

# **COMPREHENSIVE PLAN FOR EAST HANOVER TOWNSHIP, DAUPHIN COUNTY**

---

**AS ADOPTED BY  
THE EAST HANOVER TOWNSHIP  
BOARD OF SUPERVISORS**

**ON  
DECEMBER 20<sup>TH</sup>, 2011**

**Prepared for:**

**East Hanover Township  
8848 Jonestown Road  
Grantville, PA 17028  
717-469-0833**

**By:**



LTL PN 0207-0838

**EAST HANOVER TOWNSHIP  
DAUPHIN COUNTY**

**RESOLUTION NO. 2011-20**

**A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE  
TOWNSHIP OF EAST HANOVER, DAUPHIN COUNTY,  
PENNSYLVANIA, APPROVING AND ADOPTING THE EAST  
HANOVER TOWNSHIP OPERATING AND GRANT BUDGETS FOR  
THE YEAR 2012 COMPREHENSIVE PLAN.**

**WHEREAS**, Article III of the Pennsylvania Municipalities Planning Code (herein, the "Code") governs the preparation and content of municipal comprehensive plans; and

**WHEREAS**, pursuant to the procedures set forth therein, the East Hanover Township Board of Supervisors has heretofore authorized the preparation of the East Hanover Township Comprehensive Plan (herein, the "Plan"); and

**WHEREAS**, pursuant to public notice, as that term is defined in the Code, the Board of Supervisors has held a public hearing and received public comment on the Plan, which hearing was held after full compliance with the procedural requirements set forth in the Code; and

**WHEREAS**, the Board of Supervisors desires to adopt the Plan without further revision or amendment at this time; and

**WHEREAS**, the Code requires that the Plan be adopted by resolution carried by the affirmative votes of not less than a majority of the members of the Board of Supervisors.

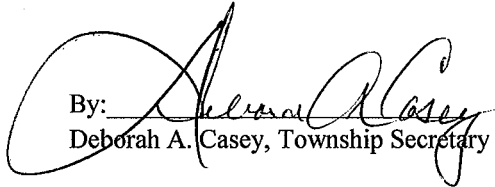
**NOW, THEREFORE**, be it resolved by the Board of Supervisors of East Hanover Township as follows:

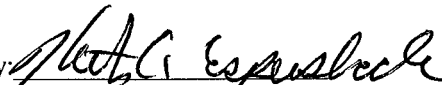
1. After public notice and hearing, having followed the procedural requirements of the Code and having afforded all interested persons the opportunity to provide comment, and after full consideration of its contents, the Plan is hereby adopted. For identification purposes, the Plan, as adopted, bears a cover page substantially similar to Exhibit "A" attached hereto, which page contains a title stating: "East Hanover Township, Dauphin County Comprehensive Plan." As adopted, the Plan consists of the following: The Plan consists of maps, charts and textual matter intended to guide land uses, including zoning and land development, within the Township over the next ten to fifteen years. It is also intended to preserve the valuable resources of the community. In general, the following goals provide overall direction for the Plan: (1) encourage coordinated community growth; (2) preserve and protect the natural and historic resources of the Township; (3) provide a desirable mix of safe and well maintained homes for all ages, incomes and family sizes; (4) support community services and utilities that adequately serve the needs of the residents and allow for coordinated community growth in strategic locations; and (5) encourage a safe, reliable and well maintained network of roadways. Among other objectives, the Plan contains a natural resources protection plan, watersheds and stream quality map, transportation plan, existing land use map, future land use map, community facilities and utilities map and a park and recreation and open space plan.
2. The Township Secretary is directed to physically affix and record a certified copy of this Resolution with the original counterpart of the Plan, and to physically include a copy of this resolution with all copies of the Plan hereafter distributed.
3. The Township Secretary is further directed to enter the original counterpart of this Resolution into the Minute Book as an attachment to the minutes of this meeting.
4. Hereafter, the Plan shall be afforded all legal status provided by law.

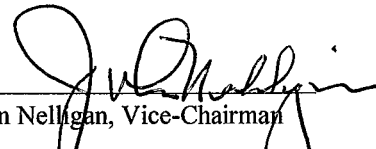
**DULY ADOPTED** this 20<sup>th</sup> day of December, 2011, by the Board of Supervisors.

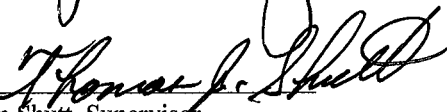
ATTEST:

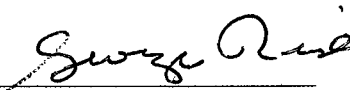
BOARD OF SUPERVISORS

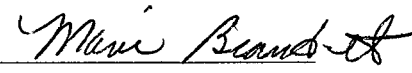
By:   
Deborah A. Casey, Township Secretary

By:   
Keith A. Espenshade, Chairman

By:   
John Nelligan, Vice-Chairman

By:   
Tom Shutt, Supervisor

By:   
George R. Rish, Supervisor

By:   
Marie Beaudet, Supervisor

# Table of Contents

<b>Chapter</b>	<b>Page</b>
Introduction.....	1-1
Demographic Profile.....	2-1
Natural Resource Protection Plan.....	3-1
Historic Resource Protection Plan.....	4-1
Transportation Plan.....	5-1
Land Use Plan.....	6-1
Housing Plan.....	7-1
Community Facilities & Utilities Plan.....	8-1
Parks, Recreation, and Open Space Plan.....	9-1
Regional Compatibility and Plan Component Inter-relationships.....	10-1
Action Plan.....	11-1

<b>Appendix</b>	<b>Map</b>
Natural Resources Protection Plan.....	A-1
Watersheds & Stream Quality.....	A-2
Historic Resources.....	A-3
Transportation Plan.....	A-4
Existing Land Use.....	A-5
Future Land Use Plan.....	A-6
Community Facilities & Utilities Plan.....	A-7
Park, Recreation & Open Space Plan.....	A-8
Data Source Summary.....	A-10

# Chapter 1 Introduction

## BACKGROUND

### ***Overview***

The pastoral landscape of East Hanover Township has provided its residents with economic benefit and aesthetic value throughout its history. While East Hanover Township has largely maintained its historic, scenic, and rural character, recent land development pressure on the Township threatens the rural qualities and natural resources that sustain the community. In response, the Township has recognized the need to re-evaluate its current land planning policies and strategies for future growth management. Updating the comprehensive plan is the first step in this process.

### ***Regional Setting***

East Hanover Township is located on the Dauphin and Lebanon County borders in southeastern Pennsylvania. It straddles the Blue Mountain and Great Valley physiographic provinces due to its elongated northwest/southeast orientation. East Hanover Township is one of Dauphin County's 40 municipalities. Adjoining municipalities include Middle Paxton, West Hanover, South Hanover, Rush and Derry Townships in Dauphin County, and East Hanover, Cold Spring, and North Londonderry Townships in Lebanon County. Nearby commercial and employment centers are in Hershey (4 miles to the south), Harrisburg (10 miles to the west), and Lebanon (12 miles to the east). Fort Indiantown Gap military reservation is located in the northern portion of the Township, but the military living and business areas of the Reservation are located in East Hanover Township, Lebanon County.

The natural resources of the Township, namely the three ridges and valleys of the Blue Mountain Province, the colluvial soils and abundant surface water emanating from Blue Mountain's southern face have supported human settlement for centuries. With the expansion of automobile transportation beginning in the 1950s suburban and highway land development began to mount. Presently, new development pressures have arisen, a likely result of the expansion of the Pennsylvania Gaming System into the Township, drawing increased commercial and residential value to its lands.

---

***Comprehensive Plan***

The comprehensive plan is a policy and planning tool enabled by the Commonwealth of Pennsylvania through Act 247, the Pennsylvania Municipalities Planning Code (MPC). It inventories the community's existing conditions, outlines planning goals, and provides recommendations and strategies aimed at achieving those goals. As a policy document (rather than a regulatory document), the comprehensive plan guides future land use and municipal management decisions. The policies and recommendations put forth in the comprehensive plan are implemented through regulatory documents such as the zoning and land development ordinances, and through other non-regulatory means. The comprehensive plan is also important from a legal standpoint in that it provides the underlying rationale for ordinance provisions and amendments, and other planning initiatives.

The East Hanover Township Comprehensive Plan update includes the following elements as mandated by the MPC:

- Demographic Profile
- Statement of Community Development Goals and Objectives
- Natural and Historic Resources Protection Plan
- Transportation Plan
- Housing Plan
- Land Use Plan
- Community Facilities and Utilities Plan
- Park, Recreation, and Open Space Plan
- Statement of the Interrelationships Among the Plan's Components
- Statement of the Plan's Compatibility with Adjoining Municipalities and the County Comprehensive Plan
- Plan Implementation Strategies

Work on the comprehensive plan update began in May 2009. Bi-monthly meetings of the East Hanover Township Planning Commission and Planning Consultants were conducted and were open to the public. In addition, a Comprehensive Plan Workshop was held on September 16, 2009, a Planning Commission Public Meeting was held on August 30, 2011 and Public Hearings of the

Board of Supervisors were held on November 1, 2011 and December 6, 2011. Each of these meetings was designed to gather community input on the Comprehensive Plan. Thus, the policies and recommendations contained in this Comprehensive Plan are based on input gathered at those meetings and on the various analyses completed by the Consultants.

Understanding that development pressures on the Township are significant, the overall goal of the plan is to manage growth by directing it to the most suitable areas of the Township, and to coordinate it with infrastructure and services. Agricultural lands and environmentally sensitive areas, best suited for conservation, are targeted to receive appropriate protection measures. This results in a sustainable and cohesive land use pattern that accommodates future growth with maximum efficiency while minimizing adverse impacts on the community and the environment.

## Chapter 2

# Demographic Profile

### INTRODUCTION

The demographic profile provides an understanding of East Hanover Township's socioeconomic conditions. This is an important component of the comprehensive plan in that it forms a basis upon which to evaluate the Township's existing policies and provides a measure of anticipated growth for which it must plan.

The demographic profile contains data from the U.S. Census Bureau on population, income, and employment. Population projections through the year 2020 are also included. To gain a broader perspective and a measure of comparison, data for the adjoining municipalities, Dauphin County, and the Commonwealth of Pennsylvania are included where appropriate.

### POPULATION TRENDS

#### ***Population 1970-2010***

To assess population trends, U.S. Census data from 1970 to 2010 are examined (Table 2.1 and Figure 2.1). Specific findings are as follows:

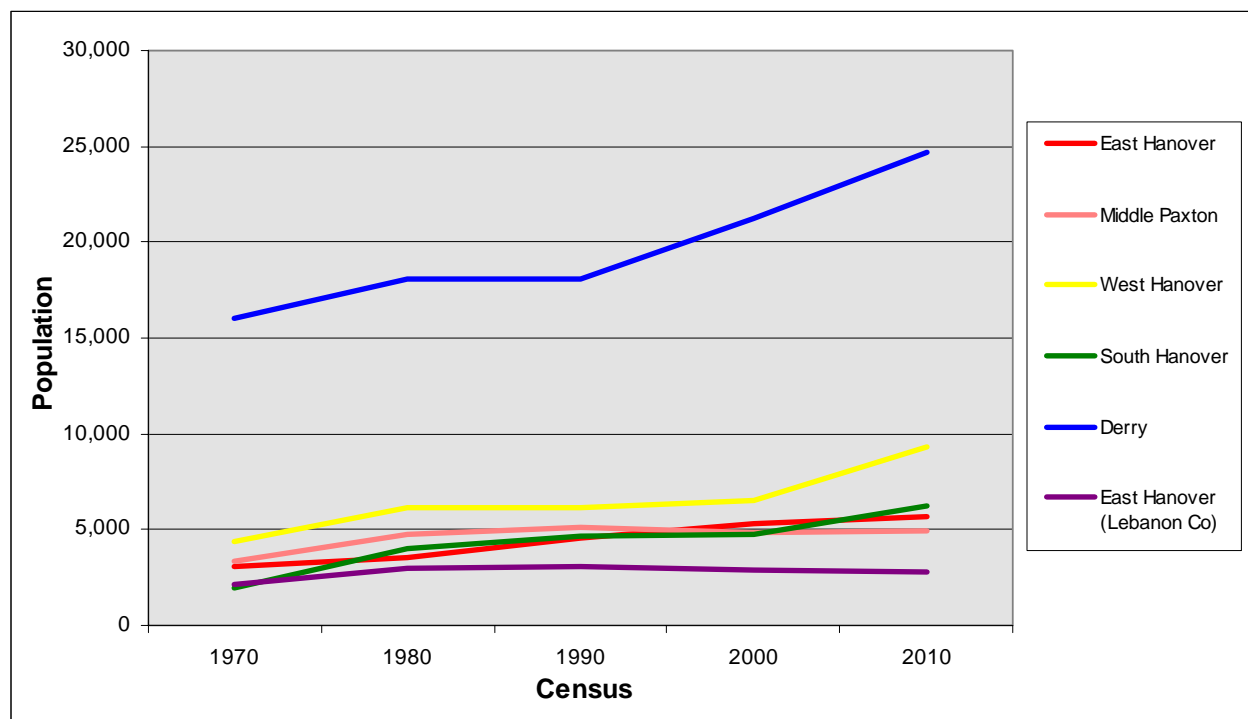
- The data show large increases in population since 1970 in East Hanover Township and surrounding townships, generally exceeding the growth rates of Dauphin County and Pennsylvania.
- East Hanover Township experienced moderate population growth (16%) from 1970 to 1980. The growth rate then accelerated through



the 1980s reaching 28%. Growth moderated again in the 1990s at 16%. The Township continued to grow from 2000 to 2010, but at a lower rate of growth (7.44%). However, at 7.44% the Township still grew more than the County and the Commonwealth.

- The 2010 Census shows very large population increases in neighboring West Hanover (44%) and South Hanover Townships (30%). Derry Township experienced the largest numerical population growth, which amounted to 16% increase. Both the County and the Commonwealth gained population.

**Figure 2.1. Population Trend Lines: 1970 - 2010**



Source: U.S. Census Bureau

**Table 2.1. Population: 1970 - 2010**

Municipality	1970 Census	1980 Census	% Change 1970-1980	1990 Census	% Change 1980-1990	2000 Census	# Change 1990-2000	% Change 1990-2000	2010 Census	# Change 2000-2010	% Change 2000-2010
East Hanover	3,091	3,574	15.63%	4,569	27.84%	5,322	753	16.48%	5,718	396	7.44%
Middle Paxton	3,362	4,745	41.14%	5,129	8.09%	4,823	-306	-5.97%	4,976	153	3.17%
West Hanover	4,407	6,115	38.76%	6,125	0.16%	6,505	380	6.20%	9,343	2,838	43.63%
South Hanover	1,943	4,046	108.23%	4,626	14.34%	4,793	167	3.61%	6,248	1,455	30.36%
Derry	16,045	18,115	12.90%	18,048	-0.37%	21,273	3,225	17.87%	24,679	3,406	16.01%
East Hanover (Lebanon Co)	2,127	2,952	38.79%	3,058	3.59%	2,858	-200	-6.54%	2,801	-57	-1.99%
Dauphin County	223,713	232,317	3.85%	237,813	2.37%	251,798	13,985	5.88%	268,100	16,302	6.47%
Pennsylvania	11,800,766	11,864,751	0.54%	11,881,643	0.14%	12,281,054	399,411	3.36%	12,702,379	421,325	3.43%

Source: U.S. Census Bureau

---

**Population  
Trends by Age**

Population trends are also analyzed by examining changes within age groups occurring between 1990 and 2010 (Table 2.2 and Figure 2.2). Population composition by age shows the current distribution of age groups in the Township (Figure 2.3). These analyses provide insight into which populations in the Township, with respect to age, account for recent population growth and which groups are growing or declining. Based on this information, the Township can begin to consider planning for services for specific population segments such as children and the elderly. Specific findings are as follows:

- From 1990 to 2000, school-aged population (age 5-17 years) in East Hanover Township increased by 34% (Table 2.2). From 2000 to 2010, this age group lost population while the 18 to 20 year age segment gained population (Table 2.3). This trend could be due to individuals in the 5 to 17 year age group aging into the next age segment while not being replenished by a declining young population under 5 years of age.
- East Hanover Township continues to experience declines in its young work force as the number of individuals age 21 to 24 years and 25 to 44 years dropped from 1990 to 2000 and from 2000 to 2010 (Table 2.2 and Table 2.3).
- East Hanover Township is an aging community. In the twenty-year period from 1990 to 2010, the population under 45 years of age experienced a net decrease while the population age 45 years and over experienced an enormous increase (Figure 2.2). The Township's median age grew from 38.1 in 2000 to 43.3 in 2010. Data show that the County and Commonwealth are also aging, but that East Hanover Township is aging more rapidly.
- The decline in population under 45 years of age suggests that young workers and young families are aging out of these categories and are not being replaced by new residents of those age groups. The Township is not retaining its young population possibly due to a lack of employment opportunities and youth leaving for college and not returning home.
- The Township has had a steep increase in the senior population aged 75 to 84 years and 85 years and over (151% and 210% respectively) since 1990. While these groups represent a comparatively small percentage of the overall population their numbers could grow as the population continues to age in place (Figure 2.3).
- Age composition of the Township as of the 2010 Census shows that the largest percentage of the Township population are aged between 24 to 54 years and 5 to 17 years.

**Table 2.2 - Population Trends by Age – 1990 to 2000**

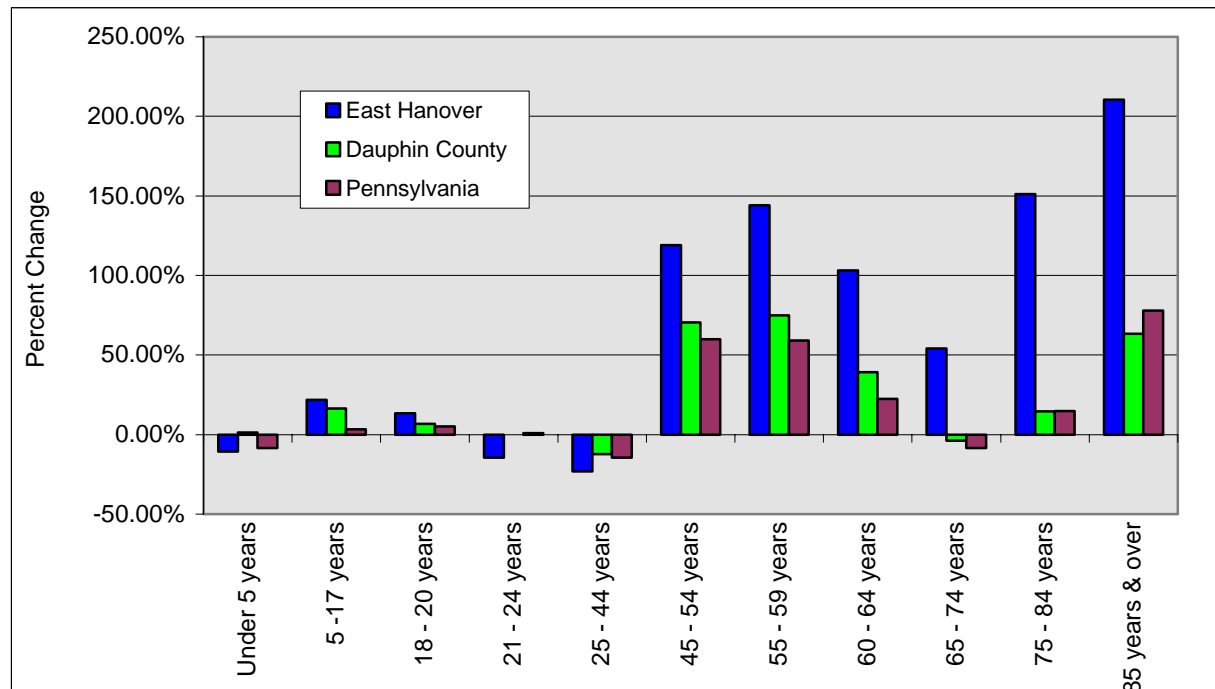
Age Range	East Hanover				Dauphin County			Pennsylvania		
	1990 Census	2000 Census	# Change 1990-2000	% Change 1990-2000	1990 Census	2000 Census	% Change 1990-2000	1990 Census	2000 Census	% Change 1990-2000
Under 5 years	362	327	-35	-9.67%	16,576	15,490	-6.55%	797,058	727,804	-8.69%
5 -17 years	838	1,123	285	34.01%	39,049	45,623	16.84%	1,997,752	2,194,417	9.84%
18 - 20 years	180	158	-22	-12.22%	8,924	8,012	-10.22%	551,216	516,557	-6.29%
21 - 24 years	200	172	-28	-14.00%	13,233	11,043	-16.55%	675,559	577,892	-14.46%
25 - 44 years	1,710	1,600	-110	-6.43%	79,030	75,753	-4.15%	3,657,323	3,508,562	-4.07%
45 - 54 years	498	910	412	82.73%	24,413	37,479	53.52%	1,213,845	1,705,032	40.47%
55 - 59 years	206	282	76	36.89%	11,064	12,410	12.17%	552,378	619,969	12.24%
60 - 64 years	189	216	27	14.29%	11,512	10,144	-11.88%	607,406	511,656	-15.76%
65 - 74 years	283	325	42	14.84%	19,802	18,667	-5.73%	1,070,021	969,272	-9.42%
75 - 84 years	84	178	94	111.90%	11,041	12,934	17.15%	587,249	712,326	21.30%
85 years & over	19	31	12	63.16%	3,169	4,243	33.89%	171,836	237,567	38.25%

Source: U.S. Census Bureau

**Table 2.3 - Population Trends by Age – 2000 to 2010**

Age Range	East Hanover				Dauphin County			Pennsylvania		
	2000 Census	2010 Census	# Change 2000-2010	% Change 2000-2010	2000 Census	2010 Census	% Change 2000-2010	2000 Census	2010 Census	% Change 2000-2010
Under 5 years	327	323	-4	-1.22%	15,490	16,794	8.42%	727,804	729,538	0.24%
5 -17 years	1,123	1,021	-102	-9.08%	45,623	45,421	-0.44%	2,194,417	2,062,617	-6.01%
18 - 20 years	158	204	46	29.11%	8,012	9,527	18.91%	516,557	579,177	12.12%
21 - 24 years	172	171	-1	-0.58%	11,043	13,211	19.63%	577,892	682,204	18.05%
25 - 44 years	1,600	1,315	-285	-17.81%	75,753	69,291	-8.53%	3,508,562	3,126,788	-10.88%
45 - 54 years	910	1,091	181	19.89%	37,479	41,647	11.12%	1,705,032	1,940,404	13.80%
55 - 59 years	282	503	221	78.37%	12,410	19,346	55.89%	619,969	879,048	41.79%
60 - 64 years	216	384	168	77.78%	10,144	16,022	57.95%	511,656	743,296	45.27%
65 - 74 years	325	436	111	34.15%	18,667	19,018	1.88%	969,272	979,538	1.06%
75 - 84 years	178	211	33	18.54%	12,934	12,647	-2.22%	712,326	674,093	-5.37%
85 years & over	31	59	28	90.32%	4,243	5,176	21.99%	237,567	305,676	28.67%

Source: U.S. Census Bureau

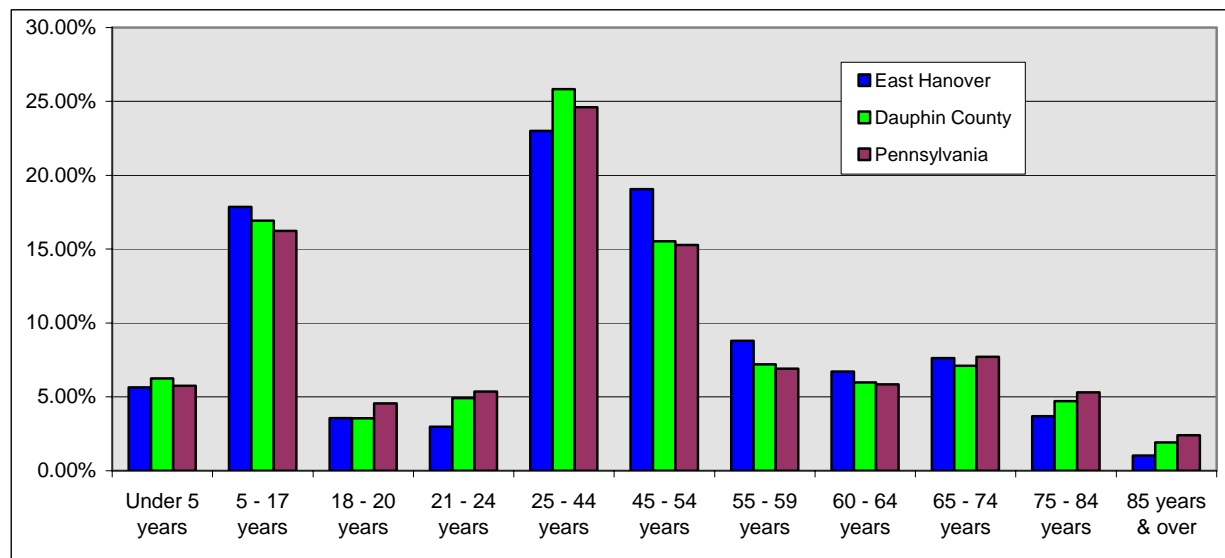
**Figure 2.2 - Population Trends by Age – 1990 to 2010 Percentage Change**

Source: U.S. Census Bureau

**Table 2.4 – Population Composition by Age - 2010**

Age	East Hanover		Dauphin County		Pennsylvania	
	2010 Census	% of Total	2010 Census	% of Total	2010 Census	% of Total
<b>Total Population</b>	5,718	100%	268,100	100%	12,702,379	100%
Under 5 years	323	5.65%	16,794	6.26%	729,538	5.74%
5 - 17 years	1,021	17.86%	45,421	16.94%	2,062,617	16.24%
18 - 20 years	204	3.57%	9,527	3.55%	579,177	4.56%
21 - 24 years	171	2.99%	13,211	4.93%	682,204	5.37%
25 - 44 years	1,315	23.00%	69,291	25.85%	3,126,788	24.62%
45 - 54 years	1,091	19.08%	41,647	15.53%	1,940,404	15.28%
55 - 59 years	503	8.80%	19,346	7.22%	879,048	6.92%
60 - 64 years	384	6.72%	16,022	5.98%	743,296	5.85%
65 - 74 years	436	7.63%	19,018	7.09%	979,538	7.71%
75 - 84 years	211	3.69%	12,647	4.72%	674,093	5.31%
85 years & over	59	1.03%	5,176	1.93%	305,676	2.41%
<b>Median Age</b>	43.3		39.4		40.1	

Source: U.S. Census Bureau

**Figure 2.3 - Population Composition by Age - 2010**

Source: U.S. Census Bureau

### ***Population Projections***

Population projections represent anticipated future growth for which the Township must be prepared to plan. The reliability of population projections at the small scale of a municipality is suspect since projections may change drastically as the result of economic conditions, a large development project, and other unforeseen factors. Furthermore, different projection methods may yield very different results at this scale. Population projections at the municipal level are therefore intended to serve as a general measure of expected growth.

Three sets of population projections for 2010 and 2020 are presented for comparison. The first is from the Dauphin County Comprehensive Plan and is calculated based on birth and death rates and migration trends (Table 2.5); the second is from the East Hanover Township Land Use Assumptions Report. It is calculated based on the number of building permits for new dwelling units multiplied by an average 2.7 persons per household (from the 2000 Census) (Table 2.6). Results of the two methods are compared in Figure 2.4. Note that at the time these projections were prepared, the 2010 Census population data were not yet available. To evaluate the accuracy of these projections given the new 2010 Census population figures, rate of error was calculated. Thus, the projection figures contained in Tables 2.5 and 2.6 must be viewed with error taken into consideration.

The third projection method incorporates the actual 2010 Census population figure for East Hanover Township. It calculates a linear trend using a least squares method based on decennial census population figures from 1970 through 2010.

Specific findings are as follows:

- Although they differ in their specific results, the three population projection methods demonstrate the same general conclusion: population will increase in East Hanover Township and surrounding municipalities over the next ten years.
- The Dauphin County projections yield the lowest 2020 projections of the three methods, resulting in a total population for East Hanover Township of 6,262 persons (Table 2.5). Note that the actual 2010 Census shows that the County's projection for that year overestimated the population by 2.61%.
- The Land Use Assumptions Report (LUAR) yields higher figures, resulting in 2020 projection that reaches 6,901 persons (Table 2.6). Note that the actual 2010 Census shows that the LUAR projection for that year overestimated the population by 7.47%.
- The linear trend method generates a 2020 projection that is mid-way between the two methods previously discussed. It results in a 2020 population of 6,555 persons, representing a 14.64% increase over the 2010 Census figure (Table 2.7 and Figure 2.4).

**Table 2.5 Population Projections – Dauphin County Comprehensive Plan**

Municipality	2000	2007	2010	# Change	% Change	2020	# Change	% Change
	Census	Estimate	Projection	2000-2010	2000-2010	Projection	2010-2020	2010-2020
East Hanover	5,322	5,427	5,867	545	10.24%	6,262	395	6.73%
Middle Paxton	4,823	5,027	5,131	308	6.39%	5,353	222	4.33%
West Hanover	6,505	8,760	6,975	470	7.23%	7,315	340	4.87%
South Hanover	4,793	6,198	5,159	366	7.64%	5,424	265	5.14%
Derry	21,273	21,971	22,950	1,677	7.88%	24,164	1,214	5.29%
East Hanover (Lebanon Co)	2,858	3,203	2,946	88	3.08%	3,057	111	3.77%
Dauphin County	251,798	255,710	264,379	12,581	5.00%	273,485	9,106	3.44%

Source: Dauphin County Comprehensive Plan, 2008

**Table 2.6 Population Projections – East Hanover Township Land Use Assumptions Report**

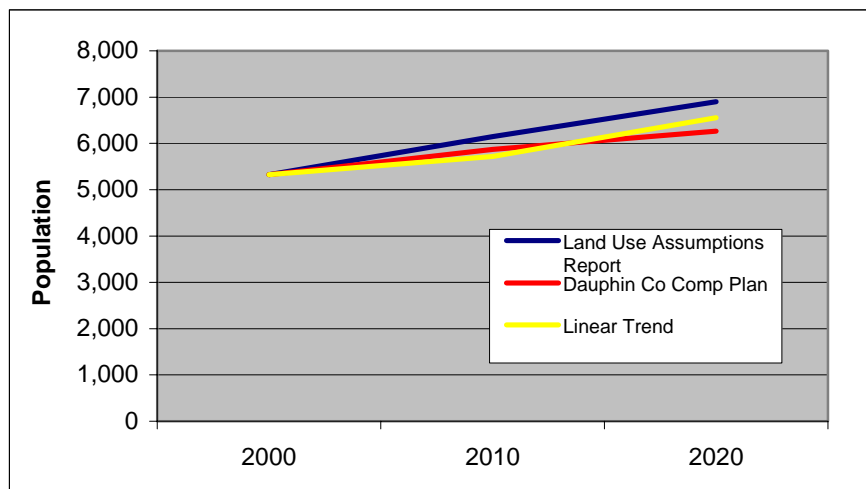
Municipality	2000	2007	2010	# Change	% Change	2020	# Change	% Change
	Census	Estimate	Projection	2000-2010	2000-2010	Projection	2010-2020	2010-2020
East Hanover	5,322	5,427	6,145	823	15.46%	6,901	756	12.30%

Source: East Hanover Township Land Use Assumptions Report, November 2008

**Table 2.7 Population Projections – Linear Trend**

Municipality	1970	1980	1990	2000	2010	2020	# Change	% Change
	Census	Census	Census	Census	Census	Projection	2010-2020	2010-2020
East Hanover	3,091	3,574	4,569	5,322	5,718	6,555	837	14.64%

Source: Consultant's Analysis

**Figure 2.4 Comparison of Population Projections**

Sources: Dauphin County Comprehensive Plan, 2008; East Hanover Township Land Use Assumptions Report, November 2008; Consultant's Analysis

## SOCIOECONOMIC CHARACTERISTICS

### ***Educational Attainment***

Educational attainment is surveyed from among the population aged 25 years and over. It represents the highest level of education reached by individuals of that age group. Data are presented for the East Hanover Township, Dauphin County and Pennsylvania from the 2000 Census and 2009 estimates. Specific findings are as follows:

- The education level of East Hanover Township increased slightly as evidenced by the rise in the percentage of residents having attained a bachelor's degree or higher from 20.8% in 2000 to 22.35% in 2009. However, the percentage increase is lower than that of the County (23.51% to 26.55%) and the Commonwealth (22.35% to 25.97%) (Table 2.8 and Table 2.9).
- Most residents of East Hanover Township have a high school education or less. (Table 2.9 and Figure 2.5).
- 2010 education levels of East Hanover Township residents are generally consistent with, yet slightly lower than, the County and the Commonwealth (Table 2.9).



**Table 2.8 - Educational Attainment - 2000**

Educational Attainment	East Hanover		Dauphin County		Pennsylvania	
	2000 Census	% of Total	2000 Census	% of Total	2000 Census	% of Total
Population 25 years and over	3524	100%	171,783	100%	8,266,284	100%
Less than 9th grade	202	5.73%	7,940	4.62%	452,069	5.47%
9th to 12th grade, no diploma	368	10.44%	20,607	12.00%	1,044,036	12.63%
High School Graduate	1455	41.29%	64,174	37.36%	3,150,013	38.11%
Some College, no degree	498	14.13%	27,902	16.24%	1,284,731	15.54%
Associate Degree	268	7.60%	10,780	6.28%	487,804	5.90%
Bachelor's Degree	497	14.10%	25,279	14.72%	1,153,383	13.95%
Graduate or Professional Degree	236	6.70%	15,101	8.79%	694,248	8.40%
% high school or higher		83.83%		83.38%		81.90%
% bachelor's degree or higher		20.80%		23.51%		22.35%

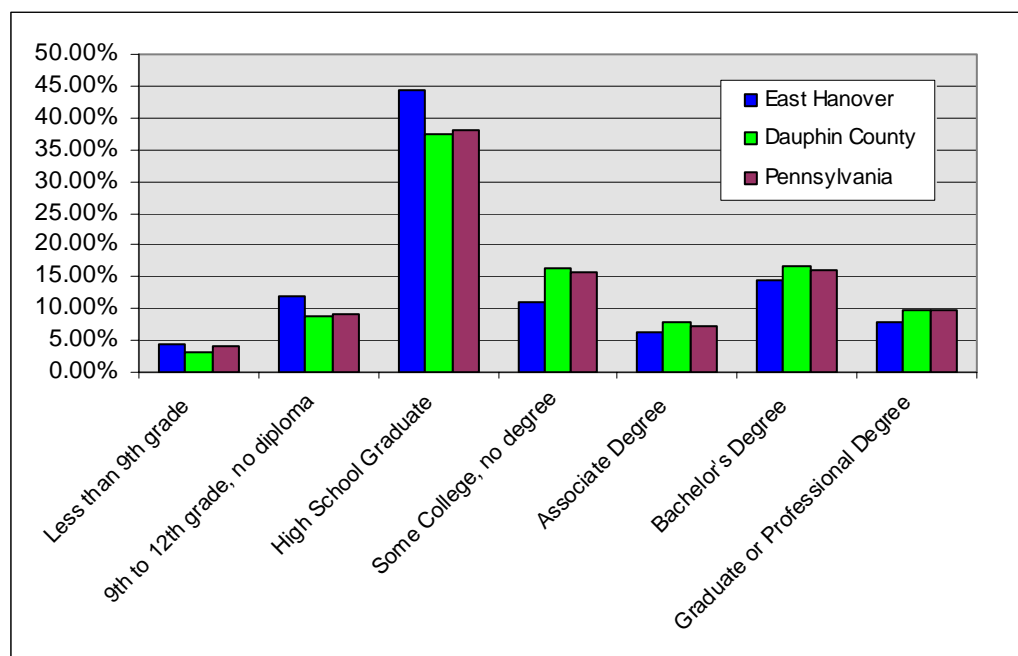
Source: U.S. Census Bureau, 2000

**Table 2.9 - Educational Attainment – 2009**

Educational Attainment	East Hanover		Dauphin County		Pennsylvania	
	2009 Estimate	% of Total	2009 Estimate	% of Total	2009 Estimate	% of Total
Population 25 years and over	3601	100%	175,426	100%	8,510,688	100%
Less than 9th grade	154	4.28%	5,779	3.29%	347,198	4.08%
9th to 12th grade, no diploma	429	11.91%	15,368	8.76%	770,227	9.05%
High School Graduate	1592	44.21%	65,549	37.37%	3,241,687	38.09%
Some College, no degree	400	11.11%	28,553	16.28%	1,330,018	15.63%
Associate Degree	221	6.14%	13,605	7.76%	611,473	7.18%
Bachelor's Degree	522	14.50%	29,420	16.77%	1,369,063	16.09%
Graduate or Professional Degree	283	7.86%	17,152	9.78%	841,022	9.88%
% high school or higher		83.81%		87.95%		86.87%
% bachelor's degree or higher		22.35%		26.55%		25.97%

Source: American Community Survey, 2011

Source: U.S. Census Bureau, 2000

**Figure 2.5 - Educational Attainment – 2009**

Source: American Community Survey, 2011

**Income**

A detailed break down of household income is provided for 2000 and 2009, where the number of households within each income bracket is reported. The 2009 estimates represent inflation adjusted dollars. Household income is used because it is a more inclusive measure than family income since it includes single persons living alone and unrelated persons living together. This provides a more accurate description of the community's economic well-being. Standard measures of income are presented, including median household income, median family income, and per capita income. Data on poverty are also included. Specific findings are as follows:

- Income levels in East Hanover Township have risen as evidenced by the increase in median household, median family and per capita incomes from 2000 to 2009 (Table 2.6 and Table 2.7). However, the increases in East Hanover Township are much smaller than those of the County and the Commonwealth.
- East Hanover Township is a middle- to high-income community with the majority (60%) of households earning more than \$50,000 per year (Table 2.7 and Figure 2.6)).
- 2010 income levels are generally consistent with the County and the Commonwealth. However, the Township exceeds the County and the Commonwealth in the proportion of households earning over \$50,000 at 65%, 51%, and 50%, respectively (Table 2.7 and Figure 2.6).

