

Comprehensive Plan Springfield Township

Springfield Township Comprehensive Planning Committee

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Introduction

The Springfield Township Comprehensive Plan is designed to guide future land use policy and decision-making. A comprehensive plan can help a community shape its

future by guiding zoning decisions, open space acquisition, transportation improvements, water supply planning, stormwater management, and sewage facilities planning.

During the past ten years, Springfield Township has experienced only a minimum amount of growth and development, usually a few single-family homes on a couple acres of land. This situation will not last for very long. Area communities, such as Richland, Milford, and Upper and Lower Saucon townships, are beginning to experience increased development pressures and Springfield Township may be next in line. Due to its proximity to major highways, its wealth of natural and historical resources, and large amount of open land, Springfield Township has the potential for a substantial increase in new development. If unplanned, such development could have a series of negative consequences for the township, including an overburdened road network, strained municipal services, increased water and air pollution, species habitat destruction, loss of open space and scenic resources, and a reduced quality of life.

The Springfield Township Comprehensive Plan presents a vision for maintaining a high quality of life for its residents and meeting the challenge of uncontrolled growth. It identifies the characteristics and resources of the township, examines trends in development, and recommends policies and actions for realizing its vision for the future. The plan addresses each of the comprehensive planning elements required by the Pennsylvania Municipalities Planning Code (MPC). Finally, to ensure community participation in the preparation of the plan, public meetings were held to discuss plan elements and the results of a community survey were used to shape the plan's direction.

The Springfield Township Comprehensive Plan is organized into the following