- In 2000, East Hanover Township's median household income and median family income far exceeded the County and the Commonwealth, and its per capita income was slightly higher (Table 2.6). In 2009, the Township's median household income was still higher, but its median family income was surpassed by the County and the nearly equaled by the Commonwealth (Table 2.7). Its per capita income was surpassed by both the County and the Commonwealth (Table 2.7). This indicates a slowing of income growth in the Township relative to the County and the Commonwealth.
- According to 2009 estimates, the percentage of families in East Hanover Township below poverty level had a substantial increase from 2.1% in 2000 to approximately 7.1% in 2009 (Table 2.6 and Table 2.7). The County and the Commonwealth experienced much smaller increases in the percentage of families below the poverty level. However, one must consider the large margin of error (+/- 4.2%) associated with the Township's 2009 estimate.
- According to 2009 estimates, the percentage of individuals in East Hanover Township below poverty level had a substantial decrease from 11.1% in 2000 to approximately 7.9% in 2009 (Table 2.6 and Table 2.7). At 7.9%, the Township is estimated to have many fewer individuals below the poverty level than the County (11.4%) and the Commonwealth (12.1%). However, one must consider the large margin of error (+/- 3.6%) associated with the Township's 2009 estimate.

**Table 2.6 – Household Income - 2000**

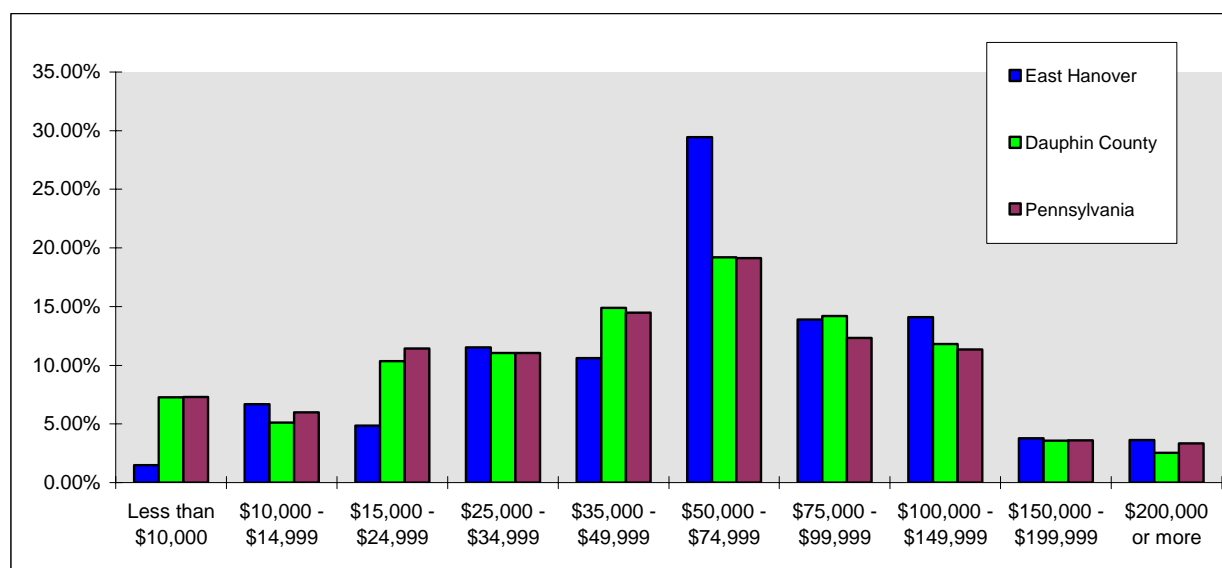
Household Income	East Hanover		Dauphin County		Pennsylvania	
	2000 Census	% of Total	2000 Census	% of Total	2000 Census	% of Total
<b># of Households</b>	1,949	100%	102,677	100.00%	4,779,186	100.00%
Less than \$10,000	61	3.13%	8,155	7.94%	465,860	9.75%
\$10,000 - \$14,999	53	2.72%	6,305	6.14%	333,381	6.98%
\$15,000 - \$24,999	183	9.39%	13,602	13.25%	657,266	13.75%
\$25,000 - \$34,999	239	12.26%	14,702	14.32%	633,953	13.26%
\$35,000 - \$49,999	371	19.04%	18,078	17.61%	809,165	16.93%
\$50,000 - \$74,999	495	25.40%	21,201	20.65%	929,863	19.46%
\$75,000 - \$99,999	247	12.67%	10,595	10.32%	457,480	9.57%
\$100,000 - \$149,999	190	9.75%	6,613	6.44%	317,171	6.64%
\$150,000 - \$199,999	83	4.26%	1,689	1.64%	84,173	1.76%
\$200,000 or more	27	1.39%	1,727	1.68%	90,874	1.90%
<b>Median Household Income</b>	\$52,009		\$41,507		\$40,106	
<b>Median Family Income</b>	\$60,674		\$50,974		\$49,184	
<b>Per Capita Income</b>	\$23,296		\$22,134		\$20,880	
<b>Families Below Poverty Level</b>	32	2.10%	4,989	7.5%	250,296	7.8%
<b>Individual Below Poverty Level</b>	164	11.10%	23,706	9.7%	1,304,117	11.0%

Source: U.S. Census Bureau, 2000

**Table 2.7 – Household Income - 2009**

Household Income	East Hanover		Dauphin County		Pennsylvania	
	2009 Estimate	% of Total	2009 Estimate	% of Total	2009 Estimate	% of Total
<b># of Households</b>	1,935	100%	105,259	100.00%	4,893,127	100.00%
Less than \$10,000	29	1.50%	7,646	7.26%	357,193	7.30%
\$10,000 - \$14,999	129	6.67%	5,378	5.11%	293,211	5.99%
\$15,000 - \$24,999	94	4.86%	10,889	10.34%	559,604	11.44%
\$25,000 - \$34,999	223	11.52%	11,617	11.04%	539,808	11.03%
\$35,000 - \$49,999	205	10.59%	15,685	14.90%	708,328	14.48%
\$50,000 - \$74,999	570	29.46%	20,207	19.20%	936,707	19.14%
\$75,000 - \$99,999	269	13.90%	14,949	14.20%	602,849	12.32%
\$100,000 - \$149,999	273	14.11%	12,436	11.81%	555,307	11.35%
\$150,000 - \$199,999	73	3.77%	3,765	3.58%	176,468	3.61%
\$200,000 or more	70	3.62%	2,687	2.55%	163,652	3.34%
<b>Median Household Income</b>	\$58,427		\$51,559		\$49,737	
<b>Median Family Income</b>	\$62,596		\$65,789		\$62,520	
<b>Per Capita Income</b>	\$26,172		\$27,402		\$26,678	
<b>Families Below Poverty Level</b>		7.1% (+/- 4.2%)		8.3% (+/- 0.7%)		8.3% (+/- 0.1%)
<b>Individual Below Poverty Level</b>		7.9% (+/- 3.6%)		11.4% (+/- 0.7%)		12.1% (+/- 0.1%)

Source: American Community Survey, 2011

**Figure 2.6 - Income - 2009**

Source: U.S. Census Bureau, 2000

## Employment Status

Data on employment status are taken from the 2000 Census and 2009 estimates, and updated with current unemployment statistics. The Census data are derived from the population aged 16 years and over. Individuals of this age are legally eligible to work. Those that are in the labor force are classified as either being in the armed forces or in the civilian labor force. Those that are not in the labor force include students,

retired workers, seasonal workers that were surveyed during the off-season institutionalized people, stay-at-home-parents, and people working less than 15 hours per week doing incidental, unpaid family work.

- Though East Hanover Township has a higher percentage of population in the work force than the county or the Commonwealth, its percentage from 75% in 2000 to 72% in 2009 while the percentages in the County and the Commonwealth increased. The same occurred with the civilian labor force (Table 2.8 and Table 2.9).
- The percentage of unemployed increased in all jurisdictions (the Township, County and Commonwealth) from 2000 to 2009 (Table 2.8 and Table 2.9).

**Table 2.8 - Employment Status - 2000**

Employment Status	East Hanover		Dauphin County		Pennsylvania	
	2000 Census	% of Total	2000 Census	% of Total	2000 Census	% of Total
Population 16 years and over	4,064	100%	197,683	100.00%	9,693,040	100.00%
Not in labor force	1,011	24.88%	68,738	34.77%	3,692,528	38.09%
In labor force	3,053	75.12%	128,945	65.23%	6,000,512	61.91%
Armed forces	11	0.27%	334	0.17%	7,626	0.08%
Civilian labor force	3,042	74.85%	128,611	65.06%	5,992,886	61.83%
Employed	2,957	72.76%	122,805	62.12%	5,653,500	58.33%
Unemployed	85	2.09%	5,806	2.94%	339,386	3.50%

Source: U.S. Census Bureau, 2000

**Table 2.9 - Employment Status - 2009**

Employment Status	East Hanover		Dauphin County		Pennsylvania	
	2009 Estimate	% of Total	2009 Estimate	% of Total	2009 Estimate	% of Total
Population 16 years and over	4,144	100%	204,014	100.00%	10,055,581	100.00%
Not in labor force	1,150	27.75%	65,724	32.22%	3,715,882	36.95%
In labor force	2,994	72.25%	138,290	67.78%	6,339,699	63.05%
Armed forces	0	0.00%	367	0.18%	10,433	0.10%
Civilian labor force	2,994	72.25%	137,923	67.60%	6,329,266	62.94%
Employed	2,891	69.76%	130,257	63.85%	5,901,533	58.69%
Unemployed	103	2.49%	7,666	3.76%	427,733	4.25%

Source: American Community Survey, 2011

## Occupation & Industry

Occupation and industry of employment are surveyed from among the population 16 years and over in the civilian labor force. Occupation describes the kind of work the person does on the job. Industry refers to the kind of business conducted by a person's employing organization. These data inform the Township of the skill level and training of its labor force and are related to educational attainment and income levels.

- From 2000 to 2009, the Township saw a reduction in the percentage of individuals in “management, professional and related” occupations (from 33% to 29%) (Table 2.10 and Table 2.11). These tend to be higher paying occupations held by more highly educated individuals. The county and the Commonwealth experienced increases in this occupation. Lower paying “service” occupations increased from 13% to 18% in East Hanover Township (Table 2.10 and Table 2.11). These shifts in occupation could be related to the slowing of income growth in the Township. “Sales and office” and “construction, extraction, and maintenance” occupations also decreased in the Township during this time period.
- East Hanover Township’s leading occupation is “management, professional and related” occupations (29%), followed by “sales and office” (26%), “production, transportation and material moving (19%), and “service” (18%) (Table 2.11 and Figure 2.7).

**Table 2.10 – Occupation - 2000**

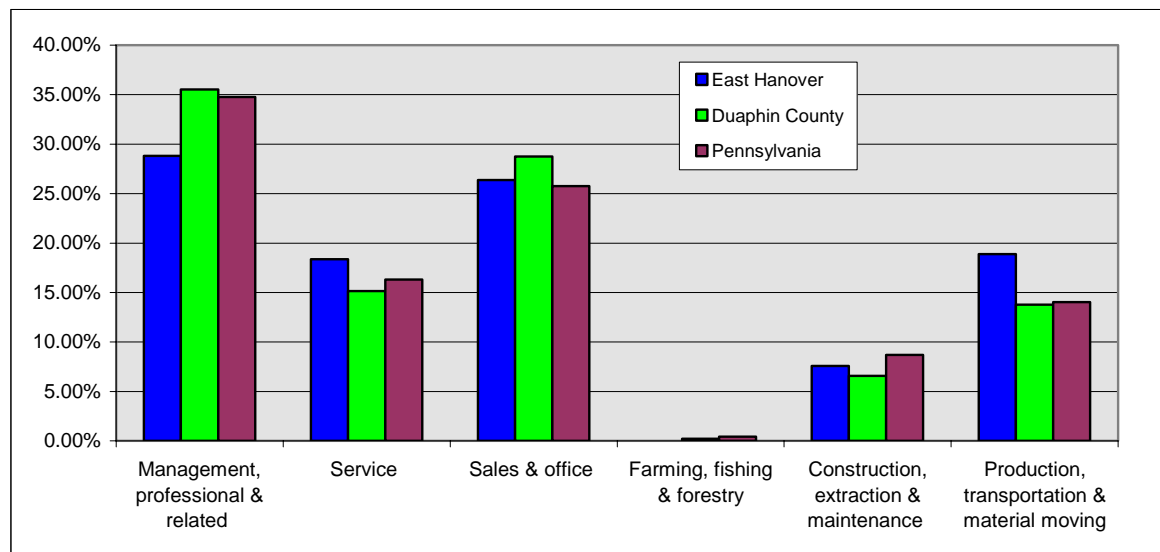
Occupation	East Hanover		Duaphin County		Pennsylvania	
	2000 Census	% of Total	2000 Census	% of Total	2000 Census	% of Total
Employed civilian population 16 years and over	2,957	100%	122,805	100.00%	5,653,500	100.00%
Management, professional & related	969	32.77%	42,833	34.88%	1,841,175	32.57%
Service	385	13.02%	17,254	14.05%	838,137	14.83%
Sales & office	800	27.05%	35,345	28.78%	1,525,131	26.98%
Farming, fishing & forestry	16	0.54%	447	0.36%	26,722	0.47%
Construction, extraction & maintenance	329	11.13%	9,435	7.68%	500,898	8.86%
Production, transportation & material moving	458	15.49%	17,491	14.24%	921,437	16.30%

Source: U.S. Census Bureau, 2000

**Table 2.11 – Occupation – 2009**

Occupation	East Hanover		Duaphin County		Pennsylvania	
	2009 Estimate	% of Total	2009 Estimate	% of Total	2009 Estimate	% of Total
Employed civilian population 16 years and over	2,891	100%	130,257	100.00%	5,901,533	100.00%
Management, professional & related	833	28.81%	46,275	35.53%	2,052,095	34.77%
Service	531	18.37%	19,734	15.15%	961,713	16.30%
Sales & office	762	26.36%	37,455	28.75%	1,520,308	25.76%
Farming, fishing & forestry	0	0.00%	280	0.21%	25,178	0.43%
Construction, extraction & maintenance	219	7.58%	8,575	6.58%	513,949	8.71%
Production, transportation & material moving	546	18.89%	17,938	13.77%	827,290	14.02%

Source: American Community Survey, 2011

**Figure 2.7 – Occupation – 2009**

Source: American Community Survey, 2011

- In reference to employment by industry, the Township experienced the largest increases in the “transportation, warehousing and utilities” industry (from 7% in 2000 to 12% in 2009) and the “retail trade” industry (from 12.5% in 2000 to 15% in 2009) (Table 2.12 and Table 2.13). Other industries that had only small increases are “professional, scientific, management, administrative and waste management,” “education, health and social services,” “arts, entertainment, recreation, accommodation and food service,” and “other services.” All other industries had decreases in employment from 2000 to 2009 (Table 2.12 and Table 2.13)
- The leading industries for employment in East Hanover Township are “education, health, and social services” (19.75%); “retail trade” (14.98%) “transportation, warehousing and utilities” (11.93%); and arts, entertainment, accommodation and food service (10.83%) (Table 2.13 and Figure 2.8). Manufacturing slipped from the third largest employer by industry in the Township in 2000 to the fifth largest in 2009 (Table 2.12 and Table 2.13).

**Table 2.12 – Employment by Industry – 2000**

Industry	East Hanover		Duaphin County		Pennsylvania	
	2000 Census	% of Total	2000 Census	% of Total	2000 Census	% of Total
Employed civilian population 16 years and over	2957	100%	122,805	100.00%	5,653,500	100.00%
Agriculture, forestry, fishing, mining	26	0.88%	906	0.74%	73,459	1.30%
Construction	208	7.03%	6,249	5.09%	339,363	6.00%
Manufacturing	356	12.04%	13,604	11.08%	906,398	16.03%
Wholesale trade	126	4.26%	4,536	3.69%	201,084	3.56%
Retail trade	370	12.51%	12,942	10.54%	684,179	12.10%
Transportation, warehousing, utilities	200	6.76%	8,322	6.78%	304,335	5.38%
Information	87	2.94%	3,480	2.83%	148,841	2.63%
Finance, insurance, real estate	197	6.66%	10,245	8.34%	372,148	6.58%
Professional, scientific, management, administrative, waste management	169	5.72%	9,802	7.98%	478,937	8.47%
Education, health, social services	550	18.60%	23,314	18.98%	1,237,090	21.88%
Arts, entertainment, recreation, accomodation, food services	300	10.15%	8,973	7.31%	397,871	7.04%
Other Services	119	4.02%	5,653	4.60%	274,028	4.85%
Public Administration	249	8.42%	14,779	12.03%	235,767	4.17%

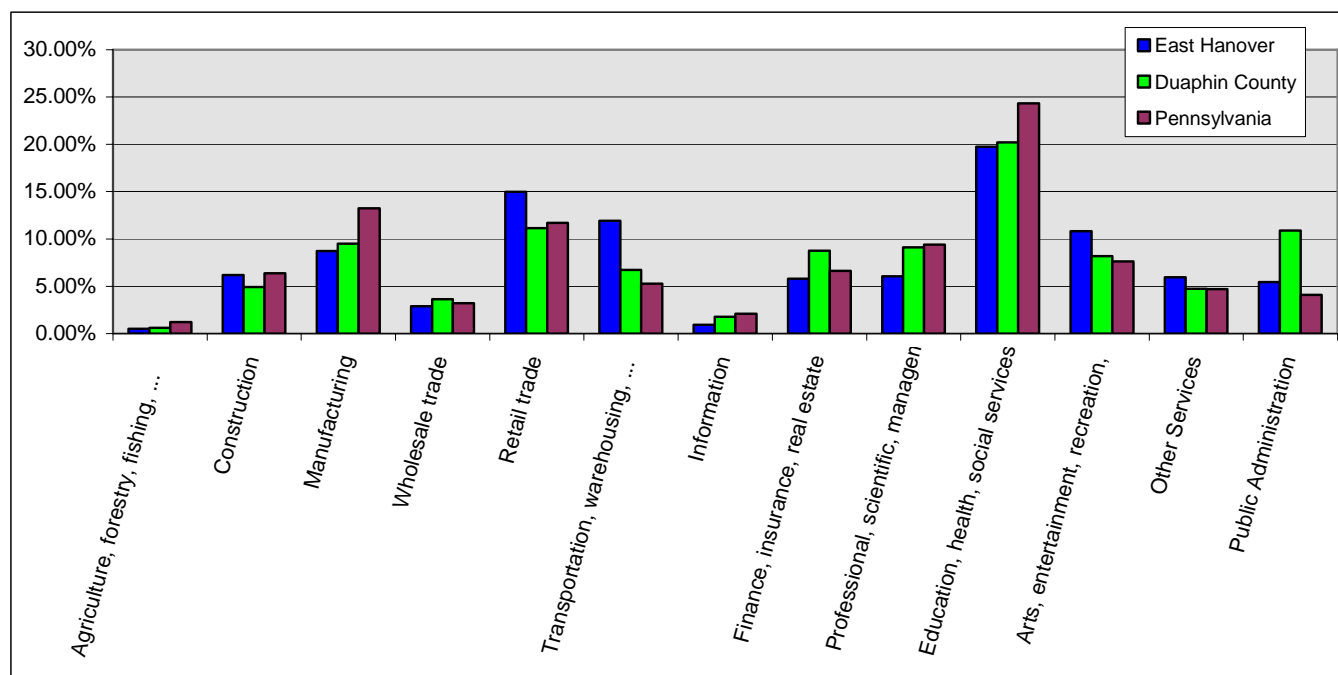
Source: U.S. Census Bureau, 2000

**Table 2.13 – Employment by Industry - 2009**

Industry	East Hanover		Duaphin County		Pennsylvania	
	2009 Estimate	% of Total	2009 Estimate	% of Total	2009 Estimate	% of Total
Employed civilian population 16 years and over	2,891	100%	130,257	100.00%	5,901,533	100.00%
Agriculture, forestry, fishing, mining	15	0.52%	784	0.60%	73,203	1.24%
Construction	179	6.19%	6,401	4.91%	376,777	6.38%
Manufacturing	252	8.72%	12,380	9.50%	781,563	13.24%
Wholesale trade	84	2.91%	4,763	3.66%	190,959	3.24%
Retail trade	433	14.98%	14,527	11.15%	691,148	11.71%
Transportation, warehousing, utilities	345	11.93%	8,770	6.73%	311,251	5.27%
Information	27	0.93%	2,326	1.79%	123,885	2.10%
Finance, insurance, real estate	168	5.81%	11,403	8.75%	392,584	6.65%
Professional, scientific, management, administrative, waste management	175	6.05%	11,870	9.11%	554,720	9.40%
Education, health, social services	571	19.75%	26,331	20.21%	1,435,932	24.33%
Arts, entertainment, recreation, accomodation, food services	313	10.83%	10,675	8.20%	449,930	7.62%
Other Services	172	5.95%	6,188	4.75%	277,333	4.70%
Public Administration	157	5.43%	14,199	10.90%	242,248	4.10%

Source: American Community Survey, 2011



**Figure 2.9 – Employment by Industry**

Source: U.S. Census Bureau, 2000

## PLANNING IMPLICATIONS

### Summary

According to the demographic analysis, East Hanover Township is a relatively young but aging, middle-income community comprised largely of families with school aged children. Education levels are falling below those of the County and the Commonwealth and income growth has not kept pace with the County or the Commonwealth as shifts in employment have occurred over the last decade.

Population in the Township and in the neighboring communities has been steadily increasing over the past several decades. However, the data suggest that the Township's population is aging in place and that it is not retaining its young work force aged 18 to 44 years. This could be due to a lack of employment opportunities and youth leaving for college. Efforts to provide employment opportunities may help to retain young workers.

The data also show that the Township's population aged 75 years and over has increased and has the potential to grow if the population continues to age in place. The Township should consider the potential need to provide activities and services for this population.

Each of the three population projection methods suggest that population will continue to increase through 2020. Projections for 2020 range from a total of 6,262 to 6,901 persons, though there is a large magnitude of error

in these figures. A least squares linear projection based on decennial census population figures from 1970 through 2010 results in a 2020 population of 6,555. Despite the range of results, all-methods suggest that the Township can expect continued growth and that planning for this growth is in its best interest. Projections can be updated periodically to monitor growth and ensure that planning strategies are current.

Planning for expected growth involves all aspects of the Comprehensive Plan, including land use, housing, natural and historic resources protection, community facilities and utilities, and transportation. The build-out analysis contained in the Township's Act 537 Plan estimates a potential total of 5,342 residential lots and 756 additional commercial lots in the Township if fully built-out. Projections contained in the Housing Plan yield 289 to 414 new housing units in the Township by 2020. Given this outlook, the Township must identify areas that are most suitable for this level of growth and development and plan for providing necessary utilities, transportation infrastructure, and services. It must also identify areas that are most suited for conservation in order to ensure that water supply, habitat, and natural resources remain functional and sustainable for the long-term.

Demographic trends indicate that the Township might consider enhancing existing community facilities and providing new community facilities that would serve its expanding population. This might include enhancements to the Township's emergency services to ensure that the level of service is sufficient to meet the needs of a growing population. It also includes the provision of social, recreational, and cultural amenities serving families and youth. The Township might also begin to plan for the possibility of an expanding senior and elderly population. Nationwide, this age segment is expected to increase drastically as the Baby Boomers age. This will put enormous strain on services and resources for seniors and the elderly. The Township must closely monitor this trend over the next decade.

## **Chapter 3 Natural Resource Protection Plan**

### **INTRODUCTION**

#### ***Overview***

Located along the Blue Mountain and the Great Valley sections of Pennsylvania, East Hanover Township is known throughout the region for its scenic landscape and distinctive natural and historic features. This landscape gives East Hanover Township its definitive character and has been an integral part of its heritage. The Township's natural features are equally important to residents' health, safety, and welfare as they provide water supply for domestic use and recreation, clean air, and habitat.

Protection of the Township's natural resources is an important concern of Township residents who have enjoyed a relatively healthy environment that has provided a high quality of life for many years. As the area continues to grow, it is incumbent upon the Township to preserve its natural resources in order to protect the health, safety, and welfare of residents, as well as the character and identity of the community.

The Natural Resource Protection Plan addresses residents' concerns related to the environment and landscape. It is intended to protect the health, safety, and welfare of Township residents by introducing contemporary planning practices that balance the need for growth with the need to protect land, water, and air resources.

**GOALS & OBJECTIVES****Overview**

The goals and objectives pertaining to natural resources were formulated by the East Hanover Township Planning Commission, representatives of various conservation and environmental organizations, and Township residents during the monthly Comprehensive Plan meetings. They form the basis for decisions and actions pertaining to the management of natural resources.

**Goal #1****Protect the Township's surface and groundwater resources.**

- Protect the water quality and environmental integrity of the Stony, Bow, Manada, and Swatara Creek watersheds.
- Specifically direct water quality efforts toward maintaining the PA DEP High Quality stream designation of the Manada Creek.
- Where water quality has been degraded, make all attempts to improve water quality and/or reverse the trend of degradation.
- Protect the Stony Creek and support its designation as one of Pennsylvania's Scenic Rivers.
- Support the protection of the Swatara Greenway Corridor, and other waterway corridors identified in the Dauphin County Greenways Plan.
- Protect the supply and quality of drinking water.
- Protect water quality for recreational use.
- Identify and correct stormwater management problems.
- Preserve and protect floodplains, wetlands, steep slopes, aquifers and other hydrologic features which contribute to the maintenance of water quality and the prevention of erosion, sedimentation, and flood damage.
- Prevent groundwater contamination.
- Promote effective septic system design and maintenance.

**Goal #2****Protect the Township's land resources.**

- Minimize disturbance of steep slopes.
- Preserve lands containing prime agricultural soils.

- Preserve forested areas and vegetative cover, and encourage woodland growth for habitat and carbon sequestration.
- Protect critical habitat areas including Natural Area Inventory sites, Important Bird Areas, and Important Mammal Areas.
- Maintain local biological diversity and rare, threatened and endangered species by preservation of wildlife habitat and movement corridors.
- Identify and protect unique geological features.
- Protect scenic viewsheds.
- Support the Kittatinny Ridge Preservation Project through ordinances which protect the Kittatinny Corridor from development and maintain its functionality as a habitat corridor and a globally significant migration flyway.

**Goal #3****Protect the Township's air resources.**

- Protect forest and vegetative cover.
- Promote alternative modes of transportation.

<b>NATURAL RESOURCES PROTECTION</b>
-------------------------------------

**Overview**

The discussion of natural resource protection provides an inventory of the Township's natural features, issues related to their current state, and protections afforded by Township and other regulatory agencies. The inventory includes physiography, geology, soils, forest and vegetative cover, watersheds, streams and lakes, wetlands, floodplains, and critical habitat areas. The assessment of existing conditions forms the basis of future planning policy recommendations and implementation strategies.

***Physiography & Topography***

East Hanover Township is located within the Anthracite Upland, Blue Mountain and Great Valley Sections of the Ridge and Valley Province, a land classification based on geologic formations and landscape characteristics. The Anthracite Upland Section occupies northernmost portion of the Township from the Blue Mountain to the Township boundary. Its topography is characterized as an upland surface having low, linear to rounded hills. Underlying rock types are sandstone, shale, conglomerate, and anthracite. Mining activities occur in this Section.

The Blue Mountain Section is characterized by a linear ridge (in Dauphin County) that widens and forms low linear ridges and shallow stream valleys as it moves into eastern Pennsylvania. Underlying rock types are sandstone, siltstone and shale with some limestone and conglomerate.

The Anthracite Upland and Blue Mountain Sections in East Hanover Township are steeply sloping and exhibit a trellis drainage pattern where tributary streams join the main channel at nearly right angles. Elevations range from approximately 600 to 1,630 feet.

The Great Valley Section occupies the remainder of the Township south of Blue Mountain. It is a broad valley that runs in its entirety from Maryland to the eastern border of Pennsylvania. Its southeastern half is comprised of karst terrain formed by underlying dolomite and limestone. Elevation in the Township ranges from approximately 50 to 380 feet. The terrain is flat to moderately sloping, which gives rise to a dendritic (branch-like) drainage pattern with wider floodplains.

Preservation of topographic features is important for maintaining natural drainage patterns, slope stability, erosion control, and surface and groundwater quantity and quality. The Township's ordinances currently provide limits of disturbance on slopes of 25% or more; however, stronger protection measures should be instituted to enhance steep slope protection.

Recommendations & Implementation Strategies:

Remove slope provisions from the SALDO and Amend the Zoning Ordinance to:

- Provide a definition of both Steep Slope (15-25%) and Very Steep Slope areas (25% and greater).
- Provide an explanation of how steep slope and very steep slope areas are to be delineated.
- Limit earth disturbance on steep slopes and very steep slopes
- Limit the permitted uses on very steep slopes.
- Encourage the planting of trees on steep and very steep slopes as a way to protect them from erosion.
- Exclude 100% of the area in very steep slopes and 50% of the area in steep slopes from the lot area determination (amend the Lot Area definition).
- Establish design and performance criteria for buildings or structures on steep slopes.
- Include steep and very steep slopes in designated conservation and open space areas.

---

**Geology &  
Groundwater**

Geology is a fundamental natural feature, as it shapes all other features including topography, soils, vegetation, and hydrology. The mountains and valleys and unique geologic features of East Hanover Township lend themselves to the Township's scenic and natural beauty and its rural character. They also impact land use patterns, as development can be either facilitated or constrained by bedrock geology, soils, and groundwater supply.

According the East Hanover Township Aquifer Study (2010), the entire Township is dependant on groundwater for its potable water supply. The aquifers underlying East Hanover are also the source of water for livestock and agricultural production, and provide base flow to the Township's streams. This dependency on groundwater means that preservation of the hydrologic cycle that recharges groundwater - and in which all natural resources play a role - is critical. Preservation and proper management of the Township's groundwater supply is "essential to the sustainable development and growth of East Hanover Township and the survival of existing facilities and enterprises."<sup>1</sup>

The northern portion of the Township contains fourteen geologic formations. These formations are dominated by sandstone, siltstone, shale, mudstone, and quartzite. They are a source of surface water, groundwater recharge, and potential future groundwater supply for the Township<sup>2</sup>. They are found in the mountains of East Hanover Township where development opportunities are currently limited. Nevertheless, the long-term protection of this area should be considered an important strategy in securing the Township's water supply.

South of Blue Mountain, the Township contains the Hamburg, Graywacke of Hamburg, and the Limestone of Hamburg formations. These formations are dominated by greywacke, shale, and limestone. Weathering of these rocks gave rise to the prime farmland soils found in this region of the Township. The vast majority of Township residents live in this area south of Blue Mountain and depend on individual wells and individual or small community wastewater treatment systems that discharge to the groundwater. The proximity of wells and septic discharges presents a potential for adverse impacts to the drinking water supply<sup>3</sup>. Evidence of this is cited in the Township's 2010 Act 537 Plan, which found that 57% of on-lot sewage disposal systems surveyed had varying degrees of malfunctions<sup>4</sup>. The highest concentration of malfunctions was in land developments along the Manada Creek and its tributaries. Well water testing showed

---

<sup>1</sup> East Hanover Township Aquifer Study, 2010. p. 1-3.

<sup>2</sup> East Hanover Township Aquifer Study, 2010. p. 5-3.

<sup>3</sup> East Hanover Township Aquifer Study, 2010. p. 5-3

<sup>4</sup> East Hanover Township Aquifer Study, 2010. p. 5-15.

contamination in many developments throughout the Township. To prevent further degradation to the water supply, future development in the Township must carefully consider the size of lots in conjunction with the design and location of wells and wastewater treatment systems.

Devil's Race Course, a unique geological feature located in State Game Lands #211 in the northeastern corner of the Township, is a boulder field approximately 40 yards wide by 1,140 yards long. Rattling Run can be heard flowing beneath the boulders. It is assumed to be protected by virtue of its location in the State Game Lands. However, the Township should explore avenues for ensuring its protection in the event that the State Game Lands are ever sold.

**Recommendations & Implementation Strategies:**

- Protect the northern mountainous region of the township as an important source of surface water, groundwater recharge, and groundwater supply.
- Amend ordinances to provide subdivision and land development standards related to wastewater disposal systems and wells in order to protect groundwater quality and quantity.
- Work with the PA DCNR to devise a strategy to ensure the protection of Devil's Race Course.
- Identify other unique geological features in the Township.
- Protect unique geological features through inclusion in conservation easement and open space areas and by prohibiting their disturbance.
- Work with landowners, land trusts and conservation organizations to preserve areas with unique geological features.

---

### **Soils**

Soils are formed by glacial deposition and the weathering of bedrock. Soil properties differ according to underlying rock types, climate and topography. They in turn influence local vegetative cover, hydrology, and land use patterns and activities.

For planning purposes, soils are analyzed in terms of suitability for development (i.e. septic absorption), cultivation, and groundwater recharge. The data indicate that:



- Soil conditions, along with slope and underlying geology, pose moderate to severe limitations to most types of septic treatment systems throughout the Township (refer to the East Hanover Township Act 537 Plan for more detail).
- Hydric and seasonal high water table soils are found throughout the Township in low-lying areas, along watercourses, and where a perched water table lies above bedrock. Hydric soils are soils that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part. These soils are indicative of the presence of wetlands. Seasonal high water table soils are defined as any time a soil depth is saturated for about 15 or more days in a month. Soils with a seasonally high water table at 20 inches from the surface pose limitations for on-lot septic. Soils with a seasonally high water table at deeper depths can cause flooding in basements and affect the settlement of foundations.

Hydric and Seasonal High Water Table soils are unsuitable for development due to the risk of damage to structures caused by seepage of water and generally wet conditions. They frequently have poor stability and therefore cannot adequately support structures. These soils also serve as important groundwater recharge areas and should be left undisturbed.

- Prime Farmland Soils (Class 1 and 2) and Soils of Statewide Importance (Class 3) are the most suited for cultivation. These soil classes are found across the southern half of the Township (south of Blue Mountain) where agriculture is the predominant land use. Soils on the mountainous northern half of the Township are limited to use for pasture, range, forestland or wildlife food and cover.

Severe soil limitations for septic absorption present a major challenge to the traditional development type found in East Hanover Township, consisting of single-family dwellings with on-lot septic systems. Soils limitations for septic absorption along with unmaintained and failing septic systems have lead to contamination of drinking water in several locations throughout the Township<sup>5</sup>.

---

<sup>5</sup> East Hanover Township Aquifer Study, 2010. p. 5-15

Current Township ordinances provide limited protection for hydric soils when they are adjacent to wetlands, and no protection for seasonal high water table soils.

The prime farmland areas in the southern part of the Township are under significant development pressure. These areas denote the Township's rural character and are important for their economic and scenic values. Several farms are enrolled in Agricultural Security Areas or the Act 319 and Act 515 programs. Although these programs do not provide for the preservation of these properties in perpetuity, they do signify a desire on the part of the land owners to continue their agricultural use. The Township should consider ways to enhance farmland preservation in its Rural Agricultural Zone.

Soils play an important role in the hydrologic cycle, allowing infiltration of stormwater and recharge of groundwater sources. They are also important determinants of vegetation type and cover. Hydric and seasonal high water table soils serve as groundwater recharge areas and can inhibit development due to their wet conditions. Preservation of farmland soils is necessary to maintain the local agricultural economy.

#### Recommendations & Implementation Strategies

Amend the Zoning Ordinance to:

- Strictly limit soil removal, especially on steep and very steep slopes.
- Prohibit building and earth disturbance on hydric and seasonal high water table soils.
- Exclude 100% of hydric and 50% of seasonal high water table soils from lot area determination (amend the Lot Area definition).
- Include hydric soils, seasonal high water table soils and prime farmland soils in designated conservation and open space areas.

#### **Forest & Vegetation**

The northern portion of East Hanover Township remains primarily forested. This area includes Stony Valley, which is part of Saint Anthony's Wilderness and is the second largest roadless area in the state (see Figure 3-1)<sup>6</sup>. It also contains several sites of rare, threatened endangered species listed in the Natural Areas

<sup>6</sup> Via, J.W. "Saint Anthony's Wilderness." <http://home.comcast.net/~StAnthonyWilderness/anthony.htm>.

Inventory. Because of a history of clearing for agriculture, much of the southern portion of the Township is deforested. Woodlands exist as smaller, scattered fragments and along the stream valleys. Meadows, wetland vegetation, and other significant vegetative cover exist throughout the Township. Use of non-native and invasive plant species by developers and residents can pose a threat to the native vegetation.

Forest and vegetative cover is important for several reasons: it provides habitat, it contributes to clean air and clean water, it regulates climate, and it stabilizes soils and steep slopes preventing erosion. Large, contiguous areas of forest and vegetative cover are desirable as they provide habitat for interior forest species and establish movement corridors for wildlife. Fragmentation of forests and vegetation leaves small, isolated islands of habitat that degrade wildlife communities and ecosystem health.

Although much of the woodland in the north of the Township is in state game lands, its protection is not guaranteed. Similarly, protection is not ensured on the smaller wooded areas to the south, which lie primarily on private lands. The Township can work with landowners to preserve remaining forest expanses while opportunities still exist. In terms of regulation, the SALDO contains standards for tree protection and replacement. These standards should be strengthened to enhance protection of existing woodlands. Conservation subdivision design can also be used to preserve existing woodlands and other significant vegetation, such as meadows.

#### Recommendations & Implementation Strategies

- Protect dense and mature forested areas especially on steep and very steep slopes, along stream corridors, and in headwater (first order) drainage areas by limiting disturbance of these areas.
- Promote the establishment of large contiguous areas of permanently protected forests including areas containing natural and scenic resources through conservation and open space planning.
- Amend the SALDO to strengthen limits on clearing of woodlands, to strengthen tree protection and replacement standards, and to require the use of native species and prohibit the use of invasive plants.
- Include woodlands and vegetation in designated conservation and open space areas.

**Recommendations & Implementation Strategies (continued)**

- Work with private landowners, land trusts, conservation organizations, and the U.S. Military (Fort Indiantown Gap Military Reservation) to preserve areas with significant forest and vegetative cover.

**Wetlands**

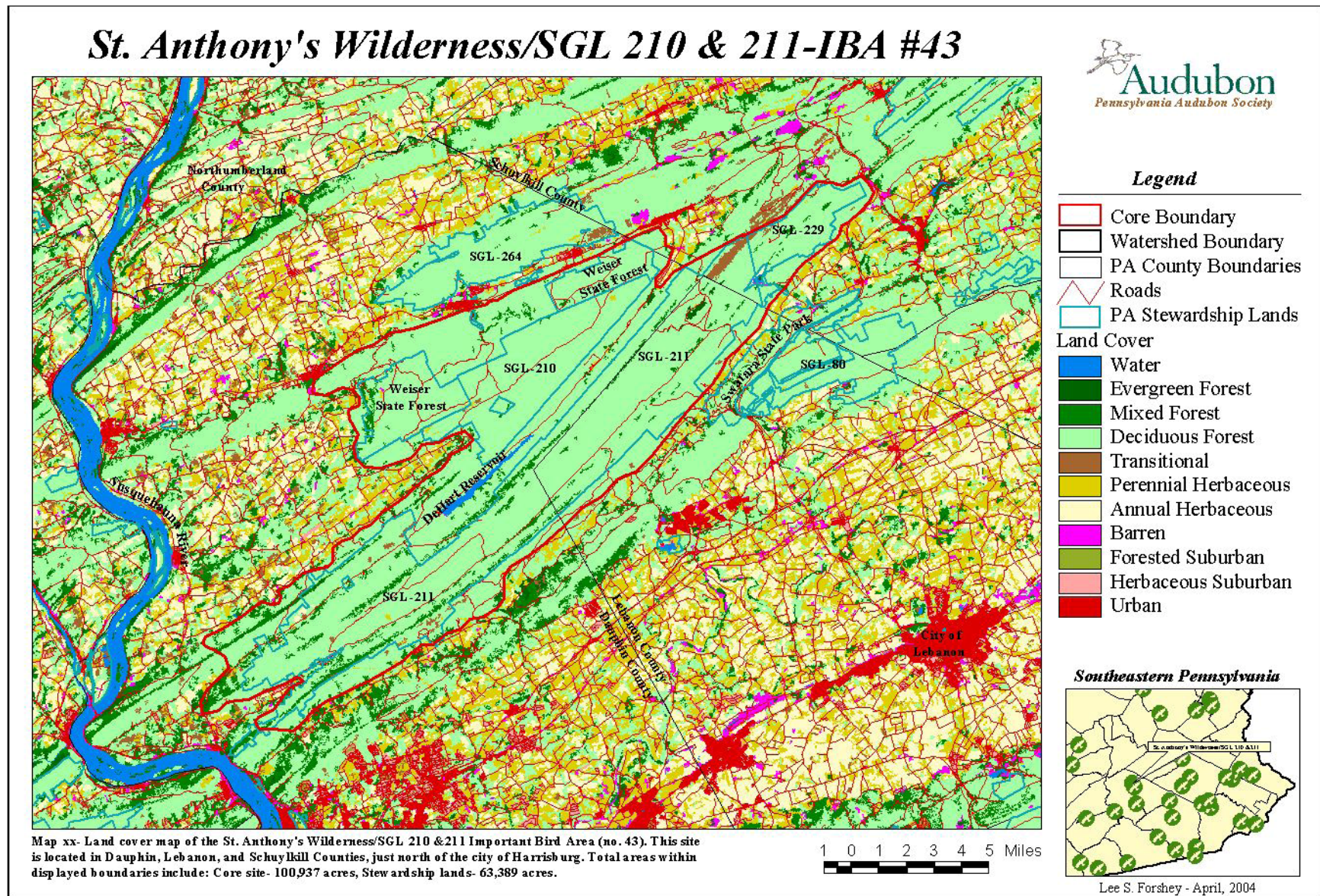
Wetlands are defined by the Pennsylvania DEP (25 PA Code, Chapter 105) as: “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” Wetlands contain three main components: (1) water at or near the surface for significant parts of the year, (2) hydric soils, and (3) wetland indicator vegetation such as cattails and skunk cabbage.

Available wetland data for East Hanover Township are limited to the National Wetlands Inventory and the USGS. These sources identify only the largest wetland areas. Mapping of hydric soils is used to supplement wetland data since it indicates the possible presence of wetlands. The data show that wetlands and hydric soils are prevalent throughout the Township primarily along the streams. A more complete and accurate inventory of wetlands would require a field survey, which is typically done at the time of a subdivision or land development application.

Wetlands serve many important functions that contribute to the health and well-being of communities: they serve as important groundwater recharge areas; they improve water quality (this is an especially important function in agricultural areas where runoff carries heavy nutrient loads that contribute to non-point source pollution); they provide flood control; they provide wildlife habitat; and they can be used for educational and recreational purposes. Wetland buffers diminish the opportunity for degradation of the wetland itself, and provide edge habitat for wetland species.

Wetlands receive protection under the federal Clean Water Act, which regulates the discharge of dredged and fill material into waters, including wetlands. Activities that are regulated include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and conversion of wetlands to uplands for farming and forestry. Any proposed activity within a wetland must receive a permit from the U.S. Army Corp of Engineers.



**Figure 3-1: St. Anthony's Wilderness**

Source: Pennsylvania Audubon Society

The basic premise of the federal wetlands protection program is that no discharge or dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the waters would be significantly degraded. A permit applicant must demonstrate that he has taken steps to avoid wetland impacts where practicable, minimized potential impacts to wetlands, and provided compensation for any remaining unavoidable impacts through activities to restore or create wetlands<sup>7</sup>.

The Township SALDO regulates wetlands and a wetland buffer area of at least 25 feet and extending to 75 feet if hydric soils are present. It requires a wetland determination for all plans; however, wetland disturbance is allowed if a state or federal permit is obtained. The Township should consider prohibiting disturbance of wetlands and wetland buffers, and increasing the minimum width of the buffer.

#### Recommendations & Implementation Strategies

- Move the wetland provisions from the SALDO to the Zoning Ordinance.
- Increase the wetland buffer to the extent of adjoining hydric soils or to a specified minimum distance.
- Strengthen wetland provisions to prohibit disturbance of wetlands and wetland buffer areas.
- Exclude 100% of wetlands and wetland buffers from lot area determination.
- Create a GIS map inventory of wetlands (beyond the National Wetlands Inventory) with data taken from subdivision plan submissions.

---

### ***Floodplains***

Floodplains are formed by the frequent shifting of streams as they meander through valleys. The shifting of a stream produces an increasingly broad, flat valley floor covered by alluvial soils deposited by the stream. The stream usually occupies only a small portion of the flat valley floor; however, during periods of flood, the entire floor may be inundated.

Floodplains are important for their natural functions and the hazards associated with them. They play an important role in flood flow conveyance, stream channel formation and water filtration.

---

<sup>7</sup> US Environmental Protection Agency, Wetland Regulatory Requirements

Building within floodplain areas upsets their natural functions and increases risks to human life and property. Therefore, development within floodplains should be strictly regulated.

The Township Zoning Ordinance currently regulates construction and development in the 100-year floodplain and a 50-foot assumed floodway. The Ordinance appropriately limits the types of uses permitted in the floodplain but should include prohibition of impervious cover in the floodplain area. The Township should also ensure that the ordinance conforms to the most recent FEMA standards.

#### Recommendations & Implementation Strategies

- Continue to prohibit new construction in the 100-year floodplain
- Continue to require that floodplain disturbance associated with any land use is minimized.
- Continue to require that improvements to existing buildings and structures will not increase the 100-year flood elevation and require flood proofing of permitted improvements.
- Permit installation of utilities and public infrastructure (i.e roads, stormwater management facilities) only if no feasible alternative location exists and only if Best Management Practices are employed to achieve minimal floodplain disturbance.
- Prohibit impervious cover (i.e. paved areas and surfaces that do not allow for infiltration of water) within the 100-year floodplain.
- Exclude 100% of the 100-year floodplain area from lot area determination (amend the Lot Area definition).
- Review the floodplain regulations for consistency with the most recent FEMA standards and update if necessary. Strengthen the floodplain ordinance to prohibit the use of impervious surfaces.

---

#### ***Watersheds & Streams***

East Hanover Township is in the Susquehanna River Basin, which is part of the Chesapeake Bay watershed. The Township itself is drained by the Swatara, Manada, Bow, and Stony Creeks and their tributaries. Swatara Creek, which runs along a portion of the Township's southern boundary is the largest body of flowing water in the Township. From its headwaters in Schuylkill County, it



travels 71 miles to Middletown, Pennsylvania where it drains into the Susquehanna River. Along its route, it drains areas in Dauphin, Lebanon, Berks, and Schuylkill Counties.

Manada Creek drains the majority of the Township from north to south. Its headwaters begin between Blue Mountain and Second Mountain in the Fort Indiantown Gap Military Reservation. It then crosses Blue Mountain at Manada Gap. The East Branch Manada Creek drains the central part of the Township and joins the main branch to the south where it then drains into the Swatara Creek. Both branches traverse agricultural and residential lands within the Township making them susceptible to degradation from wastewater treatment, stormwater runoff, and agricultural operations.

Bow Creek drains the eastern portion of the Township from north to south and empties into the Swatara Creek. Most of the Township's commercial and industrial development is located in the northern portion of this watershed. The East Hanover Township Sewer Treatment Plant is located on the Bow Creek. Water withdrawals to supply commercial and industrial development must be carefully managed to prevent excessive draw down of the groundwater which could affect the base flow of the Bow Creek.

Devil's Race Course and Rattling Run drain into Stony Creek in the State Game Lands in the north of the Township. Stony Creek then runs westward through Middle Paxton Township and drains directly into the Susquehanna River. By virtue of its location in the State Game Lands, Stony Creek is not currently threatened by degradation due to land development activities.

The federal Clean Water Act establishes regulations that prohibit the degradation of streams and water quality. In accordance with these regulations the Pennsylvania Department of Environmental Protection (DEP) has developed water quality standards for all surface waters in the Commonwealth. These standards, which are designed to safeguard Pennsylvania's streams, rivers, and lakes, consist of both use designations and the criteria necessary to protect those uses.

All Commonwealth waters are protected for a designated aquatic life use (Warm Water Fishes, Trout Stocking, Cold Water Fishes, and Migratory Fishes), as well as for water supply and recreational uses. In addition, streams with excellent water quality may be designated High Quality Waters (HQ) or Exceptional Value Waters (EV). The water quality in HQ streams can be lowered only if a discharge is the result of necessary social or economic development, the water quality criteria are met, and all existing uses of the stream are protected. EV waters are to be protected at



their existing quality; water quality cannot be lowered. The stream designations for waters in East Hanover Township are as follows:

- Stony Creek - High Quality Cold Water Fishes and Pennsylvania Wild River (see below)
- Devil's Race Course - High Quality Cold Water Fishes
- Rattling Run – High Quality Cold Water Fishes
- Manada Creek and its tributaries north of confluence with Walnut Run – Cold Water Fishes
- Manada Creek and its tributaries south of confluence with Walnut Run – Warm Water Fishes
- Bow Creek and its tributaries - Warm Water Fishes
- Swatara Creek and its tributaries - Warm Water Fishes
- Walnut Run and its tributaries – Warm Water Fishes

In addition to stream quality designations, the Commonwealth administers the Pennsylvania Scenic Rivers System. This program classifies rivers meeting certain criteria as scenic, wild, pastoral or recreational. Thirteen rivers/creeks in Pennsylvania are designated by the program; another six are federally designated scenic rivers. Stony Creek is a state designated wild river. This designation mandates that wild rivers “shall be free-flowing and supportive of native fish and wildlife. The shorelines and adjacent environment shall be pristine in character. Access to segments is restricted to foot and/or nonpowered watercraft.”<sup>8</sup>

The DEP also assesses streams to determine whether they are attaining their aquatic, fish consumption, potable water supply, and recreational use. If a stream segment is not attaining any one of these four uses it is considered non-attaining (impaired). Non-attaining streams and their sources of impairment in East Hanover Township are:

- Rattling Run – Aquatic Life - Abandoned mine drainage/pH
- Devil's Race Course - Aquatic Life - Abandoned mine drainage/pH
- A small segment of Bow Creek – Aquatic Life - Road Runoff/Siltation

---

<sup>8</sup> Pennsylvania Scenic Rivers Act.

- Unnamed tributary of Bow Creek – Aquatic Life – Agriculture/Nutrients; Other/Priority Organics
- Unnamed tributary of Manada Creek – Aquatic Life – Municipal Point Source/Nutrients; Potable Water Supply – Source Unknown/Pathogens
- Two unnamed tributaries to Raccoon Creek – Recreational – Agriculture/Pathogens
- Three unnamed tributaries to Raccoon Creek – Aquatic Life – Crop Related Agriculture/Flow Alterations

To enhance protection of its waters, the Commonwealth adopted new regulations pertaining to riparian buffers in November 2010. The new regulations prohibit earth disturbance activity within 150 feet of a perennial or intermittent river, stream or creek, or lake, pond or reservoir when the activity requires an NPDES or E&S permit and the project site is located in an Exceptional Value or High Quality watershed attaining its designated use<sup>9</sup>.

For earth disturbance activities requiring an NPDES or E&S permit where the project site is located in an Exceptional Value or High Quality watershed failing to attain one or more designated uses and the project site contains, is along, or within 150 feet of a perennial or intermittent river, stream or creek, or lake, pond or reservoir, the persons conducting the activity must either protect an existing riparian forest buffer, convert an existing riparian buffer to a riparian forest buffer, or establish a new riparian forest buffer<sup>10</sup>.

For persons that voluntarily establish a riparian forest buffer on waters other than special protection waters, the new regulations specify a 100-foot buffer stating that a 100-foot minimum width has been firmly established by scientific studies as providing substantial ecological benefit.

(Note that there are several exceptions to the new riparian buffer regulations).

In creating the riparian buffer regulations, the Commonwealth stated that:

“Land development activities change natural features and alter stormwater runoff characteristics. The resulting alterations of stormwater runoff volume, rate and water quality can cause stream bank scour, stream destabilization, sedimentation, reductions in groundwater

---

<sup>9</sup> Title 25 Pennsylvania Code.

<sup>10</sup> Title 25 Pennsylvania Code.

recharge and base flow, localized flooding, habitat modification and water quality and quantity impairment, which constitute pollution as that term is defined in section 1 of the act (35 P. S. § 691.1) [Pennsylvania Clean Streams Law]. Riparian buffers play a vital role in mitigating the effects of stormwater runoff from land development activities.<sup>11</sup>

Riparian buffers can be effective in removing excess nutrients and sediment from surface runoff and shallow groundwater, stabilizing streambanks, and shading streams and rivers to optimize light and temperature conditions for aquatic plants and animals. Riparian buffers provide significant flood attenuation and storage functions within the watershed. They prevent pollution both during and after earth disturbance activities and provide natural, long-term sustainability for aquatic resource protection and water quality enhancement.

A riparian *forest* buffer is type of riparian buffer that consists of permanent vegetation that is predominantly native trees, shrubs and forbs. “Scientific literature supports the riparian forest buffer (with stormwater entering the buffer as sheet flow or shallow concentrated flow) as the only BMP that can do all of the following: capture and hold stormwater runoff from the majority of storms in this Commonwealth in a given year; infiltrate most of that water or transport it, or both, as shallow flow through the forest buffer soils where contaminate uptake and processing occurs; release excess storm flow evenly further processing dissolved and particulate substances associated with it; sequester carbon at significant levels; and improve the health of the stream and increase its capacity to process organic matter and nutrients generated on the site or upstream of the site.”<sup>12</sup>

In addition to water protection initiatives at the state level, the Dauphin County Conservation District (DCCD) has been active in addressing watershed and water quality issues. In 2005, it completed its *Chesapeake Tributary Strategy* which details strategies for reducing the amount of nutrients and sediment flow into local streams and ultimately the Chesapeake Bay. DCCD is also preparing a *Dauphin County Stream Assessment* plan, and a county-wide Act 167 stormwater management plan. The Township will be required to adopt a new ordinance once the DCCD’s plan has been approved by the DEP.

East Hanover Township’s watersheds are most at risk from agricultural non-point source pollution and impacts from land development. Runoff carrying pesticides, fertilizers, and animal waste, combined with grazing near streams and animals in the

---

<sup>11</sup> Pennsylvania Bulletin, Vol. 40, No. 34, August 21, 2010.

<sup>12</sup> Pennsylvania Bulletin, Vol. 40, No. 34, August 21, 2010.

streams results in high levels of nutrients in the water and degrades water quality. Other contributing factors are point sources, abandoned mine drainage, and urban stormwater runoff, which introduces pollutants into the stream system, increases peak flows, increases downstream flooding, and damages stream banks. Malfunctioning on-lot and community septic systems and excessive well withdrawals can also pose a threat to water quality and quantity.

Protection of watersheds is imperative for ensuring a safe and sufficient water supply and maintaining water quality for designated uses. This is particularly true of first order drainage areas and the Township's High Quality streams. Local policies that protect individual natural features, including steep slopes, soils, forests and vegetation, wetlands, and floodplains, also advance the protection of the Township's watersheds and streams.

At the present time, the Commonwealth's 150-foot riparian buffer requirements only apply to the Stony Creek watershed - which includes Rattling Run and Devil's Race Course – as this is the only special protection watershed in the Township. Because this watershed lies within the state game lands, the new 150-foot buffer requirements should not be of major concern. However, the Township should continue to protect its surface waters with the use of riparian buffers.

Currently, the Township Zoning Ordinance contains provisions for riparian buffers applicable only to perennial streams. The buffer is comprised of three zones. Zone 1 has a minimum width of 15 feet. The three zones combined have a minimum width of 75 feet. Although it intends to prohibit disturbance with any of the three zones, the ordinance language is somewhat vague. The Township should consider strengthening the ordinance language and increasing the buffer width to achieve maximum water quality protection.

#### Recommendations & Implementation Strategies

- Amend the Zoning Ordinance to strengthen the protection standards for riparian buffers to increase the sizes of the buffer zones and set limits of disturbance.
- Encourage farmers to use streamside fencing to keep livestock out of streams.
- Amend the Zoning Ordinance to exclude 50% of riparian buffers from lot area determination (amend the Lot Area definition).

### Recommendations & Implementation Strategies (continued)

- Limit the extent of impervious cover and promote the use of pervious materials throughout the Township.
- Review the Township's Stormwater Management Ordinance once the DCCD's ordinance is approved and consider whether amendments are needed.
- Integrate utilities and development planning such that development is directed to areas that have existing sewer and water infrastructure, or are programmed to have such infrastructure.
- Regularly monitor aquifers to determine water quality and availability of potable water.
- Protect headwater areas by limiting development of these areas and including them in designated conservation and open space areas.

### ***Wildlife Habitat***

East Hanover Township's large expanses of forest and vegetation, prevalence of wetlands, and surface water features provide diverse habitat for plant and animal species.

The Dauphin County Natural Areas Inventory, compiled by the Pennsylvania Science Office of The Nature Conservancy, documents the best natural areas in the county and the locations of all known animal and plant species of special concern (endangered, threatened, or rare). The inventory also identifies areas that represent good examples of habitat types that are relatively rare in the County or that provide exceptional wildlife habitat. The purpose of the inventory is to guide planning and conservation efforts and to assist in prioritizing areas to be protected.

According to the Natural Areas Inventory, numerous threatened, rare and endangered plant and animal communities exist in East Hanover Township. These sites are concentrated in the northern portion of the Township. They are:

- Ellendale Forge Site/Sharp Mountain
- Fort Indiantown Gap Macrosite
- Rattling Run Headwaters
- Stony Creek Valley
- Stony Mountain
- Stony Mountain Ponds

The Kittatinny Ridge Conservation Corridor, which encompasses the entire Township, is recognized by Audubon Pennsylvania as a globally significant migration flyway for tens of thousands of raptors and birds. Annual migration counts are conducted at Second Mountain Hawk Watch at Fort Indiantown Gap and at several other locations along the corridor. Preservation of the forested ridges in the corridor is critically important for protecting the birds as well as the recreational and educational opportunities the Kittatinny Corridor affords.

Wildlife habitat is important for maintaining a healthy ecosystem. It also provides recreational and educational opportunities to the community. Habitat degradation and loss in the Township and the region is due to land development, contamination from wastewater and stormwater runoff, destruction of wetlands for construction and farming, construction of roads, and mining activities,.

In order to maintain natural diversity and a healthy ecosystem, the Township must preserve its large, contiguous forest communities, protect its wetlands, and create a network of open space for wildlife movement. Township ordinances are intended to protect the features that provide habitat. As detailed above, some of these ordinances can be strengthened to improve habitat protection. Innovative land development techniques, such as conservation subdivision design, can also support habitat protection.

#### Recommendations & Implementation Strategies

- Protect critical habitat areas through protection of topography and geology, soils, forest and vegetative cover, wetlands, floodplains, watersheds and streams.
- Protect as open space those properties that contain sites identified in the Dauphin County Natural Areas Inventory.
- Establish a networked system of large contiguous areas of open space.
- Establish a network of riparian corridors and greenways for wildlife movement.
- Partner with the PA Audubon Society, Manada Conservancy, and other conservation organizations to protect the Kittatinny Corridor.

**Additional Measures**

Additional recommendations and implementation strategies intended to implement the Natural Resource Protection Plan are as follows:

**Recommendations & Implementation Strategies**

- Appoint an Open Space Committee to work with conservation organizations and land trusts, and state and county representatives to inform citizens about natural resource protection and land preservation.
- Consider the use of the Act 153 (the Open Space Lands Act) and other legislation that enables the protection of natural resources.
- Consider the use of funding options, such as an Earned Income Tax, for the protection of open space and natural resources.
- Partner with neighboring municipalities, Dauphin County, the Tri-County Regional Planning Commission, PA DCNR, PA Game Commission, Manada Conservancy, and other local and regional land trusts and conservation organizations for the protection of natural resources.
- Partner with Dauphin County for the protection of the Swatara Greenway Corridor, and other waterway corridors identified in the Dauphin County Greenways Plan.

## Chapter 4 Historic Resource Protection Plan

### INTRODUCTION

#### **Overview**

The aim of historic resource protection is to retain the identity of a community or region as reflected in its natural and built environment. It ensures that the community's heritage and unique character are preserved to be appreciated by future generations. Historic resources provide a sense of place that fosters a connection to the community and a sense of pride among its residents. They also provide an awareness of the community's roots and traditions, and are a valuable educational tool. However, with increasing development pressure, many history structures and sites are sacrificed or altered to the point that their historic value is lost.

East Hanover Township has lost many historic buildings and structures over the years through neglect and demolition for new development; however, many significant resources remain and the Township still has an opportunity to preserve its history.

#### ***Township History***

The Lower Susquehanna Subbasin, which includes East Hanover Township, contains evidence of a rich and unique history. Archaeological investigations in the subbasin have uncovered artifacts supporting human occupation of the region as far back as 16,000 to 10,000 years ago (the Paleoindian Period). These are





Photo: Courtesy of PHMC

some of the earliest known inhabitants of the North American continent. Native inhabitants subsisted in the region until the early 1700s when the Susquehannock Indians, decimated by disease and warfare with the Seneca, were given land by the new American government in Conestoga Township, Lancaster County, effectively creating one of the first Indian reservations in Pennsylvania. The Susquehannocks became known as the Conestoga Indians and frequently worked for the residents of Lancaster County<sup>1</sup>.

By about 1730, Scots-Irish and German settlers arrived in the area. In 1736, a treaty was negotiated with the Indians, which gave the land south of the top of the ridge of the first mountain to the Provincial Government. East Hanover Township was formed in 1842. By 1875, the two main villages in the Township were Grantville and Shellsville. The main east-west road, now Jonestown Road, connected these villages to Harrisburg and Jonestown<sup>2</sup>.

Fort Indiantown Gap was established by the state in 1931 as the primary training base for the Pennsylvania National Guard. The Township's first four-lane highway, Route 22, was completed in 1944 and was used extensively by the military. Interstate 81 was completed in 1969 with an interchange at Grantville. It continues to bring growth to the Grantville area today.

## GOALS & OBJECTIVES

### **Overview**

The goals and objectives pertaining to historic resources were formulated by the East Hanover Township Planning Commission and Township residents during the monthly Comprehensive Plan meetings. Goals and objectives aimed at the protection of historic resources are as follows:

### **Goal #1**

#### **Protect the Township's historic and archaeological resources**

- Maintain and protect the historic resources that are currently identified and those that present themselves in the future.
- Continue to identify and document significant historic resources.
- Recognize the Township's landscape and agricultural tradition as important elements of the local heritage.
- Discourage demolition and neglect of historic resources.

<sup>1</sup> Source: Pennsylvania Historical and Museum Commission, Bureau for Historic Preservation

<sup>2</sup> Source: East Hanover Township Comprehensive Plan, 1993

- Promote adaptive reuse of historic resources.
- Educate property owners on the value and importance of historic resources and opportunities for their protection.

## LEGAL FRAMEWORK FOR HISTORIC RESOURCE PROTECTION

### Overview

In addition to the National Historic Preservation Act, which authorized the National Register of Historic Places, there are two pieces of legislation in Pennsylvania that enable historic resource protection at the local level: the Local Historic District Act (Act 167 of 1961), and the Pennsylvania Municipalities Planning Code (Act 247).

Pennsylvania's Local Historic District Act (Act 167 of 1961), *“authorizes counties, cities, boroughs, incorporated towns and Townships to create historic districts within their boundaries providing for the appointment of Boards of Historical Architectural Review; empowering governing bodies to protect the distinctive historical character of these districts and to regulate the erection, reconstruction, alteration, restoration, demolition or razing of buildings within the historic districts.”* Historic districts established by local ordinance under the Local Historic District Act must be “certified” by the Pennsylvania Historical and Museum Commission. Certification means that the district has been determined eligible for the National Register of Historic Places and authorization has been given to protect the character of the district through regulatory means. Under Act 167, applications pertaining to historic resources are reviewed by a township Historical Architectural Review Board (HARB), which then makes a recommendation to the governing body. There are currently no certified historic districts and therefore no HARB in East Hanover Township.

The second piece of legislation is the Pennsylvania Municipalities Planning Code (Act 247). Under Act 247, municipalities may regulate activities related to historic resources by ordinance for the purpose of their protection. A municipally organized historical commission could act in an advisory capacity to the governing body, conducting research and providing data on historic resources.

As in most communities, the main threats to historic resources are: demolition to make way for new development; demolition by neglect; inflexible modern building and land use codes that preclude the ability to adaptively reuse a historic building (e.g., parking and setback requirements); and the practical and financial difficulties of maintaining a historic home or structure. The Local Historic District Act the Pennsylvania Municipalities Planning Code provide municipalities with a means to combat these threats.

East Hanover Township has no zoning ordinance provisions that regulate demolition, alteration, or adaptive reuse of historic resources. Although the Subdivision and Land Development Ordinance of April 1, 2003 (SALDO) contains a historic resource provision, it appears that it effectively applies only to the one building in the Township listed on the National Register. Moreover, while community volunteers are active in the East Hanover Township Historical Society, they are not a formally recognized historical commission acting in an advisory capacity to the Board of Supervisors. Finally, the Historical Society, which currently has six members, has difficulty recruiting new volunteers due in part to a lack of awareness of, and sense of connection to the Township's heritage.

## EXISTING HISTORIC RESOURCES

### Overview

The discussion of existing conditions provides an inventory of the Township's historic resources, describes issues related to their current condition, and analyzes current protections afforded by the Township and other agencies. Historic resources are categorized as National Register Listed Resources, National Register Eligible Resources, Historic Districts, Historic Resources of Local Significance, and Archaeological Resources.

### National Register Resources



John Todd House  
(Courtesy PHMC)

The National Register of Historic Places was established by the National Historic Preservation Act of 1966. In Pennsylvania, the program is managed by the Bureau for Historic Preservation (BHP), a department within the Pennsylvania Historical & Museum Commission (PHMC). The program is designed to assist state and local governments, federal agencies, and others identify significant historic and archeological resources worthy of preservation and of consideration in planning and development decisions. Properties listed on the National Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. To be eligible for listing on the National Register, a property must meet the National Register Criteria for Evaluation. These Criteria require that a property be old enough to be considered historic (generally at least 50 years old) and that it still look much the same way as it was in the past. In addition, the property must meet one of the following criteria<sup>3</sup>:

- be associated with events that have made a significant contribution to the broad patterns of our history; or
- be associated with the lives of persons significant in our past; or

<sup>3</sup> Pennsylvania Historical and Museum Commission, *National Register of Historic Places Fact Sheet*.

- embody the distinctive characteristics of a building type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or
- have yielded or may be likely to yield, information important in history or prehistory.

A committee of BHP staff review information submitted to the BHP to determine whether a resource is eligible for the National Register (using the criteria above). If found eligible, the resource is given a Determination of Eligibility (DOE) and the nomination process can begin. The State Historic Preservation Board reviews all nominations to the National Register. Upon determination of its level of significance and that the resource meets the Criteria for Evaluation, the nomination is sent to the National Park Service (NPS), which either approves or denies the nomination. If approved by the NPS, the resource is entered into the National Register of Historic Places.

Listing on the National Register does the following:<sup>4</sup>

- honor a historic property by recognizing its importance to its local community, state of the nation;
- *encourage* the preservation of historic properties by documenting their significance;
- list properties *only* if they meet the National Register Criteria for evaluation;
- facilitate the review of federally funded, licensed, or permitted projects to determine their effects on historic properties;
- provide an opportunity to consult with government agencies to mitigate projects that will adversely affect historic properties;
- provide information about historic resources for planning purposes;
- offer federal tax benefits to owners of income producing (depreciable) historic properties if they rehabilitate their properties according to preservation standards.

Listing on the National Register does not:<sup>5</sup>

- restrict the rights of property owners;

---

<sup>4</sup> Pennsylvania Historical and Museum Commission, *National Register of Historic Places Fact Sheet*.

<sup>5</sup> Pennsylvania Historical and Museum Commission, *National Register of Historic Places Fact Sheet*.

- require that properties be maintained, repaired, or restored;
- prevent destruction of a resource by federal, state, local, or private development;
- guarantee that grant funds will be available for projects;
- require property owners to follow preservation standards on their properties (unless they wish to apply for tax benefits).

The John Todd House is the only site in East Hanover Township listed on the National Register of Historic Places. The following excerpt of the description of the house is taken from the Registration Form dated 1988 that was submitted to the PHMC:

The John Todd house is a circa 1772 2 1/2 story five-bay fieldstone building located in East Hanover Township, Dauphin County, Pennsylvania. The house sits today approximately 150 feet south of Meadow Lane (L.R. 22053) on 6.5 acres of the original 190 acre Todd farm. It is surrounded by a mixture of fields, woods, and widely scattered houses in a predominantly rural but developing residential area. Also on the property are a summer house dating from about 1832, a hand dug well, a recently constructed pond and a barn which has been constructed on the foundation of an earlier barn which had burned. The topography of the property and surrounding area is gently rolling with numerous springs emerging from the ground to form rivulets.

The John Todd house, located in East Hanover Township, Dauphin County, Pennsylvania, is one of the few remaining stone homes of the early Scots-Irish settlers who populated "Hanover" Township in large numbers in the 1700's. The house is significant because it is a fine example of vernacular Georgian architecture. That several such houses existed in the township is a little-known fact since most now appear to be gone, but the "Direct Tax" of 1798 for Hanover Township shows that a dozen substantial stone houses were scattered throughout the area at that time.

The general assumption has been that the Scots-Irish built rudimentary dwellings because their pioneering spirit discouraged permanence. While it is true that many tended to move on quickly, it is also true that many spent their entire lives in their original settlements. John Todd was one of the latter. Todd's parents and grandparents settled in Hanover Township (then a larger area than present-day East Hanover Township) prior to 1745 and promptly took up land claims. John was born in 1742 and acquired the 190 acre property on which he built his home in 1771. The exact date of construction of the house is not known. It is felt, however, that construction occurred about 1772 as the 1773 tax records show Todd to be the most highly taxed resident of the township. Since his land holdings were no greater than those of many others at that time, the difference was probably due to his more substantial home.

The simple, but classic, Georgian style of the house reflects Todd's awareness of design as it existed outside the confines of rural frontier area in which he lived. Elements incorporated into the house---or omitted as the case may be---reflect the English-Irish-Scots influence rather than the German influence which was being felt elsewhere in the area at that time. Among the typically Anglo features are blank end walls; dual gable end chimneys, corner fireplaces, massive cooking fireplace with no provision for a bake oven.

Recommendations & Implementation Strategies:

- Identify and document historic resources in the Township that meet the National Register Criteria for Evaluation and apply for National Register designation for these resources.
- Create and continuously update an official list and map of historic resources to which Zoning Ordinance provisions will apply
- Conduct public education through the Township newsletter, website, local news media, and other sources to inform residents of existing National Register Listed resources in the Township, of efforts to list more resources, and of what listing on the National Register means and the benefits it carries.
- Amend the zoning ordinance to include a historic resource protection overlay district that would classify National Register Listed resources as Class 1 resources and strictly regulate impacts on them while providing flexibility for adaptive reuse. The ordinance should also require a historic resource impact study for any development within a specified distance (e.g. 300 feet) of a Class 1 historic resource.
- Incorporate historic resources protection with open space, and recreation planning by including historic resources in open space areas and as recreational destinations.
- Seek technical and financial assistance from historic preservation organizations such as the PHMC.
- Investigate ways to provide owners of historic buildings with informational resources pertaining the rehabilitation and update of their historic buildings.

***National Register Eligible***

A resource may be deemed eligible for the National Register by the Bureau for Historic Preservation. However, that resource might never obtain a listing on the National Register. Under Section 106, properties that are determined eligible for the National Register are afforded the same treatment as those listed on the National Register. That is, the impact of any federal project on a historic resource must be evaluated and action must be taken to avoid or mitigate the impact of the project. In East Hanover Township, three resources have received a Determination of Eligibility. They are:

- The Appalachian Trail
- Fort Indiantown Gap Historic District (date built 1937)

- The Wallace House/Snodgrass House – Located at 1429 Ridge Road, Grantville. Built 1743, 1770.

**Recommendations & Implementation Strategies:**

- Identify and document historic resources in the Township that meet the National Register Criteria for Evaluation and apply for National Register designation for these resources.
- Create and continuously update an official list and map of historic resources to which Zoning Ordinance provisions will apply
- Conduct public education through the Township newsletter, website, local news media, and other sources to inform residents of National Register Eligible resources in the Township, of efforts to list more resources, and of the importance of a Determination of Eligibility for the National Register.
- Amend the zoning ordinance to include a historic resource protection overlay district that would classify resources that have received a Determination of Eligibility for the National Register as Class 1 resources and strictly regulate impacts on them while providing flexibility for adaptive reuse. The ordinance should also require a historic resource impact study for any development within a specified distance (e.g. 300 feet) of a Class 1 historic resource.
- Incorporate historic resources protection with open space and recreation planning by including historic resources in open space areas and as recreational destinations.
- Establish partnerships with historic preservation organizations.
- Investigate ways to provide owners of historic buildings with informational resources pertaining the rehabilitation and update of their historic buildings.

***Historic Districts***

The Fort Indiantown Gap has received a Determination of Eligibility for the National Register. This historic district lies within the grounds of the Fort Indiantown Gap Military Reservation. There are no other formally recognized (i.e., National Register Listed or Eligible) historic districts in the Township and no PHMC Certified districts. However, given their concentrations of significant historic buildings, Grantville and Shellville could be candidates for designation as Historic Districts.

Recommendations & Implementation Strategies:

- Identify and document historic resources in Grantville and Shellville that meet the National Register Criteria for Evaluation and consider applying for designation as a National Register Listed Historic District and/or PHMC certification as an Act 167 Local Historic District.
- Create and continuously update an official list and map of the township's historic districts and their contributing historic resources to which Zoning Ordinance provisions will apply
- Conduct public education through the Township newsletter, website, local news media, and other sources to inform residents of the significance of Grantville and Shellville and what PHMC certification and listing on the National Register means and the benefits they carry.
- Incorporate historic districts with open space and recreation planning by including them as recreational destinations.
- Establish partnerships with historic preservation organizations.

**Locally  
Significant  
Resources**

Historic resources of local significance are those that are meaningful to the community and important to its identity and heritage. These resources are documented in the book *Historic Sites in East Hanover Township, Dauphin County, PA*, compiled by the Historic Map Committee of the East Hanover Township Historic Society in June, 2000. Among these are the ruins of the Manada Furnace, several early school houses, several mill sites, a number of churches and buildings in and around Grantville and Shellville, and remnants of the Union Canal, including several locks, along the Swatara Creek.

Recommendations & Implementation Strategies:

- Identify and document historic resources in the Township that meet the criteria established by the East Hanover Township Historical Society.
- Create and continuously update an official list and map of historic resources to which Zoning Ordinance provisions will apply.



**Recommendations & Implementation Strategies (continued):**

- Conduct public education through the Township newsletter, website, local news media, and other sources to inform residents of Locally Significant Historic Resources in the Township and efforts to identify more resources, and of the importance of identifying Locally Significant Historic Resources.
- Amend the zoning ordinance to include a historic resource protection overlay district that would classify Locally Significant Historic Resources as Class 2 resources and strictly regulate impacts on them while providing flexibility for adaptive reuse. The ordinance should also require a historic resource impact study for any development within a specified distance (e.g. 300 feet) of a Class 2 historic resource.
- Incorporate historic resources protection with open space, and recreation planning by including historic resources in open space areas and as recreational destinations.
- Establish partnerships with historic preservation organizations.
- Investigate ways to provide owners of historic buildings with informational resources pertaining the rehabilitation and update of their historic buildings.

***Archaeological Resources***

Approximately 2,865 archaeological sites are recorded in the Lower Susquehanna River Subbasin, which includes East Hanover Township. Of these, 1,188 can be dated to specific prehistoric time periods and 174 to specific historic time periods<sup>6</sup>. The major research in this region has been conducted by the Pennsylvania Historical and Museum Commission. Franklin and Marshall College has also conducted research in the subbasin.

According to PHMC records, twenty surveys have been conducted in East Hanover Township, including several prehistoric sites, two farmsteads, and a historic industrial site. The two farmstead sites have a National Register status of "Considered Eligible by Submitter." The remaining sites are noted as "Insufficient Data Available to Make a Decision." The sources of the surveys are "Federal/State Compliance" and "Informant Interview/Amateur Survey." It is very likely that more sites remain undiscovered. Areas that are near a water source hold the most potential for an archaeological site.

<sup>6</sup> Source: Pennsylvania Historical and Museum Commission, Bureau for Historic Preservation

Recommendations & Implementation Strategies:

- Work with the PHMC to identify and document archaeological resources in the Township.
- Amend the zoning ordinance to include a historic resource protection overlay district that would include protection of identified archaeological resources. The ordinance should also require a historic resource impact study for any development within a specified distance (e.g. 300 feet) of an archaeological resource.

## Chapter 5 Transportation Plan

### INTRODUCTION

#### **Overview**

Automobile travel is the dominant form of transportation in East Hanover Township. Located approximately 15 miles east of Harrisburg and 10 miles north of Hershey, the Township faces increasing congestion on its roads as the region grows. The Township's proximity to these two business centers has helped transform it into a bedroom community. Commute to work data indicate that 95% of the Township's workers travel to work by automobile and 90% drive alone<sup>1</sup>. The average travel time to work is 24.4 minutes<sup>2</sup>. The Township also experiences a large amount of through traffic destined for Harrisburg, Hershey, and I-81. Much of this is truck traffic generated by the Hershey complex in Derry Township.

The high rate of growth in the Harrisburg-Hershey region in recent years translates into more vehicles and more time spent on the road. This places demands on the Township's roads, most of which were not designed for such a high level of use. As a result, traffic increases, road safety decreases, road maintenance costs rise, and the quality of life of East Hanover residents diminishes. Confronted with this situation, the Township must devise a plan that addresses existing conditions and the impacts of future development.

---

<sup>1</sup> US Census Bureau, 2000.

Transportation planning can have a significant impact on land use and on a community's quality of life. A balance must be reached between planning for needed road improvements and maintaining the community's rural character. It is the intent of this Comprehensive Plan to document needed circulation system improvements that will enhance the safety and efficiency of the Township's road network, and to coordinate future residential and commercial development with the transportation system. Items of concern and planned improvements are shown on map A-4. This Comprehensive Plan also seeks to avoid increased accessibility to the Township's undeveloped areas and mitigate impacts on its rural landscape. This approach is consistent with the goal of preserving the Township's rural character and sensitive natural features, but recognizes the need to relieve existing pressures on the circulation system.

## GOALS & OBJECTIVES

**Goal #1**                      Provide a safe, efficient road system consistent with rural character.

*Objectives:*

- Improve safety, congestion, and access issues along Route 22.
- Limit access points on major roads.
- Promote road design that is consistent with the Township's rural character.
- Limit the construction of new roads in the Township's interior.
- Limit the construction of cul-de-sacs and promote through-streets.

**Goal #2**                      Provide for alternative modes of transportation.

*Objectives:*

- Obtain a parking area for carpoolers.
- Promote public transit service to Penn National, Harrisburg, and Hershey.
- Promote sidewalks and bike paths where appropriate.

## EXISTING CONDITIONS

**Road Network**                      East Hanover Township's road network is largely comprised of two-lane rural roads. The Township contains approximately 89 miles of public roads. The Township maintains Fifty-Nine miles. Thirty miles are maintained by the state. State maintained roads are Interstate 81, US22

(Allentown Boulevard), PA743 (Laudermilch Road), PA 443 (Mountain Road), Canal Road, Sand Beach Road, Manada Gap Road, and Manada Bottom Road.

Township maintained roads are primarily winding, two-lane country roads that provide local access for residents. These rural roads contribute to the community's character and should remain unchanged except to correct safety issues. Traffic is moderate on these roads.

The state maintained routes serve as the Townships main transportation arteries. I-81 carries heavy volumes of automobile and truck traffic across the center of the Township. The interchange in Grantville provides access to and from PA743, PA443, and US22 and thus generates additional traffic on these roads. US22 parallels I-81 to the south and also traverses the Township in an east-west direction. Congestion on US22 and the potential for deteriorating conditions as the corridor develops is a major concern. PA743 is a rural, two-lane road that serves as the main north-south route in the Township. It carries heavy automobile and truck traffic between Hershey to the south and I-81 to the north. Congestion and safety along this route are a major concern and pose one of the greatest challenges to the Township and the region. In June 2004, HATS adopted the PA39/743 Transportation and Land Use Study, which examines conditions along PA743 and identifies needed improvements (see *Other Transportation Issues* below).

Sand Beach Road, Manada Gap Road, and Manada Bottom Road distribute north-south trips through the western half of the Township. Traffic on these roads is moderate but increasing. The existing capacities of these roads should be maintained in order to preserve the rural character of this area of the Township.

### **Traffic Volume**

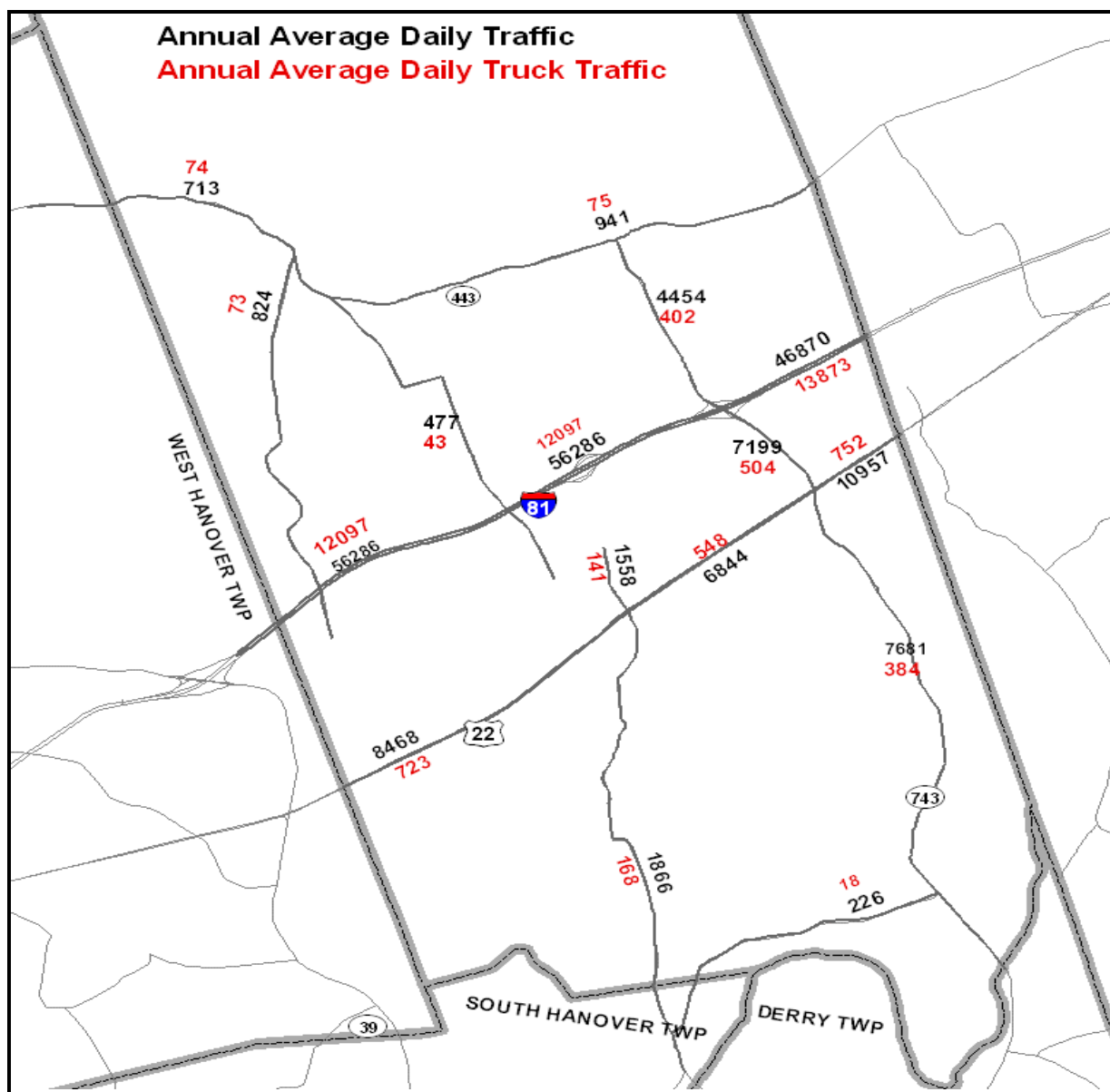
Traffic volume data are indicators of the potential for road capacity problems and help determine roadway function, design, and appropriate improvements. Plans for future residential and commercial development should consider current traffic volumes and potential impacts on traffic volumes. It is the intent of this Comprehensive Plan to avoid contributing to widespread increases in traffic volumes by coordinating growth with planned road improvements and focusing growth near roads with sufficient capacity.

Penn DOT's Annual Average Daily Traffic (AADT) counts include all types of vehicles (Figure 5-1). AADT data for East Hanover Township show the heaviest traffic volumes along I-81, PA743 and US22 (See Figure 5-1). I-81 carries an average of 64,469 vehicles per day west of the interchange and 50,362 vehicles east of the interchange, indicating that more traffic is flowing between PA743 and the Harrisburg area. PA743 carries an average of 11,413 vehicles per day between the Township's southern boundary and US22, and 5,547 vehicles between US22 and I-81. US22 carries an average of 8,290 vehicles per day on the segment that lies east of PA743, 7,704 vehicles on the segment between PA743 and Sand Beach road, and 10,309 vehicles between Sand Beach road and PA39 in

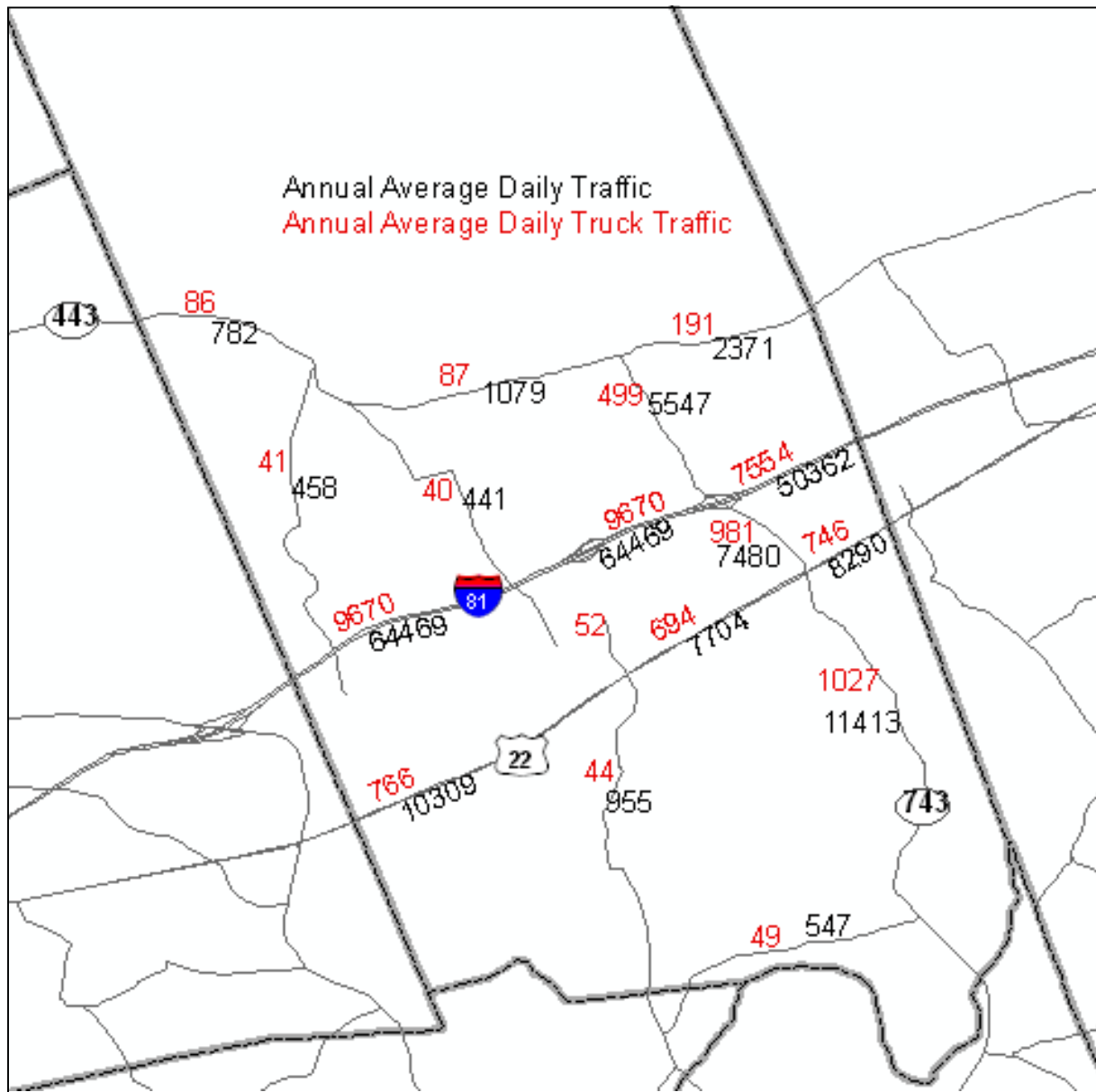
West Hanover Township. The traffic counts indicate that most traffic is flowing between PA743 and US22 and I-81.

Annual Average Daily Truck Traffic data shows heavy truck volumes on I-81, PA743 and US22 (Figure 5-2). I-81 carries 9,670 trucks west of the interchange and 7,554 trucks east of the interchange. PA743 south of US22 has the second highest volume of truck at approximately 1,027 per day. US22 carries 700 to 800 trucks per day. Again, traffic counts indicate that most truck traffic flows between PA743 and US22 and I-81.

**Figure 5-1: Average Annual Daily Traffic Volumes for 1999**



Source: Penn DOT Traffic Counts 1999 (Accessed 2009)

**Figure 5-2: Average Annual Daily Truck Volumes for 2007**

Source: Penn DOT Traffic Counts, 2007 (Published 2009)

A comparison of 1999 and 2007 traffic volumes reveals the following trends:

- Route 743: Significant increases in volume were found both south and north of the I-81 Interchange. The increases are higher on the southern side of I-81.
- Interstate 81: Decreases of truck volume both east and west of the Route 743 Interchange. Overall AADT has significantly increased.

- Route 22: Moderate increase of truck volume west of Route 743, with little change present on the eastern side of Route 743. Significant increase of AADT on the western side of Route 743 while a decrease is found on the eastern side of 743.
- Route 443: Significant increases of AADT are found from the eastern end of the Township to Manada Gap. Greater increases of Truck Traffic are found East of Route 743.
- Significant decreases of both Car and Truck Volume were found on Manada Gap Rd and Sand Beach Rd.
- Significant increases of both Car and Truck Volume were found on Canal Road.

### **Functional Classification**

Both the East Hanover Township Zoning Ordinance and Subdivision and Land Development ordinance specify the functional classification of roads in the Township. However, there are inconsistencies between the two documents. Removing the list from the Zoning Ordinance and simply referencing the appropriate section of the SALDO should remedy this. Furthermore, the classification system should differentiate between be urban and rural roads, similar to the functional classification system used by Penn DOT. The Township's road master is currently re-evaluating the roads and their functional classifications.

#### Implementation Strategies:

- Update the functional classifications of roads using Penn DOT's urban/rural scheme as a guide and amend the SALDO to reflect the updated classifications.
- Amend the Zoning Ordinance to remove the list of functional classifications of roads and instead insert a reference to the functional classifications contained in the SALDO.

### **Rural Roads**

Township maintained roads are primarily winding, two-lane country roads that provide local access for residents. These rural roads contribute to the community's character and should remain unchanged except to correct safety issues. Construction of new roads in the Township's interior should be limited and any new road that is built should conform to a rural design.

#### Implementation Strategies:

- Establish ordinance provisions to regulate uses, setbacks, and signs, and billboards along rural roads.
- Establish landscaping requirements for land uses that front on a rural road.



**Scenic Roads**

Penn DOT administers the Pennsylvania Byways program, which recognizes selected roads for their cultural, historical, recreational, archaeological, scenic and natural qualities. Roads are designated as Pennsylvania Byways at the request of the local community and upon successfully completing an application process. Designation as a Pennsylvania Byway carries many benefits including the ability to protect of the road's qualities, eligibility for federal funding, marketing by Penn DOT and DCED, and eligibility for designation as a National Scenic Byway by the Federal Highway Administration. Designation as a Pennsylvania Byway also promotes local pride and heightens local desire to protect the road's qualities.

Seventeen Pennsylvania Byways are currently recognized. The nearest is the Lebanon-Cornwall Byway, which runs 14 miles along Route 419 between Routes 322 and 422. Potential candidate roads in East Hanover Township for Pennsylvania Byways designation are as follows:

- Mountain Road – for its scenic and natural qualities.
- Sand Beach Road – for its scenic and natural qualities and because it contains a portion of the Horseshoe Trail.
- Manada Bottom Road - for its scenic and natural qualities and because it contains a portion of the Horseshoe Trail.
- Jonestown Road – for its scenic qualities and historical significance as the first road leading west out of New York City.
- Devonshire Road – for its scenic and natural qualities.

**Implementation Strategies:**

- Establish ordinance provisions to regulate uses, setbacks, and signs, and billboards along identified scenic roads.
- Establish landscaping requirements for land uses that front on a scenic road.
- Require a viewshed analysis for new development and prohibit/minimize obstruction of views from scenic roads.
- Apply for Pennsylvania Byways designation for the Township's identified scenic roads.

**Bridges**

Penn DOT is responsible for ensuring that the 32,000 bridges in the Commonwealth are inspected according to state and federal regulations. Each bridge must be inspected at least once every two years. Some bridges, such as those with weight restrictions, are inspected once a year. Approximately 25,000 bridges are owned by the state and inspections are

performed by Penn DOT employees and consultants who are certified bridge safety inspectors. Penn DOT provides oversight for the approximately 7,000 bridges owned and inspected by local municipalities and other agencies. The Pennsylvania Turnpike Commission is responsible for inspecting its bridges and is required to submit the inspection information to Penn DOT.

Inspection data are used to determine when a bridge requires maintenance and repair actions. Penn DOT uses the combined inspection data from all bridges to plan future repair and replacement projects and to estimate the cost of such projects.

There are 23 state-owned bridges, 19 township-owned bridges, and 3 county-owned bridges in East Hanover Township. Five of the state-owned bridges have been deemed “structurally deficient” by Penn DOT inspectors, meaning that the bridge has deterioration to one or more of its major components. According to Penn DOT, although deterioration is present, a structurally deficient bridge is safe. Of these five bridges, four are identified on the HATS 2009-2012 Transportation Improvement Program (see Transportation Improvement Program below). Work on Manada Bottom Bridge 2 has been completed, and work on Manada Creek Bridge 2 is in progress.

Of the 19 township-owned bridges, the Dauphin County bridge engineer inspects nine bridges; the Township inspects the other ten. Six bridges are posted with weight restrictions. The three county-owned bridges are maintained by the county on township roads.

### ***Township Bridge Projects***

Three bridge improvement projects have been identified by the Township. Additional bridge projects are included in the HATS Transportation Improvement Plan (See “HATS Transportation Improvement Plan” section below). The bridge improvement projects identified by the Township are as follows:

**B1 – Jonestown Road over Bow Creek between Spring Road and Bow Creek Road**– Bridge weight is restricted to 15 tons and the bridge is rated as poor condition. Proposed remedy is the replacement of the existing bridge. The estimated cost is \$590,000. Funding approval is pending. The estimated completion is 2012

**B2- Carlson Road Bridge over Manada Creek** - The bridge carrying Carlson Road over the Manada Creek is a single lane structure and is currently posted for 18 tons. The bridge is located on a school bus route. Adjacent to the bridge is a dry hydrant that is utilized by the fire department to fill the tanker trucks from the creek. The bridge width does not meet current standards and the approach guide rails also do not meet current standards. The most recent Bridge Inspection performed in 2007 gives the bridge and overall structural condition appraisal of 5 (fair condition). The Proposed

Remedy is the replacement of the existing bridge at a cost of \$590,000. The estimated completion is 2013.

**B3 – Crooked Hill Road over the East Branch Manada Creek between Carlson Road and Crawford Road** – Bridge weight is restricted to 33 tons and the bridge is rated as poor condition. Proposed remedy is the replacement of the existing bridge. The estimated cost is \$475,000. Funding approval is pending. Completion in October 2011 is anticipated.

**B5 – South Meadow Lane Drainage Improvements between Trail Road and Pheasant Road (south)** – Failing and deteriorated drainage are in need of replacement. Estimated Cost \$66,000. Funding has been obtained through the county grant program. The estimated completion is 2012.

Implementation Strategies:

- Lobby HATS to have needed bridge improvements placed on its Transportation Improvements Program.
- Lobby Penn DOT to have needed bridge improvements placed on its Twelve Year Program.
- Continue to seek funding for need bridge projects.

***Alternative  
Modes of  
Transportation***

Alternative modes of transportation include airports, rail service, bus service, commuter lots, pedestrian facilities, and bikeways. Aside from carpooling, alternative transportation in East Hanover Township is extremely limited. Due to its low population density and location, public transit services have not been established in the Township. Residents can, however, access bus service as well as air and rail in nearby communities. Daily travel by foot or bicycle is limited and is not practical or feasible for most East Hanover residents.

Available alternative modes of transportation are:

- Airports: The nearest airport is Harrisburg International Airport (HIA) located in Middletown. HIA provides daily service to several east coast and Midwest cities and Toronto.
- Rail: Rail service is provided by Amtrak, which has stations in nearby Elizabethtown, Harrisburg, Lancaster, and Middletown. The Keystone train connects Harrisburg to New York City via Philadelphia. The Pennsylvanian connects Pittsburg to New York City via Harrisburg and Philadelphia.
- Bus: The following national and regional bus services are present in the near vicinity of East Hanover Township.

- Greyhound Lines provides nationwide service and has stations at Hershey, Hershey Medical Center, Hummelstown, and Harrisburg.
- County of Lebanon Transit (COLT) is currently providing bus service between Fredericksburg, Lickdale, Indiantown Gap and the Hollywood Casino.
- Capitol Area Transit (CAT) provides service between Harrisburg and Hershey. CAT also operates a Shared Ride/Paratransit Division. Seniors aged 65 and over ride free on all regularly scheduled CAT bus routes.
- A network of ten community based transportation programs provide van service for all Dauphin County residents aged 60 and over.
- Hershey Intermodal Center: The Hershey intermodal Center is located adjacent to Hershey Park at West Chocolate Avenue and Park Avenue. It currently provides bus service; train service is proposed for the future. Capital Area Transit runs ten bus routes from this location, serving the Harrisburg region. A service agreement between CAT and Penn National was proposed in recent years but did not come to fruition. COLT does not use the Hershey Intermodal Center.
- Carpool: An informal carpool lot has emerged on Bow Creek Road just south of the I-81 interchange, where carpoolers are parking in a field along the road. The Township is interested in arranging for a more suitable location for the carpool lot.

#### Implementation Strategies:

- Continue to participate in efforts by HATS and public transportation providers to expand service into appropriate areas of East Hanover Township.
- Meet with hotel operators and other appropriate parties to establish an arrangement for the sharing of, or dedication of space for a new carpool parking lot. Enlist the support of HATS in this effort.

### **HATS Transportation Improvement Program**

The Harrisburg Area Transportation Study (HATS) prepares a Transportation Improvement Program (TIP) every two years. The TIP reflects the priority projects adopted by HATS and is included in Penn DOT's Twelve Year Program. Input is solicited from HATS municipalities, the public and interested parties through a public planning process. TIP projects can include all transportation modes: highway, bridges, aviation, rail freight, public transit and other transportation modes. Projects in East Hanover Township that are included in the HATS 2009-2012

Transportation Improvement Program (and Penn DOT's Twelve Year Program) are listed below. It should be noted that Township project designations have not been included with these projects, as these were not considered to be immediate priorities for action by the Township.

- **Allentown Boulevard US 22 Bridge (HATS# MPMS 84012)** - Replace US 22 bridge over Manada Creek in East Hanover Township. Estimated time for completion is July 2013.
- **Manada Bottom Road Bridge 1 (HATS# MPMS 19106)** - Replace bridge on SR 2017 over Manada Creek in East Hanover Township. Estimated time for completion is 2017.
- **Manada Creek Bridge 2 (HATS# MPMS 74516)** - Replace bridge on SR 2017 (Manada Bottom Road) over Manada Creek in East Hanover Township (in progress). The estimated time for completion is July 2013.

Implementation Strategies:

- Continue to work to complete the bridge improvements listed on the TIP.
- Continue communications with HATS and Penn DOT to ensure that needed bridge and road improvements get placed on their TIP and Twelve Year Programs.

***Township-Identified  
Transportation  
Issues***

In addition to the projects included in the TIP, the Township has identified several other transportation issues that need to be addressed. The Township can lobby HATS to include these projects in its next TIP if it deems them to be priorities. It can also seek grant funding to assist with the cost of improvements. The issues on PA743 listed below have also been identified by HATS in its *PA39/743 Transportation and Land Use Study* (adopted June 2004).

PA743 experiences extremely high volumes of car and truck traffic traveling between Hershey and the I-81 interchange. These traffic volumes exceed the designed capacity of the roadway, causing congestion problems and safety concerns along the entirety of the East Hanover portion of the route. This is an issue of local as well as regional concern. Several issues have been identified by the township and HATS and are included the HATS *PA 39/743 Study*:

- **PA743 and Canal Road:** Sight distance is severely limited at this intersection due to a rise in the roadway. The PA39/743 Study recommends grading slopes to the north and south of PA743. It estimates the cost at \$11,600 and suggests use of local funds and Liquid Fuels funds.

- PA743 and Meadow Lane: Sight distance is severely limited for vehicles on Meadow Lane attempting to enter PA743 and for vehicles on PA743 approaching the intersection. The PA39/743 Study recommends realignment of the roadway, removing obstructions, and restricting access to right-in/right-out. It estimates the total cost at \$260,300 and suggests financing through state and federal funding and Penn DOT's Twelve-Year Program
- PA743 and US22: Stacking at the intersection of PA743 and US22 occurs at peak hours and causes delays at the intersection. The lack of turning lanes on to US22 contributes to the problem. Possible remedies cited in the PA39/743 Study include construction of a left turn lane on both northbound and southbound PA743, and a right turn lane on southbound PA743. The PA39/743 Study estimates total costs at \$3,174,000 and suggests financing through state and federal funding and Penn DOT's Twelve-Year Program.
- PA743 from Jonestown Road to US22: Congestion and stacking at intersections occurs at peak times along this segment of PA743. The PA39/743 Study recommends construction of northbound and southbound left turn lanes on PA743. Coordination of the traffic signals at Jonestown Road and at US22 would also help to relieve congestion and stacking. The PA39/743 Study estimates total costs at \$400,000 and suggests financing through state and federal funding and Penn DOT's Twelve-Year Program.
- PA443 at Bow Creek Road: Insufficient drainage causes pooling and generally wet conditions on PA443 at Bow Creek Road. Penn DOT recently improved PA443 up to Bow Creek Road and will continue the improvement eastward from the Lebanon County line. It is unclear at this time whether Penn DOT intends to eventually correct the drainage problem at Bow Creek Road. The Township should inquire about this and lobby Penn DOT to remedy the drainage problem.

Implementation Strategies:

- Work to get the funding from sources identified in the PA 39/743 Study in order to accomplish the recommended road improvements.
- Lobby HATS to place these projects on its Transportation Improvements Program.
- Lobby Penn DOT to place these projects on its Twelve Year Program.

In addition to the issues with PA 743, the Township has identified the following:

- **US22 Access Management:** The issue of multiple driveway access points along US22 is both a local and regional concern. Numerous access points along a roadway increase congestion and present hazards to safety. As the Township develops in the future it must limit and consolidate driveway access points directly to/from US22. A separate service lane can be installed parallel to US22 or to the rear of the businesses and homes along US22. Commercial development can also be contained to selected intersections along US22 to prevent strip development and the proliferation of driveway access points. Residential developments should be accessed from existing roads rather connecting new roads to US 22.

Implementation Strategies:

- Establish design guidelines for non-residential uses to require rear access lanes, side and rear parking, and minimal setbacks from the street line.
- Consider an Official Map to identify and obtain rights-of-way for access lanes along US 22.

- **Meadow Lane/Laudermilch Road Intersection Improvements (EHT Designation R3)** – There is poor sight distance at this intersection. The proposed remedy is to modify the profile and shoulders of Laudermilch Road to improve sight distance. Estimated cost \$330,000. Funding approval is pending. The estimated project completion is 2012.
- **Laudermilch Road / Kelly Court / Faith Road Intersection Improvements (EHT Designation R4)** – There is poor sight distance at these intersections along Laudermilch Road. The proposed remedy is to modify the profile and shoulders of Laudermilch Road to improve sight distances. Estimated cost \$270,000. Funding approval is pending. The estimated project completion is 2012.
- **Township wide Traffic and Street Signs Improvements (EHT Designation R14)** - Township street signs are missing or are not meeting current standards. The proposed remedy is to inventory and replace or install road signs as needed. Estimated cost \$100,000. Funding approval is pending. The estimated project completion is 2011.

Implementation Strategies

- Secure grant funding to complete identified projects.

- **Relocation of the carpool lot on Bow Creek Road at I-81:** An informal carpool lot has arisen where commuters are parking in a field along Bow Creek Road near the I-81 interchange. Due to safety concerns, the Township would like to find a new, nearby location for the carpool lot. The Township should speak to the hotel operators in the vicinity to arrange for permission to use of a portion of their parking lot as a carpool area.

Implementation Strategies:

- Meet with hotel operators and other appropriate parties to establish an arrangement for the sharing of, or dedication of space for a new carpool parking lot. Enlist the support of HATS in this effort.
- Continue discussions with representatives with CAT and Penn National Gaming to procure CAT Service to the casino.
- Place proposed location of parking lot on an Official Map.

- **Pollution from idling trucks:** Trucks frequently stop at the rest stop on I-81 in East Hanover Township with their engines idling for extended durations in order to maintain heating and air conditioning in the cab. Some newer trucks are equipped to provide heat and air conditioning without idling the engine. However, until all trucks are equipped, idling engines will continue to contribute to declining air quality in the area.

Implementation Strategies:

- The Township should discuss with Penn DOT and the FHWA any additional measures that can be taken to improve the existing rest stop to provide electrical, heating, air conditioning and other needed services.

- **Congestion and safety:** Minimizing traffic congestion and maintaining safe roads are the Township's primary transportation concerns. This becomes increasingly challenging as development increases across the Township.



Implementation Strategies:

- Amend SALDO to require a Traffic Impact Study.
  - Coordinate development density and type with transportation infrastructure.
- 
- **Cul-de-sacs:** Cul-de-sac streets prevent the flow of through traffic. The Township wishes to promote through streets and extend access to/from existing cul-de-sacs in order to facilitate the movement of traffic.

Implementation Strategies:

- Amend SALDO to remove construction of cul-de-sac streets as an option or to require an access easement at the end of cul-de-sacs.
- Adopt an Official Map to identify access drives at the end of existing cul-de-sacs where a through street connection can be formed.

**PLANNING IMPLICATIONS*****Transportation  
& Land Use***

It is the intent of this Comprehensive Plan to coordinate growth with transportation infrastructure by directing future growth toward roads that will have adequate capacity and safety, and by discouraging growth in the Township's rural interior where roads are not designed to accommodate more growth and where future improvements are not planned. Because US22 and PA743 are the Township's main arteries and provide access to local and regional destinations, and because future improvements to these two roads are either pending or likely to occur in the future, they offer the most logical corridors for future growth.

However, future development of the US22 and PA743 corridors must be planned in a manner that avoids commercial strip development and sprawl along these two roadways, which would only exacerbate existing problems. Small-scale commercial and office development centered at main intersections along US22 and with rear access lanes and parking facilities will eliminate the potential for multiple curb cuts along that roadway. Small-scale commercial, office, and/or light industrial development on PA743 adjacent to Derry Township will take advantage of the proximity to Hershey and completed improvements to PA743 in that area. Setbacks and landscaping requirements should also be instituted to maintain the aesthetics of the roadways.

Improvements to roads in the Township's western interior will continued to be improved to maintain safety, but increased capacity should be avoided as this commonly leads to more traffic and higher speeds and can be a catalyst for more land development.

Plans for future road and bridge improvements must take into consideration the plan for future land use and the impacts of land uses on traffic volumes. At the time of a development plan application, a traffic impact study should be submitted to the Township.

## Chapter 6 Land Use Plan

### INTRODUCTION

#### **Overview**

Since its 1993 Comprehensive Plan, East Hanover Township has experienced a significant amount of growth and development, which is reflected in the Township's land use pattern. Residential development is characterized primarily by subdivisions containing one-acre lots scattered throughout the Township. The recent development of the Hollywood Casino has catalyzed the development of hotels and related commercial businesses along the main transportation corridors in the Township northeastern quadrant. Continuation of the current pace and patterns of residential and commercial has the potential to result in suburban sprawl and strain Township resources.

The Demographic Profile (Chapter 2) and Housing Plan (Chapter 7) reveal the extent of the Township's growth and project that it will continue through the next 10 years. The purpose of the Land Use Plan is to devise a strategy to effectively manage this growth, balancing the need to accommodate development with the need to preserve agricultural, natural, and historical resources, and the need to provide infrastructure and services. To accomplish this objective the Land Use Plan is formulated with consideration of natural and historic resources, infrastructure, and community facilities and services in order to produce a coordinated and efficient development pattern that reflects the Township's land use goals, preserves its character and identity, promotes fiscal responsibility, enhances the community's quality of life, and protects residents' health, safety, welfare.

**GOALS & OBJECTIVES****Goal #1****Maintain the Township's rural character.**

- ⇒ Avoid sprawl.
- ⇒ Protect tracts of land that contain significant natural, agricultural, scenic, and historic resources.
- ⇒ Mitigate light pollution.
- ⇒ Work with adjacent townships to maintain continuity and character along the periphery of the townships.
- ⇒ Encourage innovation to minimize the overall footprint of development.
- ⇒ Provide and preserve open space within new developments.

**Goal #2****Create a coordinated development pattern that maximizes the efficient use of services and infrastructure.**

- ⇒ Balance types of development in order not to over burden infrastructure and services.
- ⇒ Prevent commercial strip development by encouraging compact commercial growth with proper access to roadways.
- ⇒ Direct higher-intensity development to areas with existing infrastructure and community facilities and services.
- ⇒ Direct low density development and conservation to areas in the Township's interior.
- ⇒ Direct light industrial development to the Route 22 corridor in the eastern portion of the Township, consistent with the 2008 Dauphin County Comprehensive Plan.
- ⇒ Direct high-rise development to designated high density areas.
- ⇒ Locate new development on the most physically suitable land, but not on the most productive agricultural land or prime farmland soils.
- ⇒ Encourage development that prevents additional groundwater contamination by nitrates, prevents loss of use for existing wells, and ensures that new wells provide adequate quality and quantity of water needed.

- ⇒ Maintain the historic settlement pattern and encourage the expansion of compact village centers separated by rural countryside and open space or agricultural networks.
- ⇒ Activate and enhance the Township's Transferable of Development Rights ordinance.

### **Goal #3**

#### **Provide for various types of land use to meet the needs of the Township's population.**

- ⇒ Provide for various forms of residential use.
- ⇒ Provide for light industry.
- ⇒ Provide for small scale commercial uses in appropriate locations.
- ⇒ Provide for agricultural uses throughout the Township.
- ⇒ Provide for recreation and open space throughout the Township.
- ⇒ Prevent and mitigate incompatibility among neighboring land uses.

## **EXISTING CONDITIONS**

**Existing Land Use** The Existing Land Use map shows individual tax parcels coded according to the current use of the property (i.e. not according to their zoning classification). East Hanover Township's current land use pattern is dominated by large agricultural and woodland areas, including the Fort Indiantown Gap Military Reservation and State Game Lands No. 211, and dispersed residential developments. Commercial development is concentrated along the eastern section of US 22 and the northern section of PA 743. Industrial uses are accommodated near the I-81 interchange, on Firehouse Road, and on US 22 near the Township's western boundary. The major land uses within the Township are as follows:

- 42% (10,730 acres) of the Township is in Public/Semi-Public land use. This includes uses such as Fort Indiantown Gap, State Game Lands No. 211, the Township building and park, the school, the VFW, and similar uses.
- 31% (8,029 acres) of the Township is in Agricultural land use.
- 14% (3,606 acres) of the Township is in Residential land use. This is the third largest land use – in terms of acreage – in the Township after Public/Semi- Public and Agricultural.

**Land Use Trends**

The last East Hanover Township land use survey was conducted in 1993 as part of the Township's Comprehensive Plan. Direct comparisons between the 1993 survey and the current 2010 survey are difficult due to differing land use classifications. However, they do provide some indication of the changes that have occurred over the past 17 years:

- The amount of land devoted to residential development has doubled since 1993, from 1,810 acres to 3,606 acres.
- The amount of commercial development has also doubled since 1993, from 453 acres to 926 acres.
- Agricultural and undeveloped land has decreased by approximately 2,400 acres.

**Table 6.1. Existing Land Use: 2010**

EXISTING LAND USE CATEGORY	TOTAL ACREAGE	PERCENT OF TOTAL ACREAGE
Agriculture	8029.6	31.49%
Commercial	925.9	3.63%
Forested	931.9	3.65%
Hydrology	41.9	0.16%
Industrial	194.0	0.76%
Mixed Use	10.5	0.04%
Public / Semi Public	10730.4	42.08%
Residential	3606.1	14.14%
Transportation	594.2	2.33%
Undeveloped	436.6	1.71%

Source: Consultant's Analysis

**Build-Out Analysis**

A build-out analysis was conducted as part of the Township's Act 537 Plan. It projected the number of residential units and commercial lots that could be potentially built given remaining available land in the Township and current zoning regulations. The analysis yielded a total of 5,342 residential lots and 756 additional commercial lots. The pattern of commercial build-out is concentrated in the vicinity of the I-81 interchange. Residential build-out is scattered throughout the Township, creating a pattern of suburban sprawl. Many tracts would yield sizeable developments of 100 units or more, which could have adverse impacts on the township's groundwater supply. At the current time, it appears that the Township is at 38% of the total potential build-out.

**Water and Wastewater Issues**

The vast majority of housing units in the Township rely on individual wells for water supply drawn from aquifers underlying the Township, and individual on-lot septic systems for wastewater disposal. According to the

Potable Water Study, approximately 1,631 housing units are using private wells as their water source<sup>1</sup>. The Township's mobile home parks and the majority of its commercial and industrial uses are served by private wells and community systems. The Study states that the water supply appears to be adequate. However it cites testing performed as part of the Act 537 Plan which determined that a majority of residential wells tested had some degree of contamination from coliforms, fecal coliforms, and nitrates<sup>2</sup>. Much of this contamination originates from malfunctioning on-lot sewage disposal systems. The Act 537 Plan gives priority for public sewer service to areas known to have high concentrations of malfunctioning systems. Public sewer service will be limited to those areas.

The East Hanover Township Aquifer Study (2011) determined that the Aquifer underlying East Hanover Township currently provides a reliable supply of water for domestic use and maintains base flow to streams. However, it is currently stressed near the I-81 interchange due to heavy withdrawal rates, and additional withdrawals would be expected to result in loss of well reliability, impacts on adjacent wells, and reduction in the base flow to a portion of Bow Creek (on which the East Hanover Township Sewer Treatment Plant is located)<sup>3</sup>. The Study also cites testing conducted for Act 537 Plan, which found that levels of nitrates in well water throughout the Township are elevated and are expected to increase with time.

In reference to groundwater quality and quantity, the Aquifer Study puts forth the following considerations:

- Areas with private wells and septic systems will lead to increased nitrate contamination, which will degrade groundwater and stream quality.
- Areas with private wells and sewer service will lead to a decrease in the quantity of groundwater due to a decrease of septic recharge.
- Areas with public water and public sewer service will have little impact on local groundwater quality or quantity. The supporting systems will have an impact on the groundwater and surface water in some other location, assuming that the source of water is not local.

With these considerations in mind, the Aquifer Study identifies the following limitations to development:

- The Aquifer is not believed to be capable of supporting large developments of over approximately 100 homes with individual wells on lots less than one acre because the cumulative drawdown would exceed the available drawdown during dry periods.

---

<sup>1</sup> Potable Water Study, East Hanover Township, Dauphin County, PA. November 2010. p. 8.

<sup>2</sup> Potable Water Study, East Hanover Township, Dauphin County, PA. November 2010. p. 8.

<sup>3</sup> East Hanover Township Aquifer Study, p 1-2.

- The Aquifer is not believed to be capable of supporting large developments with private water and septic systems on lots less than 1.5 acres due to eventual contamination that would exceed the federal drinking water standard. Isolated lots or isolated small groups of lots less than 1.5 acres would not lead to exceedance of the federal standard.
- The Aquifer is not believed to be capable of supporting large clusters of high capacity wells (more than approximately 4 at 35 gpm) because of excessive drawdown of the Aquifer within the cluster and in nearby properties.

Note that these limitations may vary across the Township based on variations in the Aquifer's properties.

Private wells and individual septic systems are expected to remain the predominant type of water supply and wastewater treatment system in the Township for the foreseeable future. In general, the Aquifer Study finds that in order to accommodate these types of systems and ensure safe and adequate drinking water supply, a minimum 1.5 acre lot size is needed for large residential developments. To achieve smaller lot sizes, a community or public water and sewer system is needed. For all future development – residential and non-residential – regardless of size, the Aquifer Study recommends that development impacts on the Aquifer be evaluated. Particular attention should be given to areas currently with elevated nitrate contamination, areas with current concentrations of high capacity wells, and the Bow Creek basin.

---

***Implications***

East Hanover Township is faced with both challenges and opportunities in its current land use configuration.

- Although there are no guarantees, the Township can presume that federal and state-owned land will remain undeveloped for many years to come. The Township has an opportunity to supplement these existing open space areas by working with landowners to preserve lands that contain valuable resources or that are in optimal locations to enable the creation of open space and trail networks.
- Many large privately owned tracts of land exist throughout the Township. As land values rise, the likelihood of development of these properties increases. The Township must begin an outreach effort to encourage landowners to preserve their properties.
- The Township's rural landscape, marked by farmland and open space, is an integral part of its heritage, identity, and character. Its preservation is a primary goal of this Plan. However, current zoning regulations in the Rural Agricultural Zone are in conflict with agricultural and open space preservation by permitting development at a density of one dwelling unit per acre. Such zoning poses a threat to



the long-term sustainability of agriculture, to opportunities for open space preservation, and to the Township's rural character.

- The possible future expansion of the Hollywood Casino could lead to more commercial development in the Township.
- Future development can be undertaken in a manner that balances the need for growth and the need for preservation, enabling the Township and its residents to benefit from their economic potential while maintaining a high quality of life.
- The entire Township is dependent on groundwater for its potable water supply. Development must be guided by the need to protect this water supply.

## FUTURE LAND USE PLAN

### **Overview**

The overall intention of the Future Land Use Plan is to accommodate projected growth and provide needed community facilities and services while preserving the Township's natural and historic resources. It addresses land conservation, protection of groundwater, agricultural preservation, sustainable residential development, and opportunities for commercial, office, and light industrial development. The future land use plan is also responsive to state law, which requires municipalities to accommodate all categories of land use and all types of residential uses.

The development pattern proposed in the Future Land Use Plan is coordinated with the Natural Resource Protection Plan, Historic Resource Protection Plan, Transportation Plan, and Community Facilities & Utilities Plan. It also incorporates the findings and recommendations of the Township's Act 537 Plan, Aquifer Study, and Potable Water Study.

In general, the Future Land Use Plan forms a development pattern based on a gradient of density from high to low. It focuses high and medium density residential development, and commercial and industrial development in a designated growth area located in the east-central portion of the Township in proximity to the I-81 interchange and the intersection of US 22 and PA 743 in order to take advantage of existing and planned infrastructure in that area. This will facilitate the efficient delivery of community facilities and services, and will provide a community focal point. This growth area is surrounded by conservation and agricultural preservation/low density residential areas to the north, south and west. A new office park area is proposed at the southern end of the Township to provide opportunities for employment and to take advantage of the location's proximity to PA 743 and the Hershey business complex in Derry Township.

### **Future Land Use Classifications**

The land use pattern envisioned by this *Comprehensive Plan* is embodied in the Future Land Use map and described below. The land use

classifications described below correspond to the classifications in the map legend. *Note that all potential future development in all of the land use classifications described below will be dependent on the ability to demonstrate no adverse impact on the quality or quantity of the Township's groundwater supply as recommended by the East Hanover Township Aquifer Study.*

**Conservation/Open Space Area** - The Conservation/Open Space area encompasses many definitive scenic and natural features that are extremely important to the Township's and the region's identity and the health of its environment. Rising up from the floor of the Great Valley, the mountainsides and ridgelines of Blue Mountain, Second Mountain, and Stony Mountain are defining features of East Hanover Township and the entire eastern region of the state. These mountains form the drainage divides and contain the headwaters of Manada Creek, Stony Creek, and Bow Creek. They contain all of the Natural Areas Inventory sites (sites of rare, threatened, and endangered species) identified in the Township, including Devil's Race Course, Rattling Run, and several others. Saint Anthony's Wilderness and the Kittatinny Corridor – a globally significant migratory bird flyway – are also included.

Much of the Conservation/Open Space area is occupied by State Game Land No. 211 and the Fort Indiantown Gap Military Reservation. The remainder is privately owned residential land or designated open space within residential developments. Although it is presumed that the State Game Land and Military Reservation will remain in their current use for the foreseeable future, there are no guarantees. Should ownership of these lands change, the Township wants to ensure that this area is preserved in its natural state in order to protect its scenic and environmental qualities. The Conservation/Open Space land use designation is intended to achieve this goal by encouraging land use activities that are compatible with this area's sensitive scenic and natural features. Such uses include open space, passive recreation, forestry, and low density residential development in which natural and scenic features would be left in undisturbed open space and home lots would be sited accordingly.

The Township also wishes to achieve preservation by encouraging the voluntary placement of conservation easements on properties in this area, and through its Transferable Development Rights (TDR) program. Current TDR provisions as applied to the Conservation zoning district provide no incentive to landowners because they offer the same "density" as the base zoning (1 TDR per 5 acres). In order to provide an incentive for the sale of TDRs and to provide more value to landowners, the Township should increase the TDR equivalency (i.e. decrease the number of acres per TDR).

At one unit per five acres, current Cluster Development provisions as applied to the Conservation zoning district offer no incentive and no benefit to landowners or the Township compared to the base zoning in terms of value and land preservation.

Recommendations & Implementation Strategies:

To ensure that development within the Conservation Area is consistent with the carrying capacity of the land, lot area should be determined based on net acres exclusive of steep slopes, wetlands, floodplains, riparian buffers, acreage in conservation or agricultural easement, utility easements, and rights-of way. The Township should also require that building lots in the Conservation Area are situated on land that does not contain natural resources.

The Conservation/Open Space area should remain a TDR Sending Area; however, the Township should increase the TDR equivalency (i.e. decrease the number of acres per TDR) in order to provide an incentive for its use and to provide more value to landowners. If Cluster Development is going to be an option in this area, then the Cluster Development provisions must be improved. The Township should also examine the uses permitted in this area in terms of their compatibility with the Township's conservation goals. Finally, the Township should work to inform landowners about preservation options such as the voluntary sale and donation of conservation easements in this area.

In order to implement the above recommendations the Township should:

- Review the uses provided for in the Conservation zoning district and remove any that are inconsistent with the Township's goals for this area (some uses might have to be accommodated in other zoning districts).
- Amend the TDR Sending Area provision of the Zoning Ordinance to decrease the number of acres per TDR in the Conservation Zone.
- Amend the Cluster Development provisions of the Zoning Ordinance.
- Amend the Lot Area definition of the Zoning Ordinance to exclude areas in steep slopes, wetlands, floodplains, riparian buffers, acreage in conservation or agricultural easement, utility easements, and rights-of way.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.
- Conduct public outreach perhaps through a Township open space committee, to encourage landowners to preserve their properties through voluntary sale and donation of conservation easements, enrollment in Clean and Green, or the use of TDR.

**Recommendations & Implementation Strategies (continued):**

- Work with Dauphin County, land trusts, and conservation organizations to promote preservation efforts in East Hanover Township.
- Work with Fort Indiantown Gap Military Reservation to encourage protection of their land in perpetuity.

**Agriculture & Low Density Residential Area** – Protecting the Township's rural landscape and natural resources through preservation of open space and agriculture is a primary goal of East Hanover Township, and is the major intent of the Agriculture and Low Density Residential Area. This area encompasses most of the southern half of the Township below Mountain Road. It is traversed by the Bow and Manada Creeks and their tributaries and is dominated by woodlands and farms that define East Hanover Township. Residential uses are located throughout this area in relatively small, concentrated developments. The Agriculture and Low Density Residential Area also contains the highest concentrations of water quality problems resulting from the proximity of individual wells and septic systems. As determined by the Act 537 Plan and Aquifer Study, future development of this area must be carefully considered in regard to the potential for adverse impacts on the Township's water supply.

The Agriculture and Low Density Residential area generally corresponds to the Township's Rural Agriculture (RA) zoning district. However, the provisions of the RA zoning district are in direct conflict with the Township's goal of preserving agriculture, natural resources, and open spaces. By permitting development on one acre lots, the zoning ordinance has the effect of dividing agricultural tracts into parcels that are too small to farm, leading to the eventual and permanent elimination of farming and associated businesses. It also promotes a suburban sprawl development pattern that consumes open space and often requires the extension of infrastructure and other services that typically cost more than the tax revenue such development generates (farmland, on the other hand, typically generates more in tax revenue than it requires back in service expenditures, and the cost of purchasing open space is eventually recouped). Finally, based on the findings of the Aquifer Study, development within the Agriculture and Low Density Residential Area on a large scale under current zoning with individual wells and septic systems would result in further degradation of groundwater quality.

In reference to development alternatives and preservation tools, again the provisions of the Townships' Zoning Ordinance are ineffective. Neither the Cluster Development nor the TDR provisions offer any economic incentive to landowners compared to the permitted one acre density. Furthermore, the current Cluster Development provisions do not sufficiently preserve farmland and open space.

Recommendations and Implementation Strategies:

To protect its rural landscape comprised of farmland and open spaces, to protect its water supply, and to mitigate costs associated with suburban sprawl, the Township should promote cluster/open space development and TDR by providing incentives for their use. Any development would have to be deemed capable of providing safe and adequate water supply and wastewater disposal with no adverse impact on surface water and groundwater sources. The Township should also work to inform landowners about the voluntary use of conservation easements to protect open space and various farmland protection programs including Clean and Green, Agricultural Security Areas, county farmland preservation programs.

In order to implement these recommendations, the Township should:

- Encourage landowner enrollment in Pennsylvania's Clean and Green Program by notifying eligible landowners and providing assistance as necessary.
- Encourage all owners of farmland to place their land in an Agricultural Security Area by conducting a public outreach and awareness program.
- Encourage the sale and donation of conservation easements by identifying interested landowners and working with the Dauphin County Agricultural Preserve Board and land trusts to coordinate the donation/purchase of such easements.
- Work with farmers, the Dauphin County Agricultural Preserve Board and others to create a local market for farm produce and to connect local farmers to markets in the region.
- Amend the RA provisions of the Zoning Ordinance to discourage conventional residential development and encourage Conservation Subdivision Design with a 50% open space set aside requirement
- Amend the SALDO to include Conservation Subdivision Design site design provisions.
- Amend the current TDR provisions to designate the RA district a TDR Sending Area and adjust the TDR acreage equivalency to offer greater incentive to landowners.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

**Medium Density Residential Area** - Because it has access to public sewer service, this area is intended to accommodate a higher density of residential development than is feasible in other parts of the Township. A density bonus will only be received through purchase of TDRs.

The Medium Density Residential Area coincides with the RMD zoning district. As regulated by the current Zoning Ordinance, the RMD zoning district is effectively the same as the Rural Agricultural district in terms of base density, permitting one dwelling unit per acre. Therefore, the two districts could potentially yield the same development pattern with no distinction between them. This is contrary to the Township's desire to concentrate medium density development in its center with low density residential in the surrounding rural agricultural area.

Further, the incentive for purchase of TDRs for use in the RMD district is negated by the Cluster Development and Village Overlay provisions which permit an equivalent or even greater density bonus than the TDR provisions. Thus there is no incentive for a developer to purchase TDRs when he/she is given an even greater density through Cluster Development and the Village Overlay.

**Recommendations and Implementation Strategies:**

The Medium Density Residential area should provide for Conservation Subdivision Design with a 50% open space set aside as an alternative to conventional lot development. Conservation Subdivision Design should be promoted by providing a greater density than conventional lot development, while TDR should receive the greatest incentive by providing the most favorable density. Furthermore, higher density development undertaken through purchase of TDR should be required to adhere to Conservation Subdivision Design provisions and may include design guidelines such as those currently specified in the Village Overlay zone. Development in this area must be deemed capable of providing adequate and sustainable water supply and wastewater disposal.

In order to implement these recommendations, the Township should:

- Amend the RMD provisions of the Zoning Ordinance to promote Conservation Subdivision Design and TDR.
- Amend the RMD provisions of the Zoning Ordinance to provide for Conservation Subdivision Design at a greater density than the conventional lot development (base zoning) density.

**Recommendations and Implementation Strategies (Continued):**

- Amend the RMD provisions of the Zoning Ordinance to provide a density bonus only through the purchase of TDR up to a maximum of number dwelling units per acre, subject to Conservation Subdivision Design and design guidelines (i.e. all development undertaken through purchase of TDR shall be required to adhere to Conservation Subdivision Design provisions and include design guidelines such as those currently specified in the Village Overlay Zone).
- Amend the Village Overlay Zone (incorporate its standards into the Mixed Use area).
- Repeal the Cluster Development Provisions of the Zoning Ordinance and replace with Conservation Subdivision Design provisions.
- Amend the SALDO to include Conservation Subdivision Design site design provisions.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

**Village Area** - The Village area encompasses the historic villages of Grantville and Shellsville. It is intended to recognize and preserve the existence of these villages as important historical neighborhoods that reflect the Township's heritage and rural setting. This area corresponds to the Township's Village Residential zoning district.

**Recommendations and Implementation Strategies:**

The Township should preserve the villages of Grantville and Shellsville by permitting adaptive reuse of historic buildings and facilitating adaptive reuse by allowing flexibility on requirements that might not be suited to historic properties. In addition, the Township should assist property owners with maintenance of historic buildings by linking them to available resources, and institute strict design standards for new development that emulate the form and architecture of the existing villages.

In order to implement these recommendations the Township should:

- Amend the Village residential zoning district provisions to encourage adaptive reuse of historic buildings and to include design standards that are consistent with the existing villages of Grantville and Shellsville.

**Recommendations and Implementation Strategies (Continued):**

- Provide educational information on maintenance and reuse of historic buildings, perhaps through the Township newsletter and website.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

**Mixed Use Area** – The Mixed Use area is intended to permit a mix of neighborhood-scale commercial and office uses, and high density residential uses in a walkable community in proximity to the Township's commercial and industrial development areas. This area would be designated as a TDR Receiving Area with an appropriate density bonus to encourage use of the TDR program.

**Recommendations and Implementation Strategies:**

The Township should provide the opportunity for mixed use development, but ensure that such development is built according to Township design standards.

In order to implement these recommendations, the Township should:

- Amend the Zoning Map to reflect the boundaries of the Mixed Use area as delineated on Future Land Use map.
- Amend the Zoning Ordinance to include a Mixed Use zoning district that contains appropriate uses and design standards.
- Amend the TDR provisions of the Zoning Ordinance to include the Mixed Use area as a Receiving Area with an appropriate density bonus for residential and non-residential development.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

**Mobile Home Park Area** – The Mobile Home Park area is intended to recognize the existence of this form of residential land use in the Township and support its continuation. It coincides with the current Mobile Home Park zoning district.



**Recommendations and Implementation Strategies:**

The Township must continue to provide for mobile home parks. It should require recreation and open space within mobile home parks for use by residents of the neighborhood.

In order to implement these recommendations the Township should:

- Continue to enforce the Mobile Home Park provisions of the Zoning Ordinance.
- Amend the Mobile Home Park Ordinance to require recreational amenities and open space within such developments.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

**Small Scale Commercial Area** – The Small-Scale Commercial Area is intended to provide for highway-oriented commercial uses that are consistent with the Township's rural setting and that serve local residents and motorists. Small individual retail uses such as drug stores, delicatessens, and the like would be permitted. Larger individual retail uses, shopping centers, office parks, and the like would be permitted subject to conditional use provisions.

The Small-Scale Commercial Area is geographically consistent with the Highway Commercial zoning district. It is primarily located in the vicinity of the Medium Density Residential and Village areas along PA743 and US22 to maximize accessibility for local residents and motorists. Development of this area should be undertaken in a way that prevents the proliferation of curb cuts and driveways along this busy highway, which would create a traffic hazard. Reduction of curb cuts and driveways along US22 is consistent with the goals of the Harrisburg Area Transportation Study (HATS).

This area is currently designated a TDR Receiving Area with one TDR equivalent to 4,000 square feet of lot coverage up to specified limits based on the availability of sewer and water utilities. The maximum limits permitted under the TDR provisions amount to a 10 percent increase in lot coverage over the base zoning, representing a minimal incentive to Receiving Area landowners and effectively making TDR an undesirable proposition.

**Recommendations and Implementation Strategies:**

The Small-Scale Commercial Area should be compatible with the Township's rural residential character. Setbacks from adjoining residential properties (and other incompatible uses) with landscaped buffering and screening should be required to reduce visual, noise, light, and other impacts, and design standards should be created to foster attractive and well-landscaped commercial projects. Vehicular access and parking should be gained from rear service lanes where possible and pedestrian access among adjacent uses should be required. The Township should also promote the purchase of TDR for development in this area.

In order to implement these recommendations, the Township should:

- Amend the Highway Commercial provisions of Zoning Ordinance to specify the sizes of permitted and conditional uses, as necessary.
- Include office park as a conditional use in the Highway Commercial zoning district. Review other uses provided for in the Highway Commercial zoning district and amend if necessary.
- Amend the Zoning Ordinance to require appropriate setbacks and landscaped screening between incompatible uses such as adjoining residential properties.
- Amend the Zoning Ordinance to include design standards pertaining to landscaping treatments (along road frontages and in parking areas); parking area layout and design; and signage.
- Amend the Highway Commercial provisions of the Zoning Ordinance to provide incentive for the purchase of TDRs.
- Periodically re-assess the TDR Receiving Area lot coverage equivalency (4,000 sq.ft.) to ensure that it is appropriate in the prevailing market.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

**Large Scale Commercial Area** – The Large Scale Commercial area is primarily intended to provide for large-scale retail, entertainment, and service uses as currently provided for in the Interchange Commercial zoning district. This area is strategically located to serve township residents, commuters traveling on I-81, as well as visitors to the Penn National complex and the Hershey/General Mills business complex in neighboring Derry Township.

The Large Scale Commercial Area also recognizes a pending commercial development located at the west end of US 22 on boundary of West Hanover Township, which is subject to the provisions of the Highway Commercial Zoning District.

The Large-Scale Commercial Area is currently designated a TDR Receiving Area with one TDR equivalent to 4,000 square feet of lot coverage up to specified limits based the availability of sewer and water utilities (much of the area is served by public sewer). The maximum limits permitted under the TDR provisions amount to a 10 percent increase in lot coverage, representing a minimal incentive to Receiving Area landowners and effectively making TDR an undesirable proposition.

Recommendations and Implementation Strategies:

The Township should reserve the Large Scale Commercial area primarily for large retail, entertainment and service uses. Setbacks from adjoining residential properties (and other incompatible uses) with landscaped buffering and screening should be required to reduce visual, noise, light, and other impacts, and design standards should be created to foster attractive and well-landscaped commercial projects. Pedestrian access among adjacent uses should be required. Township should also promote the purchase of TDR for developments in this area.

In order to implement these recommendations, the Township should:

- Amend the Interchange Commercial zoning district provisions of the Zoning Ordinance to specify the sizes of uses permitted.
- Include office park as a conditional use in the Interchange Commercial district. Review other uses provided for in the Interchange Commercial zoning district and amend if necessary.
- Amend the Zoning Ordinance to require appropriate setbacks and landscaped screening between incompatible uses.
- Amend the Zoning Ordinance to include design standards pertaining to landscaping treatments (along road frontages and in parking areas); parking area layout and design; and signage.
- Amend the Interchange Commercial zoning district provisions of the Zoning Ordinance to provide incentive for the purchase of TDRs.
- Periodically re-assess the TDR Receiving Area lot coverage equivalency (4,000 sq.ft.) to ensure it is appropriate in the prevailing market.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

**Commercial Recreation Area** - The Commercial Recreation area is intended to accommodate commercial development that provides recreation or entertainment as currently defined in the East Hanover Township Zoning Ordinance. It includes the Penn National Raceway and Casino and the Manada Gap Golf Course and adjacent parcels. This area is currently designated as a TDR Receiving Area with one TDR equivalent to 4,000 square feet of lot coverage up to specified limits based on the availability sewer and water utilities (The Penn National complex is currently operating a private well and private wastewater treatment system). The maximum limits permitted through purchase of TDRs amount to a 10 percent increase in lot coverage over the base zoning, representing a minimal incentive to Receiving Area landowners and effectively making TDR an undesirable proposition. In order to increase the incentive for purchase of TDRs, the base permitted lot coverage of the zoning district should be substantially reduced. The 4,000 square foot equivalency should also be evaluated to ensure that it is appropriate.

According to the Aquifer Study, the Aquifer in this area is currently stressed due to high consumptive use of water. The addition of more high capacity wells in this area has the potential to create further adverse impacts on existing wells and on the base flow of Bow Creek, site of the Township's wastewater treatment plant. Future development must be carefully evaluated to ensure that it does not adversely affect the Aquifer.

**Recommendations and Implementation Strategies:**

The Township should continue to apply and enforce the Commercial Recreation Zone as currently provided in the Zoning Ordinance; however, setbacks from adjoining residential properties (and other incompatible uses) with landscaped buffering and screening should be required to reduce visual, noise, light, and other impacts, and design standards should be created to foster attractive and well-landscaped commercial projects. The Township should also increase the incentive for the purchase of TDRs in this zone.

In order to implement these recommendations, the Township should:

- Review the uses and design standards provided for in the Commercial Recreation zoning district to evaluate their compatibility with the Township's goals.
- Amend the Zoning Ordinance to require appropriate setbacks and landscaped screening between incompatible uses such as adjoining residential properties.
- Amend the Zoning Ordinance to include design standards pertaining to landscaping treatments (along road frontages and in parking areas); parking area layout and design; and signage.

Recommendations and Implementation Strategies (Continued):

- Amend the Zoning Ordinance to provide incentive for the purchase of TDRs.
- Periodically re-assess the TDR Receiving Area lot coverage equivalency (4,000 sq.ft.) to ensure that it is appropriate in the prevailing market.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

**Industrial Area–** This area is intended to provide for industrial development, and therefore, employment opportunities for Township residents. It is located in proximity to the I-81 interchange and at points along US22 in order to maximize vehicular access. This area is currently designated as a TDR Receiving Area with one TDR equivalent to 4,000 square feet of lot coverage up to specified limits based on the availability of sewer and water utilities. The maximum limits permitted under the TDR provisions amount to a 10 percent increase in lot coverage, representing a minimal incentive to Receiving Area landowners and effectively making TDR an undesirable proposition.

Recommendations and Implementation Strategies:

The Township should continue to provide for industrial uses with appropriate buffer and screening requirements to avoid conflicts among land uses, especially residential uses. Purchase of TDRs should be promoted in the Industrial area.

In order to implement these recommendations, the Township should:

- Amend the Zoning Ordinance to permit office park as a conditional use in the Industrial District.
- Amend the Zoning Ordinance to require appropriate setbacks and landscaped screening between incompatible uses such as adjoining residential properties.
- Amend the Zoning Ordinance to include design standards pertaining to landscaping treatments (along road frontages and in parking areas); parking area layout and design; and signage.
- Amend the Industrial zoning district provisions of the Zoning Ordinance to provide incentive for the purchase of TDRs.

**Recommendations and Implementation Strategies (Continued):**

- Periodically re-assess the TDR Receiving Area lot coverage equivalency to ensure that is appropriate in the prevailing market.
- Amend the SALDO to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

**Municipal/Institutional Area** – The Municipal/Institutional area recognizes the continued existence of the East Hanover Township municipal building, the school, the East Hanover Township wastewater treatment plant, and other governmental and institutional uses in the Township.

**Park and Recreation Area** - Includes the existing Township Park and potential future public park/recreation sites at the VFW facility, Tall Cedars, and on Firehouse Road, each of which is already equipped with ball fields and recreational amenities. These are sites that the Township would be interested in acquiring if they were to become available. Because these sites already contain recreational facilities, the Township expects that it would save on the cost to construct new facilities; however, upgrades might be required. The VFW Post, being centrally located and adjacent to the school and Township building is an ideal site for a community park. Located along Manada Creek, the Tall Cedars site would provide a rest-stop for hikers along the proposed Manada Creek Greenway and Trail. The park on Firehouse Road would serve Penn National employees and residents in the adjacent mobile home park and proposed Mixed Use neighborhood.

A new park is proposed at PA743 and Early's Mill Road. This park would expand upon the adjacent Township-owned property and would serve residents in the southeastern portion of the Township as well as employees in the proposed Office Park area.

**Recommendations & Implementation:**

- Prepare an updated Open Space and Recreation Plan.
- Communicate with owners of potential park properties to inform them of the Township's interests.
- Work with DCNR and other funding and technical assistance sources to obtain assistance in acquiring and developing park land.

## Chapter 7 Housing Plan

### INTRODUCTION

#### **Overview**

The Pennsylvania Municipalities Planning Code (MPC) addresses housing from the perspective of ensuring sufficient and affordable housing in various forms for all current and anticipated residents. MPC §301 requires comprehensive plans to include a housing element *“to meet the housing needs of present residents and of those individuals and families anticipated to reside in the municipality, which may include conservation of presently sound housing, rehabilitation of housing in declining neighborhoods and the accommodation of expected new housing in different dwelling types and at appropriate densities for households of all income levels.”*

In reference to providing for various housing types through zoning, MPC §604 requires zoning ordinances to *“provide for the use of land within the municipality for residential housing of various dwelling types encompassing all basic forms of housing, including single-family and two-family dwellings, and a reasonable range of multifamily dwellings in various arrangements, mobile homes and mobile home parks, provided, however, that no zoning ordinance shall be deemed invalid for the failure to provide for any other specific dwelling type.”* Court decisions have upheld this zoning provision of the MPC establishing a *fair share* rule which whether the municipality is a logical area for growth and development, the municipality’s present level of growth, the amount of land available

for a given type of housing, and the amount of undeveloped land in the municipality.

This *Housing Plan* is intended to address the provisions of the MPC stated above. It examines the characteristics of the Township's existing housing stock and provides strategies to meet the housing needs of current residents and to accommodate anticipated growth. It also seeks to ensure that the Township provides for affordable housing of various types and arrangements with open space and recreational amenities. Finally, it seeks to coordinate housing with available sewer and water infrastructure, transportation systems, and community facilities and services in order to minimize the cost of infrastructure expansion and maximize residents' accessibility to facilities and services.

### GOALS & OBJECTIVES

#### **Goal #1**

**Meet the housing needs of the Township's current and future residents and provide for a fair share of housing.**

- Encourage preservation of presently sound housing.
- Promote rehabilitation of houses in decline.
- Provide for a fair share of housing of various forms.
- Provide for affordable housing.
- Provide for housing suited to all age groups.

#### **Goal #2**

**Promote housing development in harmony with the Township's rural character in appropriate locations, at appropriate densities, and with suitable amenities.**

- Locate new homes on the most physically suitable land, but not on productive farmland or prime farmland soils.
- Provide for open space and recreational amenities in new residential developments.
- Discourage the construction of homes on the mountainsides and within scenic viewsheds.
- Locate low density residential development in the Township's conservation and agricultural areas.
- Locate medium and high density housing in areas served by public sewer and in proximity to the US 22 and PA 743 intersection.



- Locate medium and high density housing in proximity to community facilities and services.
- Ensure that new housing development can meet water supply needs without adversely impacting the Township's groundwater.

## EXISTING CONDITIONS

### ***Overview***

The discussion of existing conditions includes an analysis of housing unit growth since 1970, housing characteristics (occupancy, tenure, and types of housing), house value, affordability, and projected demand for future housing. It is intended to provide an understanding of current housing conditions and anticipated growth for which the Township must plan.

### ***Housing Trends***

Housing trends examines housing unit growth for East Hanover and neighboring townships from 1970 to 2010 (Table 7.1 and Figure 7.1). The data show that the number of housing units in East Hanover Township has been growing at a comparatively rapid rate; however, the rate of growth has been declining since the 1970s.

With the exception of East Hanover Township, Lebanon County, all of the surrounding townships have also experienced a steady increase in the number of housing units. West Hanover and South Hanover Townships have seen an enormous increase in housing units since 2000 with increases of 52% and 41%, respectively. These two Townships border East Hanover, presenting the potential for spillover development into East Hanover.

Specific findings are as follows:

- Since 1970, there has been steady growth in the number of housing units in East Hanover Township; however the rate of increase has been declining since 1970.
- East Hanover Township had the highest rate of growth in the 1980s and 1990s, followed by Derry Township. In the last decade, West Hanover Township and South Hanover Township took the lead in housing unit growth.
- Middle Paxton Township's growth in housing units virtually stagnated in the 1990's with only a 0.2% growth rate. From 2000 to 2010, it saw an 11% increase in housing units.

- East Hanover Township, Lebanon County experienced sharp declines in its growth rate from 80% to 4% to -1%. It continues to have very little growth.
- In terms of number of units, Derry Township far exceeds the municipalities with a 2010 total of 10,267.

---

### ***Housing Unit Projections***

Housing unit projections at five-year intervals are provided to the year 2020 (Table 7.2). For comparison, projections are taken from the Dauphin County Comprehensive Plan and the East Hanover Township Land Use Assumptions Report. At the time these projections were prepared, 2010 Census data were not available. To test these projections, a least squares linear trend method was calculated based on housing unit figures from 1970 to the 2010 Census.

In its explanation of the method of calculating housing unit projections the Dauphin County Comprehensive Plan states:

“In order to determine the estimated number of year round dwelling units that will be needed to accommodate the four projection years (2005, 2010, 2015 & 2020), Tri-County Regional Planning Commission (TCRPC) made two assumptions: (1) the average household size will remain the same as in 2000; and (2) the number of residents in group quarters will remain the same as in 2000. The following steps were then taken to determine the year round future housing need. Person per year round household were applied to the projected population (less persons in group quarters). This produced a housing figure that assumed a vacancy rate of zero. Since it is impractical to assume that there will be no vacancies, two potential vacancy rates were then examined. The first alternative was to continue the 2000 vacancy rate; the second was a “healthy” vacancy rate of 5 percent. The latter is an accepted percentage to meet supply and demand.”

“Past building trends were then examined to determine if a continuation of past building rates would keep pace with projected housing needs. The building trends of the last 2, 3, 5 and 10 years were examined and compared to future housing needs at both the 2000 vacancy rate and the healthy 5% vacancy rate.<sup>1</sup>”

---

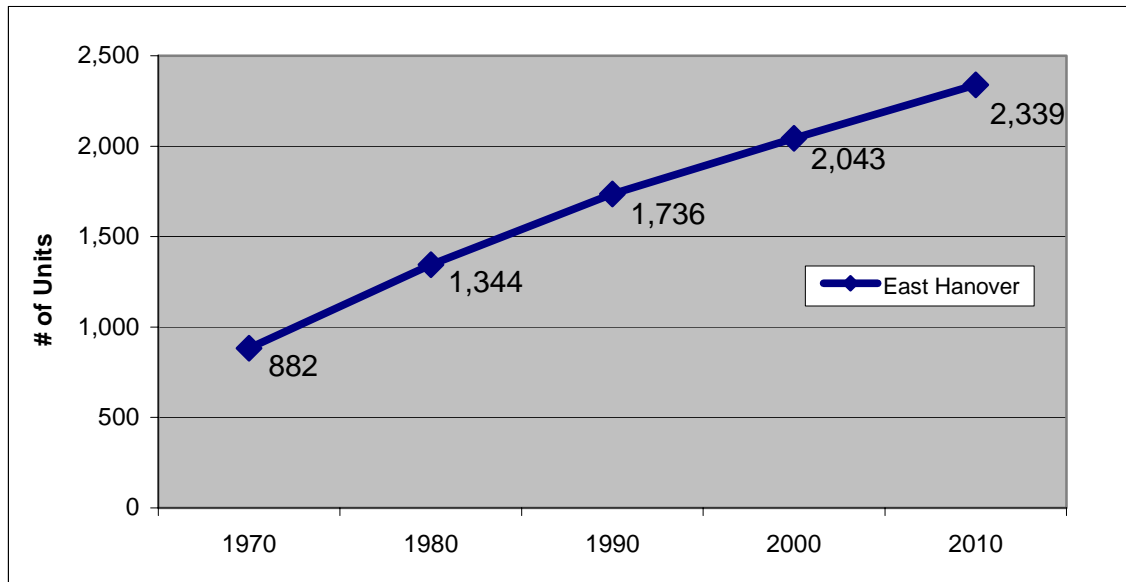
<sup>1</sup> Dauphin County Comprehensive Plan. Pg. 7-45

**Table 7.1. Housing Unit Trends: 1970 - 2010**

Municipality	1970 Census	1980 Census	# Change 1970-1980	% Change 1970-1980	1990 Census	# Change 1980-1990	% Change 1980-1990	2000 Census	# Change 1990-2000	% Change 1990-2000	2010 Census	# Change 2000-2010	% Change 2000-2010
East Hanover	882	1,344	462	52%	1,736	392	29%	2,043	307	18%	2,339	296	14%
Middle Paxton	1,165	1,737	572	49%	1,984	247	14%	1,988	4	0.2%	2,208	220	11%
West Hanover	1,266	2,011	745	59%	2,250	239	12%	2,584	334	15%	3,931	1,347	52%
South Hanover	810	1,368	558	69%	1,630	262	19%	1,792	162	10%	2,527	735	41%
Derry	5,135	6,714	1,579	31%	8,164	1,450	22%	9,481	1,317	16%	10,267	786	8%
East Hanover (Lebanon Co)	590	1,063	473	80%	1,105	42	4%	1,091	-14	-1%	1,099	8	1%
Dauphin County	78,971	95,728	16,757	21%	102,684	6,956	7%	111,133	8,449	8%	120,406	9,273	8%
Pennsylvania	3,927,206	4,596,743	669,537	17%	4,938,140	341,397	7%	5,249,750	311,610	6%	5,567,315	317,565	6%

Source: US Census Bureau

**Figure 7.1. East Hanover Township Housing Units 1970 - 2010**



Source: US Census Bureau

In its explanation of the method of calculating housing unit projections the East Hanover Township Land Use Assumptions Report states

“Cumulative housing units were calculated by starting with the 2,043 housing units in 2000 and adding new residential construction, new (not replacement) mobile homes installed and deducting demolished units, based on building permit data. Based on building permits for new residential homes, between 2004 and 2008, an average of 28 new housing units were added each year.”<sup>2</sup>

All projection methods indicate continued growth in the number of housing units in East Hanover Township through 2020. Dauphin County projects between 358 and 838 additional units by 2020. The East Hanover Township Land Use Assumptions Report projects an additional 585 units by 2020. The linear trend method projects an additional 414 units by 2020.

The various 2020 projections range from a total of 2,401 to 2,753 housing units. Using the 2010 Census housing unit figure as a check it appears that the LUAR projections are the most accurate, since this method projected the 2010 number of housing units at 2,348, while the Census count is 2,339 units. Based on the LUAR projections, the Township would add 289 new units (above the 2010 Census figure) by 2020. Based on the linear trend method, the Township would add 414 units by 2020.

***Table 7.2. Dauphin County and LUAR Housing Unit Projections: 2000 to 2020***

	Dauphin County Comprehensive Plan						Land Use Assumptions Report	
	by 2000 PPH and Vacancy Rate		by 2000 PPH and 5% Vacancy Rate		by 10 yr Building Rate		by Building Permit Activity	
	New Units	Total Units	New Units	Total Units	New Units	Total Units	New Units	Total Units
2000 Census	X	2043	X	2043	X	2043	X	2043
2005	134	2177	173	2216	210	2253	132	2175
2010	207	2250	247	2290	419	2462	305	2348
2015	282	2325	324	2367	629	2672	445	2488
2020	358	2401	401	2444	838	2881	585	2628

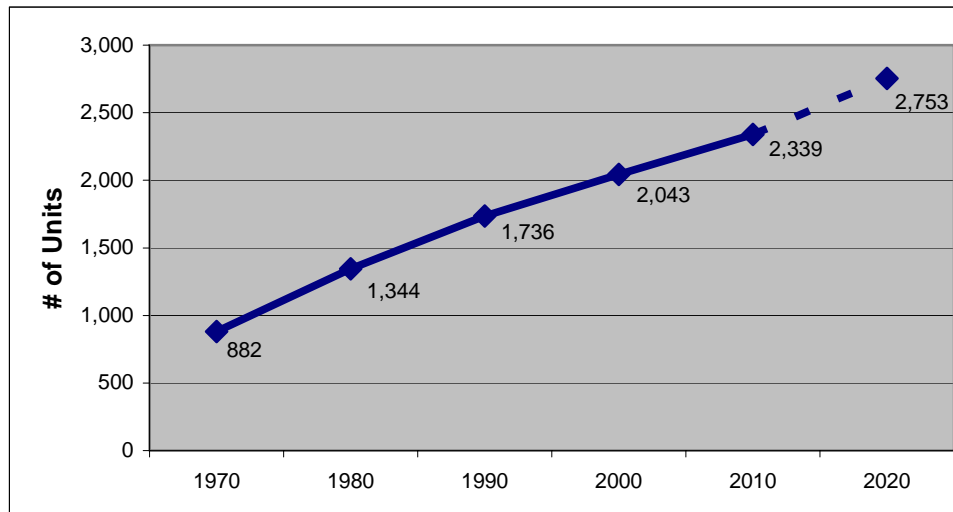
Source: Dauphin County Comprehensive Plan; East Hanover Township Land Use Assumptions Report.

***Table 7.3. Linear Trend Housing Unit Projections: 2010 to 2020***

	1970 Census	1980 Census	1990 Census	2000 Census	2010 census	2020 Projection	# of New Units	% Change 2010-2020
East Hanover Twp	882	1,344	1,736	2,043	2,339	2,753	414	18%

Source: Consultant's Analysis

<sup>2</sup> East Hanover Township Land Use Assumptions Report. November 2008, pg. 10.

**Figure 7.2. Linear Trend Housing Unit Projections: 2010 to 2020**

### Recommendations & Implementation Strategies

East Hanover Township must continue to accommodate new housing as demand dictates. Potential residential build-out indicates that with current zoning, the Township can accommodate an additional 5,342 units. Housing unit projections indicate an additional 289 to 414 housing units by 2020. The number of new units actually built will be largely affected by the housing market and development densities permitted by the zoning ordinance. Housing unit densities should be suited to the Township's growth management goals and should consider the feasibility of wastewater treatment and water supply, and impacts on natural resources. East Hanover should also monitor housing growth in neighboring municipalities and be mindful of the impacts that could potentially arise as a result of growth and growth management actions in these townships.

### **Age of Housing**

The age of the Township's housing stock is determined by examining US Census data, reporting the year each structure was built. The 2010 Census data release does not include age of housing. Therefore, 2000 Census data is used and has been updated to include homes built from 2000 to 2009 based on Township building permits records (taken from the Townships' Land Use Assumptions Report, dated November 2008, and from the Township's residential building permit records for 2009).

Age of housing data provide an indication of the potential condition of housing (Table 7.4). According to the data, East Hanover Township has a diverse and well balanced housing stock

in terms of age. Most older homes in the Township are concentrated in Grantville and Shellsville.

Specific findings are as follows:

- Nearly one-third of housing is relatively new - less than 20 years old.
- 25% of homes are more than 50 years old.
- 14% of homes are more than 70 years old.

**Table 7.4. Age of Housing**

Year Built	East Hanover	
	# of Units	% of Total
March 2000 to July 2009	256	11.14%
1990 to March 2000	440	19.14%
1980 to 1989	502	21.84%
1970 to 1979	383	16.66%
1960 to 1969	144	6.26%
1940 to 1959	247	10.74%
1939 or earlier	327	14.22%

Source: US Census Bureau

#### **Recommendations & Implementation Strategies**

Preserving older homes, especially those in Grantville and Shellsville, will assist in preserving the Township's heritage and character and the historic integrity of its villages. Older homes are susceptible to deterioration because they are subject to more years of deferred maintenance. Newer homes can also suffer from deterioration due to deferred maintenance. The Township can help to curtail deterioration of its housing stock and preserve older homes through the following strategies:

- Provide information and assistance in connecting property owners with housing assistance programs.
- Identify historic homes and apply for National Register designation.
- Provide information to owners and prospective buyers of historic homes regarding assistance programs and incentives for rehabilitation of historic homes (National trust for Historic Preservation, HUD, USDA Rural Housing Program).

---

***Housing  
Occupancy,  
Tenure & Type***

Housing occupancy, tenure, and type of structure reveal the level of stability of the Township's housing base and its diversity in terms of the variety of dwelling types that exist.

**Housing Occupancy**

Housing occupancy refers to the number of occupied, vacant, and seasonal units. The data show some changes in the Township from 2000 to 2010 indicating some instability. Specific findings are as follows (see Table 7.5):

- The percentage of owner occupied units declined by approximately one percent from 2000 to 2010. The percentage of vacant units increased by approximately one percent. The County and the commonwealth also experienced similar changes.
- Compared to the County and the Commonwealth, East Hanover Township has a higher proportion of occupied units

**Housing Tenure**

Housing tenure refers to the numbers owner-occupied and renter-occupied housing units. The data show some change in owner- and renter- occupancy in the Township, but generally the owner-occupied housing base remains stable in terms of having a high proportion of homeowners and a very low homeowner vacancy rate (a vacancy rate below 6% is considered low) (Table 7.5). The rental vacancy rate, however, has increased to 7.3%. This is an indication of either an excess supply of rental units in the Township or substandard units that cannot be rented due to their poor condition. The Township is also seeing a decline in the average household size from 2.70 to 2.57 persons per household. Specific findings are as follows (see table 7.5)

- From 2000 to 2010, the Township experienced a shift toward renter occupancy, as renter occupied units increased more than two percent and owner occupied units decreased more than two percent. Similar changes occurred in the County and Commonwealth. Owner occupancy in the Township now stands at 86% and renter occupancy at 14%.
- From 2000 to 2010, the Township's homeowner vacancy rate increased, as did the rental vacancy rate. This could be an indication that more units went on the rental market in recent years. At 1.1% the homeowner vacancy rate is considered low. At 7.3% the rental vacancy rate is considered high.

- Average household size continues to decline across the three jurisdictions. In East Hanover Township, average household size fell from 2.70 to 2.57 persons per unit.
- Compared to the County and the Commonwealth, East Hanover Township has a higher proportion of occupied units and a much higher proportion of owner occupied units. This suggests that the Township's housing stock is comparatively more stable.

**Table 7.5. Housing Occupancy and Tenure**

Occupancy & Tenure	East Hanover Township				Dauphin County		Pennsylvania	
	2000 Census	% of Total	2010 Census	% of total	2000 Census %	2010 Census %	% of Total	2010.00%
<b>Housing Occupancy</b>								
Total Housing Units	2,043	100%	2,339	100%	100%	100%	100%	100%
Occupied Units	1,966	96.23%	2,226	95.17%	92.38%	91.72%	90.99%	90.15%
Vacant Units	77	3.77%	113	4.83%	7.62%	8.28%	6.18%	9.85%
Seasonal, Occasional U	13	0.64%	10	0.43%	0.51%	0.67%	2.82%	2.90%
<b>Housing Tenure</b>								
Total Occupied Units	1,966	100%	2,226	100%	100%	100%		100%
Owner Occupied Units	1,738	88.40%	1,920	86.25%	65.39%	64.74%	71.31%	69.57%
Renter Occupied Units	228	11.60%	306	13.75%	34.61%	35.26%	28.69%	30.43%
Average Household Size		2.70		2.57	2.39	2.37	2.48	2.45
Homeowner Vacancy Rate		0.9%		1.1%	2.1%	2.4%	1.6%	1.8%
Rental Vacancy Rate		6.9%		7.3%	9.2%	8.4%	7.2%	8.1%

Source: US Census Bureau

### Type of Structure

Because of the apparent inaccuracy of the 2009 housing estimates from the American Community Survey, this section uses 2000 Census data on type of structure. Data pertaining to type of structure provide a count of the number of housing by various housing types (Table 7.6). These data provide an indication of the diversity of the Township's housing stock. The data show that most housing in East Hanover Township consists of single-family detached units and mobile homes. However, the number of one unit attached and multi-unit structures has increased since 1990 adding to the diversity of the Township's housing stock.

- The Township's housing stock is dominated by one-unit detached (single-family) structures at 71.07%. The proportion of this housing type has not changed since 1990.
- Mobile homes comprise the second largest percentage of units in the township at 23.95%. The Township added 100 mobile home units between 1990 and 2000.



- One unit attached (townhomes) structures represent 2.74% of the Township's housing stock. Twenty-seven units were added in the 1990s bringing the total to 56 units.
- Structures with 2 units or more (multi-family structures) comprise a total of 3.57% of the Township's housing stock. The number of units increased by one in the 1990s.

**Table 7.6. Type of Structure**

Type of Structure	East Hanover Township				Dauphin County		Pennsylvania	
	1990 Census	% of Total	2000 Census	% of Total	2000 Census	% of Total	2000 Census	% of Total
Total Housing Units	1,736	100%	2,043	100%	111,133	100%	5,249,750	100%
1 unit detached	1,246	71.77%	1,452	71.07%	54,748	49.26%	2,935,248	55.91%
1 unit attached	29	1.67%	56	2.74%	22,613	20.35%	940,396	17.91%
2 units			46	2.25%	4,582	4.12%	273,798	5.22%
3 or 4 units	56	3.23%	20	0.98%	6,577	5.92%	241,745	4.60%
5 - 9 units	15	0.86%	7	0.34%	6,612	5.95%	179,909	3.43%
10 - 19 units			0	0.00%	5,270	4.74%	131,691	2.51%
20 or more units	1	0.06%	0	0.00%	6,772	6.09%	283,714	5.40%
Mobile home	389	22.41%	489	23.94%	3,917	3.52%	258,551	4.93%

Source: US Census Bureau

**Recommendations and Implementation**

The Township permits a variety of dwelling types through its zoning ordinance, which provides housing opportunities for both renter and owner households at various income levels. This contributes to the stability of the Township's housing base and the low vacancy rate. To ensure the continuation of its healthy housing base, the Township should continue to provide for diverse dwelling types.

- Provide for a variety of housing types, including single-family attached and multi-family dwellings, in order to accommodate individuals and families of various income levels.
- Provide for age-restricted housing in proximity to services to accommodate seniors.
- Promote mixed-use development that would accommodate various dwelling types in proximity to commercial and civic services.

**House Value  
& Affordability**

Data pertaining to house value and affordability give an indication of local market conditions, the ability of existing householders to pay housing costs, and the ability of non-residents to afford housing in the Township. Because of the apparent inaccuracy of the 2009 housing estimates from the American Community Survey, this section uses 2000 Census data on type of structure.

### House Value

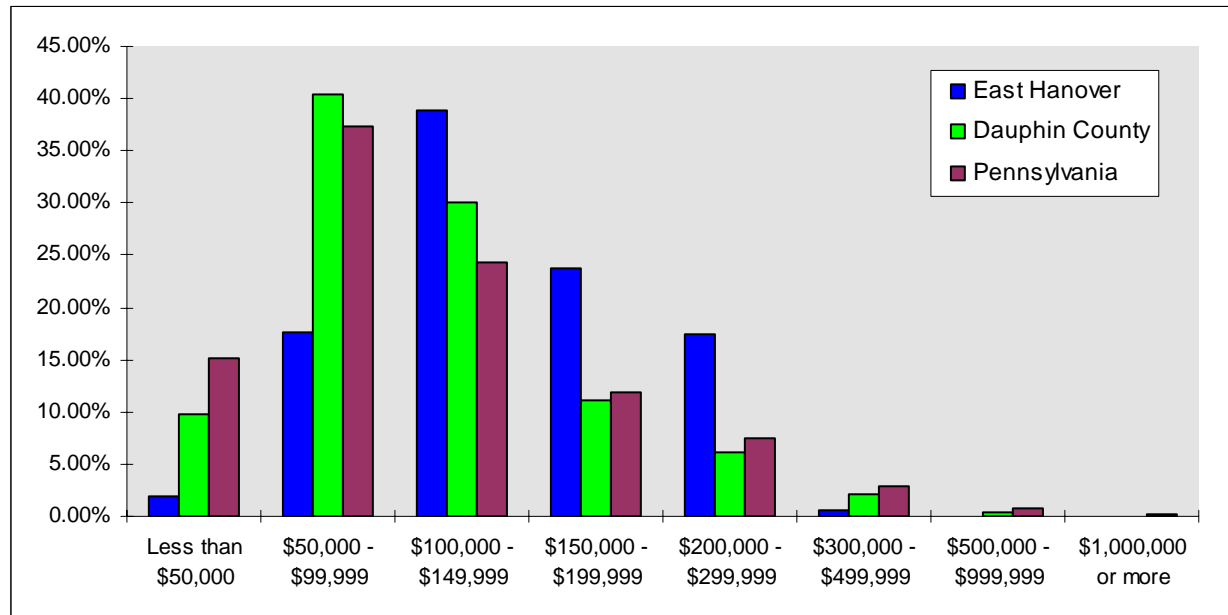
House value data provide a break down of the number of units within each value range (Table 7.7 and Figure 7.3). The data show that house values in East Hanover are significantly higher than those in Dauphin County and the Commonwealth. However, home values in East Hanover are somewhat normally distributed with nearly all homes valued in the middle-ranges and very few homes valued at the lowest and highest ends of the range. Specific findings are as follows:

- The largest percentage (38.92%) of homes in the Township are valued between \$100,000 and \$150,000.
- Nearly 24% of homes are valued between \$150,000 and \$200,000.
- 17% of homes are valued between \$200,000 and \$300,000.
- Very few (only 6) homes are valued above \$300,000.
- Very few homes (only 22) are valued below \$50,000.
- Median house value is \$137,300 and is substantially higher than the County and the Commonwealth.
- Median house value has increased since 1990 by approximately \$14,000, adjusted for inflation. (The 1990 median house value was \$93,400. When adjusted for inflation, the figure is approximately \$123,000).

**Table 7.7. House Value**

Housing Value	East Hanover		Dauphin County		Pennsylvania	
	2000 Census	% of Total	2000 Census	% of Total	2000 Census	% of Total
Specified Owner-Occupied Units	1,164	100%	59314	100.00%	2889484	100.00%
Less than \$50,000	22	1.89%	5,789	9.76%	435,193	15.06%
\$50,000 - \$99,999	204	17.53%	23,951	40.38%	1,079,698	37.37%
\$100,000 - \$149,999	453	38.92%	17,819	30.04%	703,093	24.33%
\$150,000 - \$199,999	276	23.71%	6,552	11.05%	344,172	11.91%
\$200,000 - \$299,999	203	17.44%	3,659	6.17%	214,812	7.43%
\$300,000 - \$499,999	6	0.52%	1,292	2.18%	84,425	2.92%
\$500,000 - \$999,999	0	0.00%	209	0.35%	23,654	0.82%
\$1,000,000 or more	0	0.00%	44	0.07%	4,437	0.15%
Median House Value	\$137,300		\$99,900		\$97,000	
Median Rent	\$582		\$557		\$531	

Source: US Census Bureau

**Figure 7.3. – House Value**

Source: US Census Bureau

### Housing Affordability

Affordable housing is defined as annual owner costs or gross rent less than or equal to 30% of a household's gross income. For renters, housing costs include rent plus utilities. For owners, housing costs include mortgage payment, taxes, insurance, and utilities. Cost burden is the fraction of a household's total gross income spent on housing costs. Cost burden >30% means that the household spends more than 30% of its income on housing costs and the unit is unaffordable. Cost burden >50% means that the household spends more than 50% of its income on housing costs and the unit is very unaffordable. This is also referred to as extremely cost burdened.

Housing affordability data from the US Census and the US Department of Housing and Urban Development (HUD) specifies the number of households that are cost burdened and the number of units that are affordable to households in the Harrisburg-Carlisle MSA. The data indicate that East Hanover Township provides housing for various levels of affordability, yet many households are cost burdened. All extremely cost burdened renters earn less than 50% of the Area Median Family Income (AMFI) of \$70,300, which amounts to \$35,150. All cost burdened renters earn less than 80% of the AMFI or \$56,240. Cost burdened and extremely cost burdened owner households are found at all income levels (Table 7.10). In both cases – renter and owner households – the proportion of cost burdened households

increases as income decreases (Table 7.10). All types of households are affected; however, small households with two to four related members and elderly (age 62 or over) households are the most severely affected (Table 7.11).

The presence of cost burdened households may be a result of the need for additional affordable housing units, the need for rehabilitation of substandard housing, and the possibility that some households are intentionally living beyond their means.

### Cost Burdened Households

Data pertaining to cost burdened households are presented for renter households (Table 7.8) and owner households (Table 7.9) and by household income level (Table 7.10) and type of household (Table 7.11). Findings are as follows:

- 22.87% of East Hanover Township renter households are cost burdened at >30%, and 5.83% are cost burdened at >50%. These figures are lower than those of the County and Commonwealth.
- 18.73% of East Hanover Township owner households are cost burdened at >30%, and 6.19% are cost burdened at >50%. These figures are only slightly lower than those of the County and Commonwealth.
- All extremely cost burdened renters earn less than 50% of the Area Median Family Income (AMFI) of \$70,300, which amounts to \$35,150. All cost burdened renters earn less than 80% of the AMFI or \$56,240. Cost burdened and extremely cost burdened owner households are found at all income levels. In both cases – renter and owner households – the proportion of cost burdened households increases as income decreases.
- All types of households are cost burdened. Although large related households have the highest *percentages* of cost burdened renter (50%) and owner (33.3%) households, small related and elderly households have the largest *numbers* of cost burdened and extremely cost burdened renter and owner households.

**Table 7.8. Cost Burdened Renter Households**

% of Income	East Hanover		Dauphin County		Pennsylvania	
Spent on Housing	# of Households	% of Total	# of Households	% of Total	# of Households	% of Total
	223	100%	35130	100%	1,348,824	100%
Cost Burden >30%	51	22.87%	11,284	32.12%	479,644	35.56%
Cost Burden >50%	13	5.83%	4,703	13.39%	234,320	17.37%

Source: US Census Bureau, 2000

**Table 7.9. Cost Burdened Owner Households**

Housing Cost as	East Hanover		Dauphin County		Pennsylvania	
% of Income	# of Households	% of Total	# of Households	% of Total	# of Households	% of Total
	1,164	100%	59,315	100%	2,889,484	100%
Cost Burden >30%	218	18.73%	11,461	19.32%	600,717	20.79%
Cost Burden >50%	72	6.19%	3,950	6.66%	211,391	7.32%

Source: US Census Bureau, 2000

**Table 7.10 Cost Burden by Household Income Level**

	Renters	Owners
	Total Households	Total Households
Household Income <=30% MFI		
Cost Burden >30%	50%	89.70%
Cost Burden >50%	0%	41%
Household Income >30% to <=50%MFI		
Cost Burden >30%	89.20%	64.10%
Cost Burden >50%	21.60%	23.90%
Household Income >50% to <=80% MFI		
Cost Burden >30%	10.40%	36.10%
Cost Burden >50%	0%	13.50%
Household Income >80% MFI		
Cost Burden >30%	0%	10.40%
Cost Burden >50%	0%	2.20%

Source: US Department of Housing and Urban Development, 2000

**Table 7.11 Cost Burden by Type of Household**

	Renter Households				Owner Households			
	Elderly (1 & 2 members)	Small Related (2 to 4 members)	Large Related (5 or more members)	All Other	Elderly (1 & 2 members)	Small Related (2 to 4 members)	Large Related (5 or more members)	All Other
Total Households	45	93	20	59	326	991	180	208
Cost Burden >30%	17.80%	24.70%	50%	6.80%	20.90%	18.30%	33.30%	24.50%
Cost Burden >50%	8.90%	4.30%	0%	0%	13.50%	5.30%	11.10%	3.80%

Source: US Department of Housing and Urban Development, 2000

### Housing Units by Affordability

Data pertaining to housing units by affordability specifies the number of housing units that are affordable to households of various income levels based on the HUD Area Median Family Income (\$70,300 for the Harrisburg-Carlisle MSA) (Table 7.12). They show the level of affordability to households wanting to rent or purchase a house in East Hanover Township. They also reveal areas of demand for affordable housing. The data indicate that there are fewer renter and owner units affordable to households at lower income levels and there is potential demand for additional affordable units.

Specific findings are as follows:

- There are 65 units affordable to households earning less than 30% of the HUD AMFI. Eighteen of these units are vacant for rent, which could mean that there is less demand for units at this level of affordability, or that these units are substandard and undesirable. This is also the case with the 10 vacant for rent units in the 50% to 80% affordability level.
- There are 63 units affordable to households earning 30% to 50% of the HUD AMFI. There are no vacant for rent units at this affordability level, which could indicate that there is demand for such units.
- The largest number of renter units (96) is affordable to households earning 50% to 80% of the HUD AMFI. Ten of these units are vacant for rent, which could mean that there is less demand for units at this level of affordability, or that these units are substandard and undesirable.
- There are no rental units affordable to households earning >80% of the HUD AMFI. This is an indication of demand for such units.
- The fewest number of owner units (436) are affordable to households earning <50% of the HUD AMFI. Furthermore, there are no vacant for sale owner units available at this affordability level. This indicates potential demand for units at this affordability level.
- There are 453 owner units affordable to households earning 50% to 80% of the HUD AMFI. Four units are vacant for sale.
- The largest number of owner units (826) are affordable to households earning >80% of the HUD AMFI. There are no vacant for sale units, indicating demand for such units.

**Table 7.12. Housing Units by Affordability**

Renter Units		Owner Units	
	# of Units		# of Units
Affordable to <=30% AMFI			
# Occupied	47		
# Vacant for rent	18		
Affordable to >30% to <=50% AMFI		Affordable to <=50% AMFI	
# Occupied	63	# Occupied	436
# Vacant for rent	0	# Vacant for sale	0
Affordable to >50% to <=80% AMFI		Affordable to >50% to <=80% AMFI	
# Occupied	86	# Occupied	449
# Vacant for rent	10	# Vacant for sale	4
Affordable to >80% AMFI		Affordable to >80% AMFI	
# Occupied	0	# Occupied	826
# Vacant for rent	0	# Vacant for sale	0

Source: US Department of Housing and Urban Development, 2000

#### Recommendations and Implementation Strategies:

Data show that housing values in East Hanover Township are higher than in Dauphin County. Many households are cost burdened, but the percentage of cost burdened households is no larger than in the County or the Commonwealth.

To promote affordability, the Township should continue to permit various types of housing, as specified in the MPC, through its zoning ordinance. The Township can also require that a proportion of units in a new development be affordable. Providing sufficient opportunity for various housing types will ensure compliance with the requirements of the MPC and will fulfill the Township's fair share obligation.

- Promote mixed-use development that would accommodate various dwelling types in proximity to commercial and civic services.
- Provide for a variety of housing types, including single-family attached and multi-family dwellings, in order to accommodate individuals and families of various income levels.
- Provide for age-restricted housing in proximity to services to accommodate seniors.
- Investigate ways to bring relief to cost burdened households (owner and renters).
- Investigate the need for rehabilitation of substandard housing.

## Chapter 8 Community Facilities & Utilities Plan

### INTRODUCTION

#### **Overview**

Community facilities and services can be defined as the infrastructure and services intended for the benefit and protection of the general public. This includes municipal facilities, schools, libraries, emergency and medical facilities, and cultural organizations. Utilities refer to potable water, solid waste disposal, wastewater management, stormwater control, and energy supply.

The East Hanover Township Comprehensive Plan addresses issues related to community facilities, services, and utilities, and seeks to coordinate the provision of these amenities with the development pattern advocated by the Future Land Use Plan. Community facilities and services are planned to be accessible to all Township residents. Utilities are planned to correlate with land uses proposed by the Future Land Use Plan. That is, higher intensity land use should be directed to areas capable of providing public utilities. Further, appropriate services are to be provided to areas of appropriate development. For example low-density development areas may only require on-lot sewage disposal systems (OLDS) if feasible. The aim is to achieve more efficient allocation of facilities, services, and utilities and to minimize adverse sustainability issues and fiscal impacts arising from unmanaged growth.



**GOALS & OBJECTIVES****Goal #1**      **Promote Efficient Delivery and Use of Community Facilities, Services, and Utilities**

- Maximize the utilization of existing infrastructure and alleviate the burden of expansion and maintenance costs.
- Carefully coordinate residential and commercial development with community facilities and services.
- Direct community facilities and services to areas experiencing problems, and anticipated future growth.
- Continue to make municipal services available to Township residents.

**Goal #2**      **Provide adequate water supply.**

- Require new development to demonstrate adequacy of water supply.
- Actively engage in research and planning to assure sustainability and protection of the water supply.

**Goal #3**      **Provide safe and effective sewage disposal.**

- Provide for public sewer service in accordance with the Township's Act 537 Sewage Facilities Management Plan.
- Ensure that lots not served by public sewer can safely accommodate individual on-lot sewage disposal systems.
- Promote regular maintenance and management of existing on-lot sewage disposal systems.

**Goal #4**      **Promote the Use of Alternative Energy Systems and Technologies.**

- Encourage the establishment solar, wind and geothermal energy sources.

**Goal #5**      **Provide Professional Emergency Services.**

- Continue to support the Township's emergency service providers.

**EXISTING CONDITIONS**

**Municipal Services** East Hanover Township has a five member Board of Supervisors supported by several commissions and community councils. It employs a Township Secretary/Treasurer, Administrative Assistant, Park and Recreation Director, Public Works Director, a Sewage Treatment Plant Operator, assistant operator, and maintenance person. General administrative services are performed by the governing body, hired municipal staff, and contracted firms. The Township Administrative Office is located in the municipal building at 8848 Jonestown Road in Grantville PA.

**Recommendations & Implementation Strategies:**

- Continue to provide existing levels of municipal services and adjust services as warranted by future growth, changing needs and changing technological improvements.

**Emergency Services**

East Hanover Township has no municipal police force. Police services are provided to the Township by the Pennsylvania State Police. The State Police department servicing the Township is located at the Harrisburg Station at 800 Bretz Drive in Harrisburg. This police station also serves the Townships of West Hanover, South Hanover, Londonderry, Conewago, and Middle Paxton. It serves Dauphin, Royalton, and West Fairview Boroughs when their part-time police departments are not in service.

At the time of the writing of this plan, the Grantville Volunteer Fire Company provides fire protection, rescue, fire police, emergency medical and other support services to East Hanover Township and surrounding areas. Annually, the Township selects and pays for fire protection services. The Fire Company is headquartered at 9083 Jonestown Road. In addition to the provision of emergency services, the Fire Company co-sponsors several community activities and events through the year. In late 2003, the Fire Company established a building steering committee to design and construct a new, larger station. Upon completion, the new facility will be capable of housing more equipment and have a more centralized location at the Corner of North Hill Drive and Allentown Boulevard.

The primary ambulance service for East Hanover Township is provided by South Central EMS. The ambulance center is located by the western border of the Township along Allentown Boulevard. Medical emergencies are directed to hospitals in Harrisburg and Hershey.

**Recommendations & Implementation Strategies:**

- Continue to support the Township's emergency service providers.

- Maintain SALDO requirements for appropriate design in new developments to ease emergency response vehicles access to properties.

### ***Library***

No public library is located in East Hanover Township. Library services are provided for students at the Lower Dauphin School District schools and for the residents via the Dauphin County Library System with branches located in Harrisburg, Elizabethtown, Millersburg, Hummelstown and Likens. The Anderson Family Library, a part of the Historical Society of Dauphin County provides resources for genealogical and local history research. The Anderson Family Library is located at 219 Front Street in Harrisburg.

#### **Recommendations & Implementation Strategies:**

- Continue to support the Dauphin County Library System.

### ***Schools***

East Hanover Township is part of the Lower Dauphin School District along with the Borough of Hummelstown, and the Townships of Conewago, Londonderry, and South Hanover. Lower Dauphin Covers close to 90 square miles and is home to 22,545 residents. Approximately 4,000 students attend Lower Dauphin Schools. The District is comprised of five elementary schools (K-5), one of which is located in East Hanover Township, one middle school (grades 6-8), and one high school (grades 9-12). Hummelstown is the home for the middle school, high school, and the district's administrative offices.

#### **Recommendations & Implementation Strategies:**

- Continue to support the Lower Dauphin School District.
- Partner with the School District to share resources in the Township, such as play fields.

### ***Parks & Recreation***

Issues related to this topic are covered in Chapter 9 of this plan.

### ***Solid Waste Disposal***

East Hanover Township has contracted municipal curbside trash and recycling with Penn Waste Services. This program is scheduled to last until July 2013.

Dauphin County Department of Solid Waste Management and Recycling offers a one time per year curbside pickup program for Household Hazardous Waste. Access to information on this service is provided to the public via the County's website.

**Recommendations & Implementation Strategies:**

- Continue to provide curbside trash and recycling services.
- Include paper, glass, and all plastics (#1-7) in the recycling service.

***Water Supply***

Currently, there are no existing or planned public water supplies within east Hanover Township. All water provided to residential and commercial land uses come from privately owned wells.

To date the groundwater yields in the Township have been sufficient to accommodate the land development that has occurred. However, water supply is a concern because the Township's underlying geology may not yield sufficient groundwater needed to support higher intensity residential development or additional large draw commercial wells.

In 2010, the Township had completed an Aquifer Study to analyze the yield and recharge potential of geology and soils within the Township. The study utilized remote sensing, well drilling records, geologic and soil techniques to evaluate and stress test the sustainability of the water supply.

The Aquifer Study finds that both the quality and quantity are sufficient to support the current population, however the Aquifer Study indicates that areas of intense residential development and high yield wells are particularly sensitive to potential failure in times of drought conditions. Indications of nitrate and coliform contamination also are found to be potential threats to quality of well and surface water. In particular, the Bow Creek Basin, Manada Creek Basin and areas surrounding the I-81 interchange are cited by the Study to be under the highest levels of stress for both quality and quantity issues.

The Study recommends the use of supply limitations set forth in its findings to guide the drafting of ordinances and provisions of land use controls. The plan supports a targeted TDR approach to more effectively address non-point source pollution issues and recharge needs of the aquifer. The study also provides tools to evaluate both the impact of large-scale commercial and residential developments on drawdown of the aquifer and indirect drawdown on neighboring properties.

In continuation of the Aquifer Study, a Potable Water Study (PWS) is being prepared to identify and evaluate locations of need, supply sources, distribution alternatives, and costs if a public water system may be needed in the future. The PWS follows a planning model similar to that of the Act 537 Plan. At this time, although nearly completed, review of alternatives in the PWS is ongoing. It should be noted by the reader that this study has not yet been completed and the findings introduced below should be considered strictly preliminary and subject to change.

The Study Finds that the primary defect in the existing water supply in East Hanover Township is in quality. All of the alternatives provided in the study address this issue by proposing utilization of new water sources with disinfection. In addition, the Township should also try to address the issue in problem areas by providing public sewers to protect existing private wells.

The greatest benefit would be obtained by providing water service to the Fair Field, Sycamore Lane and Sand Beach Road areas. Consideration for digging a township well in the near vicinity of these areas versus accessing public water from West Hanover Township were both considered. Utilizing an existing water supply system in West Hanover Township could serve the areas of need in a more timely, financially feasible manner than developing and producing a Township owned water system for this location.

A secondary recommendation provided is to develop well areas and provide service to Grantville, Shellsville, and the Partridge Hills and Englewood Land areas. This is recommended to address anticipated growth issues. These areas have, or could have significant growth potential in the Township. Large portions of these areas are or will be served by public sewers, potentially attracting future development. Providing public water in these areas can insure that growth would be sustained.

A wellhead protection plan is also underway to identify groundwater sensitivity near wells and would set forth measures to prevent contamination. When completed, these studies shall be joined within a greater Comprehensive Watershed Protection Plan.

#### Recommendations & Implementation Strategies:

- Completion of the Township's analysis of potable water resources and promote measures of protection of well water.
- Use an Official Map to locate potential municipal large draw well areas and areas identified for wellhead protection.
- Complete and adopt the Wellhead Protection Plan if a Township water source is identified.
- Coordinate future Zoning and SALDO regulations with ongoing potable water research and recommendations from the Aquifer Study.
- Review and modify existing ordinances such as the Mobile Home Park Ordinance of 2003 to ensure effectiveness in protecting potable water resources.
- Maintain the correlation between higher intensity land development and presence of infrastructure by encouraging development in areas with existing infrastructure.

- Discourage high-density development in areas further from infrastructure and having natural restrictions. This may be done through the requirement of developer contribution for extension of sewers to less developed areas
- Continue to investigate options presented in the Potable Water Study including discussions and planning with outside water utilities in neighboring municipalities.

### **Wastewater Management**

A new revision of the East Hanover Township Act 537 Sewage Facilities Plan is currently under review by the Pennsylvania Department of Environmental Protection (PADEP). This plan is the first complete update of the plan in over fifteen years. The plan recognizes several areas of need in the township for extension of the current sewer system as well as improved municipal ordinances and establishment of a municipal authority.

The majority of the Township is served by OLDS. No community on-lot sewage disposal systems are known to exist in the Township. There are currently two small-flow sewage treatment facilities serving mobile home parks in the western portion of the Township particularly including properties in the Sycamore Lane and Fair Field Land Development areas.

There is one privately owned and operated sewage treatment facility in the Township. This treatment plant serves the Penn National Raceway and Hollywood Casino property, and is contracted to serve the Holiday Inn Hotel and a small restaurant on Mountain Road. Representatives of Penn National have stated that although some capacity remains at the plant, limitations on the receiving stream have placed a cap on the volume that can be output. The Township has been informed that no additional connections to the Penn National System will occur.

Preliminary discussion regarding potential sewer capacity sharing with West Hanover Township sewage collection system and treatment facility is currently awaiting response from the neighboring Municipality.

Currently, the only “public” wastewater treatment facility within the Township is the Dairy Lane Wastewater Treatment Plant. The facility is presently permitted by Pennsylvania Department of Environmental Protection (PADEP) for 400,000 gallons per day (GPD) and currently treats an estimated average of 150,000 GPD according to the Township’s 2010 Chapter 94 wasteload management report.

Portions of Jonestown Road, Crawford Road, Caren Drive, Sanjo Drive, Hill Road, Bow Creek Road, Short Drive, *Chesapeake Estates* (300 unit mobile home community) and the *Preserve At Bow Creek* Land Development are served by the Dairy Lane Wastewater Treatment Plant. Service is also provided for the Interstate-81 rest area. The sanitary

sewer system primarily serves the Highway Commercial, Interchange Commercial, Village Residential, and Residential Medium Density Zoning Districts. The sewage facilities are owned and operated by East Hanover Township.

The East Hanover Township Zoning Ordinance of 2003 provides incentives for developing in sewer areas by adjusting design standards depending on presence of public sewer and water.

The Township is currently engaged in the construction of an extension of the sewer system to the land developments of Englewood and Partridge Hills in the southeastern quarter of the Township. These developments were built in the late 1970's. These projects are a result of the findings of a component 3M special study required by PADEP. Evidence of OLDS malfunctions and well water contamination problems were indicated in this study. The resulting expansion of the system will provide service for an additional 114 homes. Construction of this project is scheduled for completion by January 2012. Financing for this project will be from a matching funds grant from the Commonwealth Financing Authority. This grant was secured in 2009 under the H2O PA Water / Wastewater Program.

There are a number of additional sanitary sewer needs areas in the Township. This is particularly the case in the Rural Agricultural zoning district and in older land developments, where malfunctioning OLDS and evidence of nitrate and coliform contamination are present in well water. Various areas throughout the Township present these conditions to varying degrees. The Act 537 Plan has identified these problem areas and the Township has selected sewer alternatives for the areas of greatest need. These areas are as follows:

- Dairy Lane Properties – These properties are to be connected the current system being constructed for Englewood and Partridge Hills. Completion is anticipated by 2013.
- Pheasant Road Properties – These properties are to be connected as an extension to the Englewood and Partridge Hills Project. Completion is anticipated by 2015.
- Southwestern Portion – This area has been identified in the areas immediately north and south of Route 22 (Allentown Boulevard). Completion is anticipated by 2023.

The largest funding will be for the construction of alternative 4.F that conveys sewer from 180 homes on the western portion of the Township to the Dairy Lane WWTP via a pump station. This is estimated to have a construction and project costs of approximately \$8,900,000.

This will be funded through the creation of a capital reserve plan and public or private financing. Once implemented, new and existing debt service will be balanced with the rates established and the only rate increases necessary will be for inflationary or staffing increases. The Township has an existing Pennsylvania Infrastructure and Investment

Authority (PENNVEST) loan set to mature in 2026. For the financing of sewers in the Western Portion of the Township, an additional loan will be required. The source of that loan is not known at this time due to the time frame of this plan.

In order to institute this plan, including the financial portion the Township must create an Authority. The Authority will execute the plan, develop the capitol reserve and secure financing in the future.

In the Conservation and Residential Agriculture zoning districts, constituting the majority of the Township land, lots typically are greater than 1 acre and are expected to have sufficient suitable area for a replacement soil absorption system should the primary system fail. However the draft revision of the Act 537 plan finds that for many areas of these zoning districts, extensive natural restrictions (steep slopes, limiting soils, floodplains, and wetlands) may impinge on the potential for effective replacement. For these areas of the Township, the continued use of OLDS with proper operation and maintenance is considered a viable long-term method of sewage disposal.

For areas with OLDS where public sewage would be infeasible, the Township will review its sewage management program for effectiveness. The program indicates that all systems will be inspected by responsible management entity on a three-year cycle and maintained as required. Soil absorption areas are to be inspected in order to assure the area is protected from physical damage. Any problems or suspected concerns shall be reported to a responsible management entity.

The Dauphin County Comprehensive Plan encourages municipalities to promote the centralization of sewer systems. The Plan also promotes the direction of development toward existing infrastructure and away from undeveloped areas. The location of mixed use, commercial, village, and medium density residential land use areas in this Comprehensive Plan support the County's position.

The current draft Act 537 Plan alternatives under consideration indicate the Township's commitment to environmental protection and sustainability by prioritizing existing sewer capacity for existing problem areas. Once system capacity has been reached, further expansion to support new development would potentially be a result of developer contribution, timing controls, or impact fees.

**Recommendations & Implementation Strategies:**

- Adopt, and actively engage the alternatives and implementation schedule of the Township's Act 537 Sewage Facilities Plan.
- Establish a Sewer Authority and Capital Reserve Plan to finance the Act 537 Plan's Selected Technical Alternatives.
- Review the Township's on-lot sewage management ordinance for effectiveness and continue regular monitoring of on-lot septic systems.



- Maintain requirements for on-lot sewage system replacement areas in the event of primary system failure.
- Complete the Englewood and Partridge Hills Sewer Project.
- Maintain the correlation between higher intensity land development and presence of infrastructure by encouraging development in areas with existing infrastructure.
- Discourage high-density development in areas further from infrastructure and having natural restrictions. This may be done through the requirement of developer contributions for extension of sewers to less developed areas.

### ***Energy***

East Hanover Township currently has no public energy utility. Electric service is provided to residents primarily by Metropolitan Edison Company. Electrical Infrastructure is owned and maintained by the electric companies. The system consists of two high-tension line corridors running east to west. The southern corridor connects to a major electrical sub-station west of Lauder Milch Road on Wolfe Lane. The remainder of electrical supply is in the form of residential and commercial/industrial service conduits throughout the Township.

Natural gas transmission pipelines are also present in the Township. Buckeye Partners LP, UGI, and Texas Eastern have transmission mains present in the Township. The UGI and Texas Eastern pipelines are serviced at a substation north of I-81. Although not owned by the Township, measures of public safety and physical protection of this infrastructure of regional importance must be maintained.

The Township recognizes the potential benefits of promoting the use of renewable resources such as solar, wind, and geothermal energy. The use of renewable energy sources could potentially reduce dependency on fossil fuels, and reduce emission of carbon. Use of renewable sources of energy also is also viewed as a means to reduce the long-term cost of “on the grid” service.

#### **Recommendations & Implementation Strategies:**

- Amend the SALDO to require placement of electrical lines underground in new developments for safety and aesthetic value.
- Continue to encourage the use and development of alternative energy sources through public education.

## PLANNING IMPLICATIONS

### ***Summary***

Municipal facilities and services appear to be regularly used and sufficiently serve Township residents. Although currently adequate, the Township should regularly assess the sustainability of community services based on population and development patterns. The planned expansion of the sewer system may spur development pressure in periphery areas. The Township must ensure, however, that new developments plan responsibly to support and sustain infrastructure and services to the populations they create. The importance of the protection of aquifer and potable water resources is recognized. The Township also recognizes the potential benefits of promotion of renewable sources of energy.

## Chapter 9

# Park, Recreation, Open Space & Greenways Plan

### INTRODUCTION

#### **Overview**

Land development in municipalities creates pressure on environmental resources, while exacerbating demand for recreational amenities. Communities that plan inadequately risk degradation of environmental value and quality of life for their citizens. Although development resulting from growth pressure is unavoidable, it can be accommodated within a context of natural resource protection and in a manner that meets increasing recreational needs of increasing populations.

The proposed recreation, open space and greenway areas contained in this plan are coordinated with the Future Land Use Plan, the Natural Resources Plan, and the Historic Resources Plan. Active recreation (e.g. ball fields) is proposed in proximity to population centers. Open space and greenways coincide with natural resource protection areas. Trails provide links to historic resources and other significant destinations. The overall goal of this plan is to promote a contiguous network of open space, greenways, and trails that provides recreational opportunities while achieving environmental protection. This network can subsequently be linked to a regional or countywide system.

<b>GOALS &amp; OBJECTIVES</b>
-------------------------------

**Goal #1****Provide for recreational opportunities for all age groups.**

- Provide sufficient opportunities for active recreation for residents of all ages.
- Maintain the availability and quality of sports and play facilities.
- Require the installation of park facilities in all new developments.
- Provide for passive recreational uses within open space areas.
- Provide recreational access to the Manada Creek.
- Support the East Hanover Township Recreation Plan of 2003 to assure its responsiveness to current needs and to additional demands created by future development.

**Goal #2****Create and preserve a Township-wide open space network that connects to open space areas in adjoining townships**

- Protect the Township's three mountains and respective valleys for recreational opportunities such as hunting, hiking, and fishing.
- Create open space within new developments and on tracts contiguous to existing open space and recreational areas.
- Work with landowners to encourage voluntary preservation of environmentally important land on their properties.
- Utilize open space to protect habitat and water resources.

**Goal #3****Establish a trail and greenway network that provides connections between public lands, Township identified open space, scenic and historic areas, and trails in adjoining Townships.**

- Create a walkable community.
- Provide for trails in all new residential and non-residential developments.
- Protect and maintain existing trails, including the Appalachian Trail and Horse-Shoe Trail and other unnamed trails.
- Establish Greenways for conservation and recreational purposes.
- Promote and protect hiking trails linking with landmarks and community focal points, historic sites, and neighboring municipalities.

- Encourage pedestrian connections between developments.
- Promote trail design that minimizes conflict between different users and with adjacent property owners.
- Provide for new trails and park facilities in all new residential and non-residential developments.
- Establish new trail connections to assist in the development of a more regional trail network.
- Promote the creation of on and off-road bicycle paths.
- Provide for adequate parking for trailheads.
- Improve recreational access to creeks and water trails.

## EXISTING CONDITIONS

### **Overview**

Much of the area in the northern part of East Hanover Township is protected state and federally owned land. Of the remaining land, approximately 67% has potential for development. Given the prospect of increased development and population in the Township's medium to high-density residential zoning districts, more consideration should be given to the promotion of neighborhood parks and the creation of linked open space and passive recreation areas, trails, and greenways.

### ***Dauphin County Parks, Recreation, Open Space, and Greenway Study, 2009***

In 2009, The Dauphin County Parks, Recreation, Open Space, and Greenway Study was published. The study evaluated the ecological and social benefits found inherently in the County's natural spaces and recreational facilities. The Study evaluated the status of outdoor and recreational facilities using inventories and comparative analysis of facilities based on guidelines from the National Recreation and Parks Association (NRPA). This analysis provided a summary of surpluses and deficits of parkland and recreation for four distinct planning sections of the County.

The Study concluded that the Southeast Planning Section (the portion of the county in which East Hanover Township is found) is experiencing several deficiencies in park type, acreage and facilities. The Study also includes guidelines for increasing available open space and greenway development from a regional perspective. The Township recognizes the deficiencies and guidelines set forth by this study by incorporating them into the recommendations and implementation strategies portions of this chapter.

**Recommendations & Implementation Strategies**

- Coordinate with Dauphin County and the Tri-County Regional Planning Commission to promote goals and action recommendations from the Parks Recreation, Open Space, and Greenways study.

***Township  
Recreation Plan  
Of 2003***

In 2003 the Township enacted a Recreation Plan to provide a framework for future decisions regarding provision of recreational services to the public. Goals have been set in the plan regarding planning, facilities, and administration.

The Recreation Plan provides an analysis of the parks in the Township and discusses the sustainability of the park system based on inventory, population growth, and NRPA guidelines. However, NRPA guidelines have since been updated based on a new needs analysis methodology.

The 2003 Recreation Plan finds that many existing parks are in need of improvements. Community scale parks such as East Hanover Township Elementary School and Shellsville VFW can support their respective populations if pedestrian accessibility to the parks is improved. The Recreation Plan finds that the neighborhoods surrounding Grantville, the southern portion of the Township near Laudermilch Road and Chesapeake Mobile Home Park are in need of improvement. Either expansions of existing facilities or creation of smaller parks to support non-vehicular access are recommended.

In locations where no parks are present, the Recreation Plan supports Township acquisition of land via mandatory dedication and collection of fees-in-lieu to be applied to neighborhood park development.

Regarding the park in the Chesapeake MHP Neighborhood, the plan recommends that the Township should provide for a 1.9 acre developed neighborhood park in the short term and require that the developer enlarge and improve it according to the Mobile Home Park Ordinance of 1970 as more mobile homes are added to the property. During the research period establishing the basis for this plan, it was found that an inconsistency exists between the park and recreation plan and the mobile home park ordinance of 2003. In this specific instance, the current ordinance does not support the Chesapeake MHP statement made by the Recreation Plan.

The Recreation Plan recommends that extensions or linear parks should be designed to connect existing trails, historical sites, and centers of community activity. The Plan recommends that the Township should seek methods to protect its existing trails by requiring development plans proposed along them to relocate them away from roads and provide overland alignment by designing developments that respect trail integrity and use.

**Recommendations & Implementation Strategies:**

- Review and update the 2003 Recreation Plan for consistency with new NRPA guidelines, the 2010 Census and new development patterns.
- Review and Update The Park and Recreation Plan and SALDO for consistency.
- Reevaluate sufficiency of neighborhood parks and plan based on any future modifications to the Park and Recreation Plan.

***Existing Parks & Open Space***

The following recreation and open space areas are inventoried on Map A-8.

**PA State Game Lands #211:** Approximately 3,050 acres of wooded game lands comprise the northernmost portion of the Township. This is a portion of St. Anthony's Wilderness, recognized as the second largest roadless area in the state<sup>1</sup>. The State Game Lands are traversed by the Appalachian Trail, the Horse-Shoe Trail and the Stony Valley Railroad Grade rail-trail. This land currently provides recreational opportunities and landscape essential to the Township's character, health and wellbeing. It also provides protection for critical habitat and natural resources, including several Natural Areas Inventory Sites.

**Recommendations & Implementation Strategies:**

- Make all feasible efforts to protect the Township's Mountain and Valley areas.
- Open space should be used to maintain the rural character of the Township and provide for passive recreational pursuits
- Recognize State Game Lands 211 as conservation land use in order to maintain protection of this land in the case of closure or sale of the property.
- Communicate to the Pennsylvania Game Commission the Township's interest in preserving the State Game Land property and the trails that traverse it.

**Fort Indiantown Gap Military Reservation:** 6,942 of the 17,000 acres of the Reservation are located in East Hanover Township, stretching from the southern portion of the State Gamelands through Manada Gap. The Reservation has over 140 military training facilities restricted from public use. These facilities are concentrated, however, in a small portion of the Reservation. The remaining land is made available for outdoor activities such as bird watching, hunting, fishing, and wood gathering. The Horse-Shoe Trail passes through the property. It is also contains some of the

<sup>1</sup> Website: <http://home.comcast.net/~StAnthonyWilderness/anthony.htm>. 2009

Township's most scenic and environmentally significant landscape. Fort Indiantown Gap supports environmental conservation by engaging in public education and requires visitors to pay an entrance fee and attend a safety briefing.

**Recommendations & Implementation Strategies:**

- Make all feasible efforts to protect the Township's Mountain and Valley areas.
- Open space should be used to maintain the rural character of the Township and provide for passive recreational pursuits
- Recognize Fort Indiantown Gap as conservation land use in order to maintain protection of this land in the case of closure or sale of the property.
- Communicate to Fort Indiantown Gap the Township's interest in preserving this land and the trails that traverse it.

**County and Neighboring Municipal Parks:** The southeastern section of Dauphin County in which East Hanover Township is located, hosts nearly 544 acres of public parkland. Nine municipal or county parks are located within five miles of the border of the Township. Two parks are located nearby in neighboring Lebanon County. Memorial Lake State Park in East Hanover Township, Lebanon County encompasses over 200 acres and provides picnic areas, trails, and lake access for fishing and boating (electric motors only). H.M. Levitz Memorial Park is also located in East Hanover Township, Lebanon County. This park offers various outdoor sports facilities, an ice skating pond, and hiking areas.

**Recommendations & Implementation Strategies:**

- Work with Dauphin County and neighboring municipalities to provide trail and greenway connections between park and recreation areas.

**East Hanover Township Public Parks and Recreation Areas:**

According to the County Study, an additional 27.4 acres for Neighborhood Parks and 27.3 acres for Mini parks would help the southeast planning section approach a sufficient amount of acreage for the projected population. Regarding facilities, the southeast section has been found deficient in only baseball fields and tennis courts.

The Township's municipal park is approximately 60 acres. In 2009 expansion was made to the park's soccer fields and additional baseball fields are in the planning and design stage. The park offers playground and picnic facilities, and fitness and walking trails. Adequate parking and restroom facilities are also provided. The park benefits from its centralized



location but is primarily a vehicular destination for most of the Township's residents.

The East Hanover Township Park and Recreation Board and Park Director position was established in 1980. The Board directs, plans, and administers a variety of park activities open to the public. A quarterly newsletter is also issued to the public. Township staff members currently maintain the park.

**Recommendations & Implementation Strategies:**

- Increase non-vehicular connections to the Township Park through trails and greenways.
- Create agreements with athletic organizations and other park users for maintenance of the play fields and other facilities.
- Regularly monitor use of the Township Park and the condition of park facilities and upgrade as necessary.
- Promote the construction of the planned baseball fields in the Township Park in future budget and capital improvement discussions.
- Examine the need and feasibility of creating a township or neighborhood Park in the vicinity of the Englewood development off of PA 743.
- Consider use of an Official Map to identify potential parklands.

**Lower Dauphin Area Elementary School:** Offers 3.9 acres of open space with playground equipment and ball fields. This recreation area is open to the public and used by the elementary school for various recreation and educational activities. The park offers playground equipment, two baseball fields and a football field and basketball court. Some limited indoor facilities are also available for public use. The facilities are permitted for use by various public associations, primarily for sports activities.

**Recommendations & Implementation Strategies:**

- Partner with the school district on the sharing of recreational resources and the sharing of maintenance of recreational facilities.

**Shellsville VFW Open Space:** Houses a picnic area, playground and additional ball fields available to public use. The VFW is very near the Township Park and is adjacent to the Lower Dauphin Area Elementary

School. The facilities of the open space are used by the public and are shared with East Hanover Township Elementary School.

**Recommendations & Implementation Strategies:**

- The VFW open space could be connected to the Township Park. The Township and VFW should examine the feasibility of purchasing or acquiring through donation, the VFW's open space area and facilities.

**The Manada Conservancy:** Currently owns two parcels adjacent to Shells Church Road. This land is often used for passive recreation and educational purposes.

**Recommendations & Implementation Strategies:**

- Partner with Manada Conservancy and other land trusts and conservancies to assist landowners with the sale and donation of conservation easements that include public access to land and/or trails.

**Private Recreation Areas:** Various privately owned recreation facilities are located in the Township. These include the Manada Golf Course, Penn National Raceway and Ball Field, and Mountain Road Driving Range in the Commercial Recreation Area; Faith United Church playground and basketball courts, Chesapeake Mobile Home park playground and basketball court, and Tall Cedars Recreation Area, fronting on Manada Creek.

**Recommendations & Implementation Strategies:**

- Support the continuation of privately owned recreational facilities in the Township.
- Should the Tall Cedars site cease to operate, consider the need and feasibility of this site as a Township park that could connect to a greenway along Manada Creek.

***Private Open Space*** Although much land in the Township is devoted to conservation purposes, the percentage of privately owned open space in the form of conservation easement and homeowner association (HOA) open space is relatively small. This may be due to the lack of incentive for implementing cluster development and utilizing Transfer Development Rights (see Chapter 6). According to Dauphin County Board of Assessment, privately owned and managed open space accounts for approximately 81 acres in the Township. The largest portions of privately owned and maintained open space are found at the Preserve at Bow Creek land development on Laudermilch Rd, adjoining the Creek.

**Recommendations & Implementation Strategies:**

- Pursue improvements to existing parks and creation of new neighborhood parks to meet the recreational and social needs of increasing neighborhood populations.
- Review, update, and enforce SALDO regulations requiring developers to provide for recreation within the development, or to pay a fee in lieu of recreation facilities to help fund active and passive recreational needs in the Township.
- Review and amend, if necessary, the provisions of the Zoning Ordinance to provide additional incentive for the use Cluster Development and require an appropriate amount of open space within such developments.
- Amend the TDR provisions of the Zoning Ordinance to provide an incentive for Sending Area landowners to sell development rights.
- Form a Township open space, trails and greenways committee to conduct education and outreach to encourage landowners to conserve land through conservation easements, TDR, and other available means.

***Trails***

East Hanover Township is home to several historically and environmentally important trails. Three out of the four trails inventoried below are found in the northern, mountain section. The Township recognizes the need for continued preservation and improvement of these trails as an attraction and benefit to the community.

**The Appalachian National Scenic Trail:** Conceived in 1921 and completed in 1937 the Appalachian National Scenic Trail is the nation's longest marked footpath spanning approximately 2,178 miles along the Appalachian Mountains from Georgia to Maine<sup>2</sup>. The Trail was designated a national scenic trail in 1968. It is a privately managed unit of the national park system. Along its path it crosses six other units of the national park system, traverses eight national forests, and contains several occurrences of rare, threatened and endangered species<sup>3</sup>. The Trail is nationally and internationally renown. An estimated two to three million people hike portions of the Trail each year. Although one in four Thru-hikers complete the entire trail, it is primarily used by short distance, local hikers from around the region<sup>4</sup>.

<sup>2</sup> Website: [www.appalachiantrail.org](http://www.appalachiantrail.org). 2011

<sup>3</sup> Website: <http://www.appalachiantrail.org/about-the-trail/plants-wildlife/faqs>. 2011.

<sup>4</sup> Website: <http://www.appalachiantrail.org/about-the-trail>. 2011.

Headquartered in Harpers Ferry, West Virginia with four regional offices, including one in Boiling Springs, Pennsylvania, the Appalachian Trail Conservancy (ATC) has been delegated responsibility by the National Park Service to coordinate the management and protection of the Trail footpath and its surrounding corridor lands. The ATC has approximately 40,000 members and employees approximately 45 regular staff. The Trail is cooperatively managed by the National Park Service, the Appalachian Trail Conservancy (ATC), 30 trail clubs, the USDA Forest Service and other public land management agencies. In Pennsylvania, it is managed by the ATC, the PA DCNR, the PA Game Commission, Penn DOT, and 11 trail clubs. The footpath and a corridor of land of varying width surrounding the Trail are owned by the Commonwealth of Pennsylvania and the National Park Service.

On June 11th 2008, the Governor of Pennsylvania signed House Bill 1281 amending the Appalachian Trail Act of 1978. HB 1281 is now known as Act 24 of 2008 and became effective on August 10th, 2008. The amended act now requires the 58 Pennsylvania municipalities through which the Appalachian Trail passes to adopt and enforce zoning ordinances that preserve the “natural, scenic, historic and esthetic values of the trail and to conserve and maintain it as public resource”.

The Appalachian National Scenic Trail passes through the northern portion of East Hanover Township, entering near the gap of Stony Run and exiting along the Stony Mountain ridge. The Trail offers spectacular views of the surrounding landscape. Protection of the Trail footpath and surrounding landscapes is imperative to preserving the superior, national scenic status of the Trail, the Trail experience, and the benefits the Trail provides.

**Recommendations & Implementation Strategies:**

- In accordance with Pennsylvania Act 24, amend the Zoning Ordinance to include provisions to protect the Appalachian National Scenic Trail.
- Conduct a preliminary study of the trail footpath and its viewshed to determine the geographic extent of the protection measures.
- Create a Township open space, trails, and greenways committee to spearhead efforts to communicate with the Appalachian Trail Conservancy (ATC) and PA Game Commission, to contribute to trail protection efforts, and to monitor Act 24 developments, and to encourage support for the ATC.
- Consider use of an Official Map or the Open Space Lands Act to acquire easements along the Appalachian Trail corridor.

**The Horse-Shoe Trail:** Established in 1935, this dual purpose hiking and equestrian trail extends 140 miles, beginning at Valley Forge National

Historic Park and connecting to the Appalachian National Scenic Trail at Stony Mountain on East Hanover- Rush Township border. “The history of the Trail is entwined with the development of the iron industry in this part of Pennsylvania during the 18th and 19th centuries. The many furnaces and forges were connected by trails, portions of which have survived to form the foundation of today’s Horse-Shoe Trail. The trail expanded and evolved since becoming open to the public in 1935. The trail provides opportunities to explore the region’s lush landscapes and visit important natural and historical landmarks. These include Hopewell Furnace, French Creek State Park, Middle Creek Wildlife Management Area, Cornwall Iron Furnace, Mt. Gretna, and Manada Furnace, the northernmost site along the Trail <sup>5</sup>. The PA DER recognized the Horse-Shoe Trail in 1989 as being a model greenway corridor linking recreational resources while preserving natural resource values.

The Horse-Shoe Trail enters East Hanover Township at its southern boundary along Canal Road. It then runs north, entering the Fort Indiantown Gap Military Reservation at Furnace Road. It exits the Township into West Hanover Township, then loops back in and runs through State Game Lands No. 211 to Stony Mountain where it connects to the Appalachian National Scenic Trail.

The Trail has been maintained by the non-profit, volunteer Horse-Shoe Trail Conservancy since 1935. “The work of the Conservancy is done by a number of standing committees. These include Trail Protection; Trail Maintenance, which maintains, enhances and improves the Trail; Fundraising, which raises the needed dollars for Trail maintenance, improvement and protection; Communications, which publishes the Conservancy newsletter and other related materials; and Membership.<sup>6</sup>”

The Conservancy owns no land. The trail is kept open on both public and private lands by agreements with landowners who have given permission to hikers and equestrians to follow the portions of the Trail that fall on their properties. Over the years, the Trail has been increasingly re-routed onto roadways causing conflict of space and use, detracting from the trail experience, and potentially posing a danger to hikers. This is evidenced in East Hanover Township where the entire length of the Trail south of Furnace Road is on-road. Communities are working to move the Trail back off-road locations. Through partnership with landowners and the Horse-Shoe Trail Conservancy, East Hanover Township can join in this effort.

#### Recommendations & Implementation Strategies:

- Create a Township open space, trails, and greenways committee to organize efforts to raise awareness of the Horse-Shoe Trail, to foster appreciation for the Trail by sponsoring hikes, to encourage support for the Horse-Shoe Trail Conservancy, and to communicate with the

<sup>5</sup> Website: [www.hstrail.org](http://www.hstrail.org). 2010.

<sup>6</sup> Website: [www.hstrail.org](http://www.hstrail.org). 2010.

Horse-Shoe Trail Conservancy and landowners along the Trail in an effort to obtain off-road trail easements or agreements to allow access to the Trail on their properties.

- Work with South Hanover Township, Derry Township, and the Horse-Shoe Trail Club to develop permanent off road easements for the trail between Hershey and Manada Gap.
- Require new subdivisions and land developments along the Horse-Shoe trail to provide for an off-road trail easement with permission for public access. In the case of Cluster Developments, the Trail easement can be located in the development's designated open space area.
- If the Trail is routed onto private lands, prepare a trail ordinance to establish rules for conduct on trail within the Township.
- Consider use of an Official Map or the Open Space Lands Act to acquire easements along off-road portions of the Horse-Shoe Trail.

**Stony Valley Railroad Grade:** The Stony Valley Railroad Grade is a rail trail established on the former Schuylkill and Susquehanna Railroad, built in the 1850s to transport coal to the canals and tourists to enjoy the healing mineral waters at Cold Springs. The trail is located on 44,342 acres of state game land and passes through diverse natural habitats with an abundance of wildlife. Its western trailhead is at Ellendale; its eastern trailhead is on Gold Mine Road, north of Swatara State Park in Lebanon County<sup>7</sup>.

In East Hanover Township, the dirt and gravel rail trail passes through State Gamelands No. 211 and Fort Indiantown Gap. It enters the Township at its border with Middle Paxton Township, shares the railroad bed with the Horse-Shoe Trail, then exits on the northern slope of Sharp (Second) Mountain into East Hanover Township, Lebanon County. Trail activities including walking, horse riding, biking, cross-country skiing, and snowmobiling. Automobiles are permitted on the trail for one day per year, a unique feature for the rails to trails system<sup>8</sup>. The Pennsylvania Game Commission manages the railroad grade.

#### **Recommendations & Implementation Strategies:**

- Create a Township open space, trails, and greenways committee to organize efforts to raise awareness of the Stony Valley Railroad Grade in East Hanover Township, to foster appreciation for the Trail by sponsoring hikes, and to encourage support for the Rail-Trail Conservancy.

<sup>7</sup> Website: [www.railstotrails.org](http://www.railstotrails.org). 2010

<sup>8</sup> Website: [www.railstotrails.org](http://www.railstotrails.org). 2010

**Swatara Water Trail:** Described by the Pennsylvania Fish and Boat Commission as an “urban wilderness”<sup>9</sup> this 60-mile segment of the Swatara Creek begins at Pine Grove, Schuylkill County, and flows through Lebanon County to its mouth on the Susquehanna River in Middletown, Dauphin County. The water trail incorporates several historical and environmental sites of interest, including Swatara State Park, Union Canal locks, the Appalachian Trail Bridge, the abandoned Lebanon to Tremont railroad and bridge, Harper's Tavern, various farms and bank barns, forested riparian buffers, limestone outcrops, and the only lava deposits in Pennsylvania.<sup>10</sup> In East Hanover Township, the only official access to the water trail is located at the Union Canal Canoe Rentals at river mile 14. Lands adjoining the Creek are in the 100-year floodplain and are restricted from development.

The Dauphin County Study finds that the Swatara Creek / Union Canal Greenway and Water Trail to be the second highest priority greenway for protection under municipal ordinances.

**Recommendations & Implementation Strategies:**

- Create a Township open space, trails, and greenways committee to organize efforts to raise awareness of the Swatara Water Trail, to foster appreciation for the Trail by sponsoring paddling trips, and to encourage support for the Swatara Watershed Association.
- Establish and preserve a greenway along the Swatara Creek through creation and preservation of a riparian buffer and by partnering with land trusts, conservancies and landowners for placement of conservation easements on properties along the Creek.

**Local Trails & Bikeways:** The Township should consider establishing walking trails within its neighborhoods in order to give neighborhood residents, especially children, an opportunity to exercise and enjoy the outdoors and to connect neighborhoods to other trails and points of interest. Bikeways along the Township's less congested roads could also enable physical activity and non-vehicular access to points of interest.

**Recommendations & Implementation Strategies:**

- Create a Township open space, trails, and greenways committee to identify opportunities for new trails and trail connections and to evaluate their feasibility.

<sup>9</sup> Website: <http://www.fish.state.pa.us/watertrails/swatara/trailguide.htm>. 2011

<sup>10</sup> Website: [www.baygateways.net](http://www.baygateways.net). 2009

- Ensure that trails and trail access are provided in future subdivision and land development plans. Trails can be located in the designated open space area within conservation subdivision designed developments.
- Expand the trail system in order to connect existing neighborhoods to other trails, parks, and points of interest in the Township and the region.
- Examine the feasibility of improving access in the Township to the Horse-Shoe Trail, Appalachian Trail, and Stony Valley Railroad Grade.
- Establish greenways along streams that would accommodate trails and trail connections. Utilize existing riparian buffers in order to form the greenways.
- Utilize locally and historically significant sites as destinations along the trail system. Route trails in a manner that promotes the preservation of these sites as trail destinations.
- Establish a system of bikeways on the Township's least congested roads. Work with Penn DOT to include bikeways in transportation improvement plans.
- Consider adoption of an Official Map to or use of the Open Space Lands Act to acquire trail easements where appropriate and feasible.

### **Greenways**

Greenways can be defined as corridors of undeveloped land, potentially along rivers and streams, that are reserved for recreational and conservation purposes. These corridors often connect urban centers, historical locations, or locations of environmental value. The East Hanover Township Subdivision and Land Development Ordinance of 2003, section 623.4 indicates that the Township may waive any or all design standards in order to preserve natural and historical resources and to integrate greenbelts throughout a development that link residences with on site or adjoining parks, schools or other similar features.

The Dauphin County Parks, Recreation, Open Space, and Greenways study of 2009 has identified and proposed greenways in three categories. Recreational greenways would provide for low impact recreation and human quality of life benefits. Conservation greenways support ecological and conservation related values. Finally, multiuse greenways support both human and ecological / conservation purposes. The Dauphin County Study has identified the following five greenways in East Hanover Township.

1. **The Horse-Shoe Trail** – Recognized by the State Greenway Plan, this Greenway is identified as multi-use.



2. **Manada Creek Greenway** – The County Study proposes a conservation greenway for the entire length of the Creek from Manada Gap to its mouth at Swatara Creek.
3. **The Stony Creek Greenway and Trail** – The County Study proposes a multi-use greenway to serve both the creek and railroad grade.
4. **The Appalachian Trail Greenway** – This National Scenic Trail is recognized as a multiuse greenway by the County Study.
5. **The Swatara Creek / Union Canal Greenway and Water Trail.** The County Study recognizes this Multi-Use Trail as Second Highest Ranking trail of any category.

As part of the Township's Dairy Lane Wastewater Treatment Facility and Bow Creek Study performed in 2010, Conestoga Rovers & Associates performed a biological monitoring project on the Bow Creek. Not only did the report find that water quality on the creek was unaffected by effluent from the Treatment Facility but output from the facility and groundwater infiltration to the stream in its southern reaches actually tended to improve water quality through dilution.

As the bow creek is the location for primary wastewater treatment, and is also located in the most intensively used areas of the township, consideration of its protection from pollution and supply threats of any kind is pertinent to the Township's interest. The US Environmental Protection Agency had issued a Total Maximum Daily Load Restriction to an unnamed tributary to the bow creek for phosphorus due to non point source phosphorus pollution.

The establishment of greenway corridors and enforcing riparian buffer regulations for the Bow Creek can result in the promotion of filtration of groundwater entering the stream and help to buffer other potentially harmful land uses. This would protect the Bow Creek as a natural and a recreational resource.

Potential Township greenways have been identified and located on Map # A-8. These locations are calculated as a 100-foot buffer of stream banks.

#### Recommendations & Implementation Strategies:

- In reference to providing for greenways along watercourses, the East Hanover Township Zoning Ordinance of 2003 has identified three riparian buffer zones to provide protection to lands adjacent to perennial streams, including Manada Creek, Stony Creek, and Bow Creek. The buffers also incorporate 100-year floodplains, wetlands, and slopes greater than 25 percent. The intent of the buffer zones is to protect water quality, sustain local wildlife, and reduce the adverse impacts of stormwater runoff. The ordinance can be strengthened to

prohibit disturbance of the buffer area excepting the creation of trails and activities consistent with the purposes of the greenways.

- In reference to the establishment of greenways along the Appalachian Trail and Horse-Shoe Trail, the Township must partner with landowners and the trail conservancies to obtain easements that will allow public access to the trails, protect their footpaths and viewsheds, and in the case of the Horse-Shoe Trail, provide an off-road route.
- Recognize the conditions present in Bow Creek that make protection of its waters priority. Promote the creation of a Conservation or Multiuse greenway and additional open space protection for the Bow Creek sub watershed.
- Create a Township open space, trails, and greenways committee to identify opportunities for new trails and trail connections and to evaluate their feasibility.
- Consider use of an Official Map to or the Open Space Lands Act to acquire easements for greenways where appropriate and feasible.

## PLANNING IMPLICATIONS

### **Summary**

East Hanover Township should continue to preserve its current open space, promote interconnected open space networks, and accommodate increasing future needs for recreational facilities. The 2002 Comprehensive Plan Survey of Township residents found that 87% agreed that preservation of agricultural properties and open space should be a primary priority.

The planning policies and recommendations contained in this chapter are intended to advance the creation of an integrated, networked system of parks, recreation, open space, trails, and greenways that protects resources while meeting the demands of Township residents. These policies are intended to connect the community, to promote the continued identity of East Hanover Township as a scenic rural home for its residents, and to enhance the health and well being of Township residents.

## **Chapter 10 Regional Compatibility and Plan Component Interrelationships**

### **INTERRELATIONSHIPS AND PLAN COMPONENTS**

#### ***Overview***

Section 301(a)(4.1) of the Municipalities Planning Code (MPC) requires that all Comprehensive Plans include a (statement of the interrelationships among the various plan components, which may include an estimate of the environmental, energy conservation, fiscal, economic development and social consequences on the municipality.

The East Hanover Township Comprehensive Plan is to be interpreted as an all-encompassing document in which individual components and chapters have wide ranging effects and interaction with the other components. Consideration must be given when reading this document to identify examples such as the rippling impact of extending utility service to an undeveloped area. The intended extension may attract more development for

which additional community services and infrastructure must be in place to sustain. Greater detail is now given to each section with a summary of interrelationships.

Together, the following components are intended to provide a landscape and pattern that is both sustainable and beneficial to the welfare of the public.

***Introduction***

The introduction sets the stage for the human and physical meaning of the plan. It includes discussion of the Township's location within the region and explanation of the Plan's structure, history, and methodologies in brief.

***Demographics***

Demographics are presented as the cornerstone for the Plan's model of analysis. Issues of land use, density and type of housing, community facilities, and utility infrastructure are all dependent on the growth and assumptions set forth in this chapter. The demographics reported in this plan are key to estimating build out analyses and act as determinants for funding anticipated for capital projects.

***Natural and  
Historic Resources***

The core of The Township's character, existing conditions, and resource development for the Township are dependent on the inventory of natural resources. Their presence and importance affect intended future land use patterns and potential materials for municipal and private use. These chapters emphasize preservation of lands holding historic and ecological value is reflected throughout the Plan. Natural resources such as forested areas and stream valleys influence recreational activities such as hiking, boating, hunting, and camping. These resources influence goals for providing greenways, open space, and parks.

These chapters emphasize increased diligence in the preservation of resources through modifications to land use controls, and partnering with other entities to continue their preservation.

***Transportation***

The controlled movement of people and goods are key to quality of life and economic development to the Township. The Plan recognizes that the expansion of transportation resources can also affect impacts on land use and housing potential.

The Plan for transportation describes issues and necessary improvements to the system including modifications and recommended acquisition of funds for improvements. Efforts recommended include partnering with private, municipal, county, and state entities to improve the transportation system.

***Land Use***

The concerns of nearly all of the Plan's chapters relate to the Land Use Plan. The nature of the envisioned future land use reflect the Township's intent to promote growth in intended areas and to

prevent the unintended intensification of development and draw of resources.

The Land Use Plan presents recommendations targeted to provide not only protection for resources but also to provide incentives to that end. The Future Land Use map does not act as a stand-alone feature but interacts with the Natural Resources, Historic Resources, Park Recreation and Open Space, and Utilities Maps to allow the Township to protect its unique rural character while setting aside intended areas of growth, commercial, and industrial pursuits.

### ***Housing***

The Plan for Housing focuses on providing choices within its boundaries that support the envisioned needs while limiting environmental impacts, and providing the tools to preserve the rural character of the Township. The chapter is also depicts the Township's intent to provide adequate, equitable housing for persons of all ages and income levels.

### ***Community Facilities & Utilities***

The Township's envisioned growth directly influences the type and intensity of services and utilities provided. The chapter indicates the needs reflected in the research performed on environmental and infrastructure quality to serve the population. The intent of this chapter is also to coordinate with other municipal plans and ordinances adopted by the Township. The expansions of infrastructure directly affects and is affected by the state of land use and development pressures present. Community facilities solutions also lean heavily on other municipalities, the county and regional entities for support.

### ***Parks, Recreation, & Open Space***

This chapter identifies valuable natural areas and the need to promote activities indicative to life in a rural setting. The value of outdoor recreation is combined with the need to preserve surface and groundwater, wooded areas, and locations of historical importance. Recommendations of preservation focus on interaction with other municipalities and regional groups to improve existing trails and interconnect parks and open space through use of greenways.

Evidence of the value of preservation of water resources is repeated in the Utilities Plan regarding the status of wastewater treatment, including perceived impact to Bow Creek. Preservation of these areas directly relate to incentives such as Transfer of Development Rights, and regulations such that are provided in the Zoning Ordinance and SALDO.

**REGIONAL COMPATABILITY****Overview**

The Municipalities Planning Code also requires a statement that explains the compatibility of Plan with existing plans of neighboring municipalities and development in the region. In section 301(a)(5) the MPC requires that “a statement indicating that the existing and proposed development of the municipality is compatible with the existing and proposed development and plans in contiguous portions of neighboring municipalities” and a statement indicating that the plan is “generally consistent with the objectives and plans of the county comprehensive plan”

Through the Plan, East Hanover Township wishes to promote enhanced communication throughout the region on initiatives of planning, infrastructure, environmental protection, and transportation issues. Such collaboration will lead to benefit the public throughout the region.

**Dauphin County  
Comprehensive Plan**

The East Hanover Township Comprehensive Plan is generally consistent with the Dauphin County Comprehensive Plan as in (but not limited to) the following examples:

- Continue to identify and protect historic resources through municipal ordinances, in particular, Zoning regulations. The East Hanover Township plan identifies and provides recommendations for protection through future land use, housing, historical societies, and zoning provisions. This is intended not only to preserve sensitive areas but also preserve the rural character of the Township.
- Thoroughly evaluate the county’s natural resources and plan for their preservation. By confirming the Township’s many water resource studies, the Plan intends to promote through ordinance and capital improvement, regulation for protection and incentive to land owners to preserve.
- Preserve natural and wild areas. The Plan recognizes the large quantity of wild and scenic areas. The protection for these areas comes through collaboration with outside sources to preserve trails and to expand open space.
- Promote development of new business and retain existing business. The Plan promotes new business by proposing future land uses conducive to technological industry, the continuation of partnering with regional entities for the improvement of transportation.

- Promote sensible land use patterns that promote economic growth while prohibiting financial strain on the community. By providing ample opportunity for landowners to trade development rights and offering incentive for cluster development in appropriate areas, the East Hanover Township Plan recognizes that financial strain can come with uncontrolled development particularly on the periphery of serviceable areas.
- Evaluate if the existing or planned infrastructure can be sustained with population growth. The supporting studies for the Comprehensive plan have provided the groundwork for controlling growth through land use controls and ordinances.
- Provide for attractive and well-maintained housing in residential neighborhoods. Protection of historical qualities and providing for all types of housing, including mixed-use areas.
- Work closely with CAT in improving the system of transit throughout the region. The Township continues to make connections with CAT and private entities to provide service.
- Continue to Support the regional education system, emergency management, and library services.
- Expand parkland and provide interconnection between parks and Open Spaces. The plan intends to do this through use of greenways and improvements to existing trails.
- Protect utilities from being overtaxed by land development. This is being done through the requirements placed on the wastewater system through Act 537 alternatives and land use control measures. New expansion of the system would be done only in areas of need not intended areas of new development.

### ***Contiguous Municipal Land use And Lands***

The future envisioned land development of the Township remains consistent with its neighboring municipalities. The following is a summary of these consistencies.

**Cold Spring Township** – The current reported population of Cold Spring Township, Lebanon County is less than 100. The Township has no formal form of government and Lebanon County handles Planning and regulatory duties. The land abutting East Hanover Township consists only of the valley between Second and Sharp Mountain. As in East Hanover Township, this land is covered under conservation zoning showing a general consistency.

**Rush Township** – As it is with Cold Spring Township, the lands abutting the Township are in conservation zoning (being the north slope of Sharp Mountain) and are generally consistent with East Hanover Townships future land use.

**Middle Paxton Township** - As it is with Cold Spring Township, Middle Paxton Township's abutting lands consist only of the valley between second and Sharp Mountain, In conservation zoning and with no conflict.

**West Hanover Township** – West Hanover Township comprises nearly the entire western border from Second Mountain to the Border of South Hanover Township.

It should be noted that West Hanover Township provides sewage service to a property on the western border.

The most recent revision to West Hanover Township's comprehensive plan came in 2008. West Hanover Township's abutting land uses are as follows.

- Flexible Rural Agriculture (FRA): supporting agricultural and low-density residential development with lot size minimums set at 2 acres with bonuses for open space developments.
- Commercial Highway (CH): includes more intensity uses such as theatres and big box stores. No minimum lot sizes are indicated but potential development is controlled primarily by the township's planning process.
- Neighborhood Commercial (NC): permits mixed uses with small scale commercial combined with varying residential land uses. Minimum Lot Sizes also vary depending on the proposed use of the lot.
- Medium Density Residential (R-2): supports varying residential and government land uses. This does not support commercial land uses. The minimum lot size is 15,000'<sup>2</sup> for single-family homes.
- Conservation (C): supports resource conservation limiting development to 5-acre lot sizes, and minimal land uses.
- Business Enterprise (BE): supports office business, educational, or technology forms of land uses. Minimum Lot Sizes are 2 acres for single businesses and 10 for planned business developments.
- Rural Residential (RR): supports primarily single-family homes on lots with a minimum size of 1 acre with bonuses offered for open space zoning.

**South Hanover Township** – The southwestern corner of East Hanover Township is bounded by South Hanover Township from the West Hanover Township Boundary to Swatara Creek. The



only abutting land uses is Residential Agriculture (RA) which requires a minimum of 1 acre lot sizes which are generally compatible with East Hanover Township's Agricultural and low density residential land uses.

**Derry Township** – Derry Township lies across Swatara Creek on the southeastern border. Derry Township's Comprehensive Plan is dated 1991. All abutting land uses are buffered for floodplain conservation. Abutting land uses for the Township are as follows.

- Agricultural Conservation (AC): permitting agricultural, single family residential and public uses. The minimum lot size is 5 acres.
- Limited Compatibility (LC): allows for agricultural, public, and non-profit uses. The minimum lot size is also 5 acres.

**East Hanover Township (Lebanon County)** – East Hanover Township Makes up nearly the entire eastern border with East Hanover Township (Dauphin County). Planning activities for this municipality is handled by Lebanon County. It has several adjacent land uses in contact with the border East Hanover Township (Dauphin). These are as follows.

- Agricultural (A): supporting primarily large scale agricultural and single family residential uses at a minimum of 1 acre for single family homes.
- Residential Forest (RF): supporting public conservation, parks, single-family homes, and plan residential developments. Minimum lot sizes for single-family homes are 7,500, limited to areas with public water and sewer.
- Institutional (INS): supports state and federally owned lands, public parks, agriculture, and single-family residential uses. Minimum lot sizes for all land uses are 1 acre, 3 acres if general landscape has a slope in excess of 20%.
- General Commercial (GC): supports varying degrees of commercial uses up to large shopping centers. Minimum Lot Size is dependent on Total Gross Floor Area with a minimum set at 1 acre for the smallest floor areas.

It is anticipated that these land uses are not conflicting since the no new land uses are proposed on the eastern border and current zoning remains in effect. Further, this consistency of land use should be considered indicative to the relationships shared between the Township and those of Lebanon County.

## Chapter 11 Action Plan

### INTRODUCTION

#### **Overview**

The Action Plan lists the implementation strategies contained in each of the previous chapters of this plan. It is designed as a quick reference for the Township to facilitate implementation and monitor progress. It is vital that the Township reach out to its citizens, stakeholders, Dauphin County, and state and federal agencies to obtain support and assistance in implementing the Comprehensive Plan. Forming partnerships with such groups will expand the Township's resources and aid in accomplishing its goals.

Implementation consists of amendments to Township Zoning Ordinance and Subdivision and Land Development Ordinance, formation of a Township open space committee to spearhead conservation efforts, and partnerships with various county and state agencies and private groups such as land trusts.

#### ***Natural Resource Protection Plan***

#### **Steep Slopes**

Remove slope provisions from the SALDO and Amend the Zoning Ordinance to:

- Provide a definition of both Steep Slope (15-25%) and Very Steep Slope areas (25% and greater).

- Provide an explanation of how steep slope and very steep slope areas are to be delineated.
- Limit earth disturbance on steep slopes and very steep slopes
- Limit the permitted uses on very steep slopes.
- Encourage the planting of trees on steep and very steep slopes as a way to protect them from erosion.
- Exclude 100% of the area in very steep slopes and 50% of the area in steep slopes from the lot area determination (amend the Lot Area definition).
- Establish design and performance criteria for buildings or structures on steep slopes.
- Include steep and very steep slopes in designated conservation and open space areas.

### **Geology and Groundwater**

- Protect the northern mountainous region of the township as an important source of surface water, groundwater recharge, and groundwater supply.
- Amend ordinances to provide subdivision and land development standards related to wastewater disposal systems and wells in order to protect groundwater quality and quantity.
- Work with the PA DCNR to devise a strategy to ensure the protection of Devil's Race Course.
- Identify other unique geological features in the Township.
- Protect unique geological features through inclusion in conservation easement and open space areas and by prohibiting their disturbance.
- Work with landowners, land trusts and conservation organizations to preserve areas with unique geological features.

### **Soils**

Amend the Zoning Ordinance to:

- Strictly limit soil removal, especially on steep and very steep slopes.

- Prohibit building and earth disturbance on hydric and seasonal high water table soils.
- Exclude 100% of hydric and 50% of seasonal high water table soils from lot area determination (amend the Lot Area definition).
- Include hydric soils, seasonal high water table soils and prime farmland soils in designated conservation and open space areas.

### **Forests and Vegetation**

- Protect dense and mature forested areas especially on steep and very steep slopes, along stream corridors, and in headwater (first order) drainage areas by limiting disturbance of these areas.
- Promote the establishment of large contiguous areas of permanently protected forests including areas containing natural and scenic resources through conservation and open space planning.
- Amend the SALDO to strengthen limits on clearing of woodlands, to strengthen tree protection and replacement standards, and to require the use of native species and prohibit the use of invasive plants.
- Include woodlands and vegetation in designated conservation and open space areas.
- Work with private landowners, land trusts, conservation organizations, and the U.S. Military (Fort Indiantown Gap Military Reservation) to preserve areas with significant forest and vegetative cover.

### **Wetlands**

- Move the wetland provisions from the SALDO to the Zoning Ordinance.
- Increase the wetland buffer to the extent of adjoining hydric soils or to a specified minimum distance.
- Strengthen wetland provisions to prohibit disturbance of wetlands and wetland buffer areas.
- Exclude 100% of wetlands and wetland buffers from lot area determination.

- Create a GIS map inventory of wetlands (beyond the National Wetlands Inventory) with data taken from subdivision plan submissions.

### **Floodplains**

- Continue to prohibit new construction in the 100-year floodplain
- Continue to require that floodplain disturbance associated with any land use is minimized.
- Continue to require that improvements to existing buildings and structures will not increase the 100-year flood elevation and require flood proofing of permitted improvements.
- Permit installation of utilities and public infrastructure (i.e. roads, stormwater management facilities) only if no feasible alternative location exists and only if Best Management Practices are employed to achieve minimal floodplain disturbance.
- Prohibit impervious cover (i.e. paved areas and surfaces that do not allow for infiltration of water) within the 100-year floodplain.
- Exclude 100% of the 100-year floodplain area from lot area determination (amend the Lot Area definition).
- Review the floodplain regulations for consistency with the most recent FEMA standards and update if necessary. Strengthen the floodplain ordinance to prohibit the use of impervious surfaces.

### **Watersheds & Streams**

- Amend the Zoning Ordinance to strengthen the protection standards for riparian buffers to increase the sizes of the buffer zones and set limits of disturbance.
- Encourage farmers to use streamside fencing to keep livestock out of streams.
- Amend the Zoning Ordinance to exclude 50% of riparian buffers from lot area determination (amend the Lot Area definition).
- Limit the extent of impervious cover and promote the use of pervious materials throughout the Township.

- Review the Township's Stormwater Management Ordinance once the DCCD's ordinance is approved and consider whether amendments are needed.
- Integrate utilities and development planning such that development is directed to areas that have existing sewer and water infrastructure, or are programmed to have such infrastructure.
- Regularly monitor aquifers to determine water quality and availability of potable water.
- Protect headwater areas by limiting development of these areas and including them in designated conservation and open space areas.

### **Wildlife Habitat**

- Protect critical habitat areas through protection of topography and geology, soils, forest and vegetative cover, wetlands, floodplains, watersheds and streams.
- Protect as open space those properties that contain sites identified in the Dauphin County Natural Areas Inventory.
- Establish a networked system of large contiguous areas of open space.
- Establish a network of riparian corridors and greenways for wildlife movement.
- Partner with the PA Audubon Society, Manada Conservancy, and other conservation organizations to protect the Kittatinny Corridor.

### **Additional Measures**

- Appoint an Open Space Committee to work with conservation organizations and land trusts, and state and county representatives to inform citizens about natural resource protection and land preservation.
- Consider the use of the Act 153 (the Open Space Lands Act) and other legislation that enables the protection of natural resources.
- Consider the use of funding options, such as an Earned Income Tax, for the protection of open space and natural resources.

- Partner with neighboring municipalities, Dauphin County, the Tri-County Regional Planning Commission, PA DCNR, PA Game Commission, Manada Conservancy, and other local and regional land trusts and conservation organizations for the protection of natural resources.
- Partner with Dauphin County for the protection of the Swatara Greenway Corridor, and other waterway corridors identified in the Dauphin County Greenways Plan.

---

### **Historic Resource Protection Plan**

#### **National Register Resources**

- Identify and document historic resources in the Township that meet the National Register Criteria for Evaluation and apply for National Register designation for these resources.
- Create and continuously update an official list and map of historic resources to which Zoning Ordinance provisions will apply
- Conduct public education through the Township newsletter, website, local news media, and other sources to inform residents of existing National Register Listed resources in the Township, of efforts to list more resources, and of what listing on the National Register means and the benefits it carries.
- Amend the zoning ordinance to include a historic resource protection overlay district that would classify National Register Listed resources as Class 1 resources and strictly regulate impacts on them while providing flexibility for adaptive reuse. The ordinance should also require a historic resource impact study for any development within a specified distance (e.g. 300 feet) of a Class 1 historic resource.
- Incorporate historic resources protection with open space, and recreation planning by including historic resources in open space areas and as recreational destinations.
- Seek technical and financial assistance from historic preservation organizations such as the PHMC.
- Investigate ways to provide owners of historic buildings with informational resources pertaining the rehabilitation and update of their historic buildings.

#### **National Register Eligible**

- Identify and document historic resources in the Township that meet the National Register Criteria for Evaluation and apply for National Register designation for these resources.

- Create and continuously update an official list and map of historic resources to which Zoning Ordinance provisions will apply
- Conduct public education through the Township newsletter, website, local news media, and other sources to inform residents of National Register Eligible resources in the Township, of efforts to list more resources, and of the importance of a Determination of Eligibility for the National Register.
- Amend the zoning ordinance to include a historic resource protection overlay district that would classify resources that have received a Determination of Eligibility for the National Register as Class 1 resources and strictly regulate impacts on them while providing flexibility for adaptive reuse. The ordinance should also require a historic resource impact study for any development within a specified distance (e.g. 300 feet) of a Class 1 historic resource.
- Incorporate historic resources protection with open space and recreation planning by including historic resources in open space areas and as recreational destinations.
- Establish partnerships with historic preservation organizations.
- Investigate ways to provide owners of historic buildings with informational resources pertaining the rehabilitation and update of their historic buildings.

### **Historic Districts**

- Identify and document historic resources in Grantville and Shellsville that meet the National Register Criteria for Evaluation and consider applying for designation as a National Register Listed Historic District and/or PHMC certification as an Act 167 Local Historic District.
- Create and continuously update an official list and map of the township's historic districts and their contributing historic resources to which Zoning Ordinance provisions will apply
- Conduct public education through the Township newsletter, website, local news media, and other sources to inform residents of the significance of Grantville and Shellville and what PHMC certification and listing on the National Register means and the benefits they carry.
- Incorporate historic districts with open space and recreation planning by including them as recreational destinations.



- Establish partnerships with historic preservation organizations.

### **Locally Significant Historic Resources**

- Identify and document historic resources in the Township that meet the criteria established by the East Hanover Township Historical Society.
- Create and continuously update an official list and map of historic resources to which Zoning Ordinance provisions will apply.
- Conduct public education through the Township newsletter, website, local news media, and other sources to inform residents of Locally Significant Historic Resources in the Township and efforts to identify more resources, and of the importance of identifying Locally Significant Historic Resources.
- Amend the zoning ordinance to include a historic resource protection overlay district that would classify Locally Significant Historic Resources as Class 2 resources and strictly regulate impacts on them while providing flexibility for adaptive reuse. The ordinance should also require a historic resource impact study for any development within a specified distance (e.g. 300 feet) of a Class 2 historic resource.
- Incorporate historic resources protection with open space, and recreation planning by including historic resources in open space areas and as recreational destinations.
- Establish partnerships with historic preservation organizations.
- Investigate ways to provide owners of historic buildings with informational resources pertaining the rehabilitation and update of their historic buildings.

### **Archaeological Resources**

- Work with the PHMC to identify and document archaeological resources in the Township.
- Amend the zoning ordinance to include a historic resource protection overlay district that would include protection of identified archaeological resources. The ordinance should also require a historic resource impact study for any development within a specified distance (e.g. 300 feet) of an archaeological resource.

---

**Transportation Plan****Functional Classifications**

- Update the functional classifications of roads using Penn DOT's urban/rural scheme as a guide and amend the SALDO to reflect the updated classifications.
- Amend the Zoning Ordinance to remove the list of functional classifications of roads and instead insert a reference to the functional classifications contained in the SALDO.

**Rural Roads**

- Establish ordinance provisions to regulate uses, setbacks, and signs, and billboards along rural roads.
- Establish landscaping requirements for land uses that front on a rural road.

**Scenic Roads**

- Establish ordinance provisions to regulate uses, setbacks, and signs, and billboards along identified scenic roads.
- Establish landscaping requirements for land uses that front on a scenic road.
- Require a viewshed analysis for new development and prohibit/minimize obstruction of views from scenic roads.
- Apply for Pennsylvania Byways designation for the Township's identified scenic roads.

**Township Bridge Projects**

- Lobby HATS to have needed bridge improvements placed on its Transportation Improvements Program.
- Lobby Penn DOT to have needed bridge improvements placed on its Twelve Year Program.
- Continue to seek funding for needed bridge projects.

**Alternative Modes of Transportation**

- Continue to participate in efforts by HATS and public transportation providers to expand service into appropriate areas of East Hanover Township.

- Meet with hotel operators and other appropriate parties to establish an arrangement for the sharing of, or dedication of space for a new carpool parking lot. Enlist the support of HATS in this effort.

### **HATS Transportation Improvement Program**

- Continue work to complete bridge improvements listed on the TIP.
- Continue communications with HATS and Penn DOT to ensure that needed bridge and road improvements get placed on their TIP and Twelve Year Programs.

### **Township-Identified Transportation Issues**

- Seek funding from sources identified in the PA 39/743 Study in order to accomplish the recommended road improvements.
- Lobby HATS to place eligible township projects on its Transportation Improvements Program.
- Lobby Penn DOT to place eligible township projects on its Twelve Year Program.
- Establish design guidelines for non-residential uses to require rear access lanes, side and rear parking, and minimal setbacks from the street line.
- Consider an Official Map to identify and obtain rights-of-way for access lanes along US 22.
- Continue discussions with representatives with CAT and Penn National Gaming to procure CAT Service to the casino.
- Place proposed location of a park and ride lot on an Official Map.
- The Township should discuss with Penn DOT and the FHWA any additional measures that can be taken to improve the existing rest stop to provide electrical, heating, air conditioning, and other needed services.
- Amend SALDO to require a Traffic Impact Study for large developments.

- Coordinate development density and type with transportation infrastructure.
- Amend SALDO to remove construction of cul-de-sac streets as an option or to require an access easement at the end of cul-de-sacs.
- Adopt an Official Map to identify access drives at the end of existing cul-de-sacs where a through street connection can be formed.

---

**Future Land Use  
Plan**


---

**Conservation/Open Space Area**

- Review the uses provided for in the Conservation zoning district and remove any that are inconsistent with the Township's goals for this area (some uses might have to be accommodated in other zoning districts).
- Amend the TDR Sending Area provision of the Zoning Ordinance to decrease the number of acres per TDR in the Conservation Zone.
- Amend the Cluster Development provisions of the Zoning Ordinance.
- Amend the Lot Area definition of the Zoning Ordinance to exclude areas in steep slopes, wetlands, floodplains, riparian buffers, acreage in conservation or agricultural easement, utility easements, and rights-of way.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.
- Conduct public outreach, perhaps through a township open space committee, to encourage landowners to preserve their properties through voluntary sale and donation of conservation easements, enrollment in Clean and Green, or the use of TDR.
- Work with Dauphin County, land trusts, and conservation organizations to promote preservation efforts in East Hanover Township.
- Work with Fort Indiantown Gap Military Reservation to encourage protection of their land in perpetuity.

**Agriculture and Low Density Residential Area**

- Encourage landowner enrollment in Pennsylvania's Clean and Green Program by notifying eligible landowners and providing assistance as necessary.
- Encourage all owners of farmland to place their land in an Agricultural Security Area by conducting a public outreach and awareness program.
- Encourage the sale and donation of conservation easements by identifying interested landowners and working with the Dauphin County Agricultural Preserve Board and land trusts to coordinate the donation/purchase of such easements.
- Work with farmers, the Dauphin County Agricultural Preserve Board and others to create a local market for farm produce and to connect local farmers to markets in the region.
- Amend the RA provisions of the Zoning Ordinance to discourage conventional residential development and encourage Conservation Subdivision Design with a 50% open space set aside requirement
- Amend the SALDO to include Conservation Subdivision Design site design provisions.
- Amend the current TDR provisions to designate the RA district a TDR Sending Area and adjust the TDR acreage equivalency to offer greater incentive to landowners.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

**Medium Density Residential Area**

- Amend the RMD provisions of the Zoning Ordinance to reduce the conventional lot development (base zoning) density as a mechanism to promote Conservation Subdivision Design and TDR.
- Amend the RMD provisions of the Zoning Ordinance to provide for Conservation Subdivision Design at a greater density than the conventional lot development (base zoning) density.
- Amend the RMD provisions of the Zoning Ordinance to provide a density bonus only through the purchase of TDR

up to a maximum of number dwelling units per acre, subject to Conservation Subdivision Design and design guidelines (i.e. all development undertaken through purchase of TDR shall be required to adhere to Conservation Subdivision Design provisions and include design guidelines such as those currently specified in the Village Overlay Zone).

- Repeal the Village Overlay Zone (but incorporate its standards into the Mixed Use area).
- Repeal the Cluster Development Provisions of the Zoning Ordinance and replace with Conservation Subdivision Design provisions.
- Amend the SALDO to include Conservation Subdivision Design site design provisions.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

#### **Village Area**

- Amend the Village residential zoning district provisions to encourage adaptive reuse of historic buildings and to include design standards that are consistent with the existing villages of Grantville and Shellsville.
- Provide educational information on maintenance and reuse of historic buildings, perhaps through the Township newsletter and website.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

#### **Mixed Use Area**

- Amend the Zoning Map to reflect the boundaries of the Mixed Use area as delineated on Future Land Use map.
- Amend the Zoning Ordinance to include a Mixed Use zoning district that contains appropriate uses and design standards.
- Amend the TDR provisions of the Zoning Ordinance to include the Mixed Use area as a Receiving Area with an appropriate density bonus for residential and non-residential development.

- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

### **Mobile Home Park Area**

- Continue to enforce the Mobile Home Park provisions of the Zoning Ordinance.
- Amend the Mobile Home Park Ordinance to require recreational amenities and open space within such developments.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

### **Small-Scale Commercial Area**

- Amend the Highway Commercial provisions of Zoning Ordinance to limit the size of uses.
- Review the uses provided for in the Highway Commercial zoning district and eliminate any that are not considered small scale.
- Amend the Zoning Ordinance to require appropriate setbacks and landscaped screening between incompatible uses such as adjoining residential properties.
- Amend the Zoning Ordinance to include design standards pertaining to landscaping treatments (along road frontages and in parking areas); parking area layout and design; and signage.
- Amend the Highway Commercial provisions of the Zoning Ordinance to decrease the base permitted lot coverage in order to provide incentive for the purchase of TDRs.
- Periodically re-assess the TDR Receiving Area lot coverage equivalency (4,000 sq.ft.) to ensure that it is appropriate in the prevailing market.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

### **Large-Scale Commercial Area**

- Amend the Zoning Map to reflect boundaries of the Large Scale Commercial area as delineated on the Future Land Use map.
- Amend the Interchange Commercial zoning district provisions of the Zoning Ordinance to specify the size of uses permitted.
- Review the uses provided for in the Interchange Commercial zoning district and amend if necessary.
- Amend the Zoning Ordinance to require appropriate setbacks and landscaped screening between incompatible uses such as adjoining residential properties.
- Amend the Zoning Ordinance to include design standards pertaining to landscaping treatments (along road frontages and in parking areas); parking area layout and design; and signage.
- Amend the Interchange Commercial zoning district provisions of the Zoning Ordinance to decrease the base permitted lot coverage in order to provide incentive for the purchase of TDRs
- Periodically re-assess the TDR receiving Area lot coverage equivalency (4,000 ft.<sup>2</sup>) to ensure that it is appropriate in the prevailing market.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

### **Commercial Recreation Area**

- Review the uses and design standards provided for in the Commercial Recreation zoning district to evaluate their compatibility with the Township's goals.
- Amend the Zoning Ordinance to require appropriate setbacks and landscaped screening between incompatible uses such as adjoining residential properties.
- Amend the Zoning Ordinance to include design standards pertaining to landscaping treatments (along road frontages and in parking areas); parking area layout and design; and signage.
- Amend the Zoning Ordinance to decrease the base permitted lot coverage in order to provide incentive for the purchase of TDRs.



- Periodically re-assess the TDR Receiving Area lot coverage equivalency (4,000 ft.<sup>2</sup>) to ensure that it is appropriate in the prevailing market.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

### **Commercial/Office Park Area**

- Amend the Zoning Map to reflect boundaries delineated on Future Land Use map.
- Amend the Zoning Ordinance to include a new zoning district with appropriate base zoning lot coverage provisions (to provide an incentive for the use of TDR) and design standards pertaining to parking, signage, landscaping and screening, commercial, and recreation areas.
- Amend the TDR provisions Zoning Ordinance to add this district as a Receiving Area with appropriate lot coverage incentive.
- Periodically re-assess the TDR Receiving Area lot coverage equivalency to ensure that it is appropriate in the prevailing market.
- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

### **Industrial Area**

- Amend the Zoning Ordinance to require appropriate setbacks and landscaped screening between incompatible uses such as adjoining residential properties.
- Amend the Zoning Ordinance to include design standards pertaining to landscaping treatments (along road frontages and in parking areas); parking area layout and design; and signage.
- Amend the Industrial zoning district provisions of the Zoning Ordinance to decrease the base permitted lot coverage in order to provide incentive for the purchase of TDRs.
- Periodically re-assess the TDR Receiving Area lot coverage equivalency (4,000 ft.<sup>2</sup>) to ensure that is appropriate in the prevailing market.

- Amend the Subdivision and Land Development Ordinance to establish standards to evaluate potential impacts from development on groundwater quality and quantity.

### **Park and Recreation Area**

- Prepare an updated Open Space and Recreation Plan.
- Communicate with owners of potential park properties to inform them of the Township's interests.
- Work with DCNR and other funding and technical assistance sources to obtain assistance in acquiring and developing park land.

---

### **Housing Plan**

- Housing unit densities should be suited to the Township's growth management goals and should consider the feasibility of wastewater treatment and water supply, and impacts on natural resources.
- Provide information and assistance in connecting property owners with housing assistance programs.
- Identify historic homes and apply for National Register designation.
- Provide information to owners and prospective buyers of historic homes regarding assistance programs and incentives for rehabilitation of historic homes (National trust for Historic Preservation, HUD, USDA Rural Housing Program).
- Provide for a variety of housing types, including single-family attached and multi-family dwellings, in order to accommodate individuals and families of various income levels.
- Provide for age-restricted housing in proximity to services to accommodate seniors.
- Promote mixed-use development that would accommodate various dwelling types in proximity to commercial and civic services.
- Promote mixed-use development that would accommodate various dwelling types in proximity to commercial and civic services.
- Provide for a variety of housing types, including single-family attached and multi-family dwellings, in order to accommodate individuals and families of various income levels.

- Provide for age-restricted housing in proximity to services to accommodate seniors.
- Investigate ways to bring relief to cost burdened households (owner and renters).
- Investigate the need for rehabilitation of substandard housing.

---

**Community  
Facilities and  
Utilities Plan****Municipal Services**

- Continue to provide existing levels of municipal services and adjust services as warranted by future growth, changing needs and changing technological improvements.

**Emergency Services**

- Continue to support the Township's emergency service providers.
- Maintain SALDO requirements for appropriate design in new developments to ease emergency response vehicles access to properties.

**Library / Schools**

- Continue to support the Dauphin County Library System.
- Continue to support the Lower Dauphin School District.
- Partner with the School District to share resources in the Township, such as play fields.

**Solid Waste Disposal**

- Continue to provide curbside trash and recycling services.
- Include paper, glass, and all plastics (#1-7) in the recycling service.

**Water Supply**

- Complete the Township's analysis of potable water resources and promote measures of protection of well water.
- Use an Official Map to locate potential municipal large draw well areas and areas identified for wellhead protection.
- Complete and adopt the Wellhead Protection Plan if a potential Township water source is identified.

- Coordinate future Zoning and SALDO regulations with ongoing potable water research and recommendations from the Aquifer Study.
- Review and modify existing ordinances such as the Mobile Home Park Ordinance of 2003 to ensure effectiveness in protecting potable water resources.
- Maintain the correlation between higher intensity land development and presence of infrastructure by encouraging development in areas with existing infrastructure.
- Discourage high-density development in areas further from infrastructure and having natural restrictions. This may be done through the requirement of developer contribution for extension of sewers to less developed areas
- Continue to investigate options presented in the Potable Water Study including discussions and planning with outside water utilities in neighboring municipalities.

### **Wastewater Management**

- Adopt, and actively engage the alternatives and implementation schedule of the Township's Act 537 Sewage Facilities Plan.
- Establish a Sewer Authority and Capital Reserve Plan to finance the Act 537 Plan's Selected Technical Alternatives.
- Review the Township's on-lot sewage management ordinance for effectiveness and continue regular monitoring of on-lot septic systems.
- Maintain requirements for on-lot sewage system replacement areas in the event of primary system failure.
- Complete the Englewood and Partridge Hills Sewer Project.
- Maintain the correlation between higher intensity land development and presence of infrastructure by encouraging development in areas with existing infrastructure.
- Discourage high-density development in areas further from infrastructure and having natural restrictions. This may be done through the requirement of developer contributions for extension of sewers to less developed areas.

### **Energy**

- Amend the SALDO to require placement of electrical lines underground in new developments for safety and aesthetic value.
- Act to provide the general public information on the use and development of alternative energy sources.

---

### **Park & Recreation Plan**

#### **Township Recreation Plan of 2003**

- Review and update the 2003 Recreation Plan for consistency with new NRPA guidelines, the 2010 Census and new development patterns.
- Review and Update The Park and Recreation Plan and SALDO for consistency.
- Reevaluate sufficiency of neighborhood parks and plan based on any future modifications to the Park and Recreation Plan.

### **Existing Parks and Open Space**

- Make all feasible efforts to protect the Township's Mountain and Valley areas.
- Support the preservation of Open Space in order to maintain the rural character of the Township and provide for passive recreational pursuits
- Recognize State Game Lands 211 as conservation land use in order to maintain protection of this land in the case of closure or sale of the property.
- Communicate to the Pennsylvania Game Commission the Township's interest in preserving the State Game Land property and the trails that traverse it.
- Recognize Fort Indiantown Gap as conservation land use in order to maintain protection of this land in the case of closure or sale of the property.
- Communicate to Fort Indiantown Gap the Township's interest in preserving this land and the trails that traverse it.

- Work with Dauphin County and neighboring municipalities to provide trail and greenway connections between park and recreation areas.
- Increase non-vehicular connections to the Township Park through trails and greenways.
- Create agreements with athletic organizations and other park users for maintenance of the play fields and other facilities.
- Regularly monitor use of the Township Park and the condition of park facilities and upgrade as necessary.
- Promote the construction of the planned baseball fields in the Township Park in future budget and capital improvement discussions.
- Examine the need and feasibility of creating a township or neighborhood Park in the vicinity of the Englewood development off of PA 743.
- Consider use of an Official Map to identify potential parklands.
- Partner with the school district on the sharing of recreational resources and the sharing of maintenance of recreational facilities.
- Examine the feasibility of purchasing or acquiring through donation, the VFW's open space area and facilities.
- Partner with Manada Conservancy and other land trusts and conservancies to assist landowners with the sale and donation of conservation easements including public access to land and/or trails.
- Support the continuation of privately owned recreational facilities in the Township.
- Should the Tall Cedars site cease to operate, consider the need and feasibility of this site as a Township park that could connect to a greenway along Manada Creek.

### **Private Open Space**

- Pursue improvements to existing parks and creation of new neighborhood parks to meet the recreational and social needs of increasing neighborhood populations.

- Review, update, and enforce SALDO regulations requiring developers to provide for recreation within the development, or to pay a fee in lieu of recreation facilities to help fund active and passive recreational needs in the Township.
- Review and amend, if necessary, the provisions of the Zoning Ordinance to provide additional incentive for the use of Cluster Development and require an appropriate amount of open space within such developments.
- Amend the TDR provisions of the Zoning Ordinance to provide an incentive for Sending Area landowners to sell development rights.
- Form a Township open space, trails and greenways committee to conduct education and outreach to encourage landowners to conserve land through conservation easements, TDR, and other available means.

### **Trails**

- In accordance with Pennsylvania Act 24, amend the Zoning Ordinance to include provisions to protect the Appalachian National Scenic Trail.
- Conduct a preliminary study of the trail footpath and its viewshed to determine the geographic extent of the protection measures.
- Create a Township open space, trails, and greenways committee to spearhead efforts to communicate with the Appalachian Trail Conservancy (ATC) and PA Game Commission, to contribute to trail protection efforts, and to monitor Act 24 developments, and to encourage support for the ATC.
- Consider use of an Official Map or the Open Space Lands Act to acquire easements along the Appalachian Trail corridor.
- Create a Township open space, trails, and greenways committee to organize efforts to raise awareness of the Horse-Shoe Trail, to foster appreciation for the Trail by sponsoring hikes, to encourage support for the Horse-Shoe Trail Conservancy, and to communicate with the Horse-Shoe Trail Conservancy and landowners along the Trail in an effort to obtain off-road trail easements or agreements to allow access to the Trail on their properties.

- Work with South Hanover Township, Derry Township, and the Horse-Shoe Trail Club to develop permanent off road easements for the trail between Hershey and Manada Gap.
- Require new subdivisions and land developments along the Horse-Shoe trail to provide for an off-road trail easement with permission for public access. In the case of Cluster Developments, the Trail easement can be located in the development's designated open space area.
- If the Trail is routed onto private lands, prepare a trail ordinance to establish rules for conduct on trail within the Township.
- Consider use of an Official Map or the Open Space Lands Act to acquire easements along off-road portions of the Horse-Shoe Trail.
- Create a Township open space, trails, and greenways committee to organize efforts to raise awareness of the Stony Valley Railroad Grade in East Hanover Township, to foster appreciation for the Trail by sponsoring hikes, and to encourage support for the Rail-Trail Conservancy.
- Create a Township open space, trails, and greenways committee to organize efforts to raise awareness of the Swatara Water Trail, to foster appreciation for the Trail by sponsoring paddling trips, and to encourage support for the Swatara Watershed Association.
- Establish and preserve a greenway along the Swatara Creek through creation and preservation of a riparian buffer and by partnering with land trusts, conservancies and landowners for placement of conservation easements on properties along the Creek.
- Create a Township open space, trails, and greenways committee to identify opportunities for new trails and trail connections and to evaluate their feasibility.
- Ensure that trails and trail access are provided in future subdivision and land development plans. Trails can be located in the designated open space area within conservation subdivision designed developments.
- Expand the trail system in order to connect existing neighborhoods to other trails, parks, and points of interest in the Township and the region.



- Examine the feasibility of improving access in the Township to the Horse-Shoe Trail, Appalachian Trail, and Stony Valley Railroad Grade.
- Establish greenways along streams that would accommodate trails and trail connections. Utilize existing riparian buffers in order to form the greenways.
- Utilize locally and historically significant sites as destinations along the trail system. Route trails in a manner that promotes the preservation of these sites as trail destinations.
- Establish a system of bikeways on the Township's least congested roads. Work with Penn DOT to include bikeways in transportation improvement plans.
- Consider adoption of an Official Map to or use of the Open Space Lands Act to acquire trail easements where appropriate and feasible.

### **Greenways**

- In reference to providing for greenways along watercourses, the East Hanover Township Zoning Ordinance of 2003 has identified three riparian buffer zones to provide protection to lands adjacent to perennial streams, including Manada Creek, Stony Creek, and Bow Creek. The buffers also incorporate 100-year floodplains, wetlands, and slopes greater than 25 percent. The intent of the buffer zones is to protect water quality, sustain local wildlife, and reduce the adverse impacts of stormwater runoff. The ordinance can be strengthened to prohibit disturbance of the buffer area excepting the creation of trails and activities consistent with the purposes of the greenways.
- In reference to the establishment of greenways along the Appalachian Trail and Horse-Shoe Trail, the Township must partner with landowners and the trail conservancies to obtain easements that will allow public access to the trails, protect their footpaths and viewsheds, and in the case of the Horse-Shoe Trail, provide an off-road route.
- Recognize the conditions present in Bow Creek that make protection of its waters priority. Promote the creation of a Conservation or Multiuse greenway and additional open space protection for the Bow Creek sub watershed.

- Create a Township open space, trails, and greenways committee to identify opportunities for new trails and trail connections and to evaluate their feasibility.
  - Consider use of an Official Map to or the Open Space Lands Act to acquire easements for greenways where appropriate and feasible.
-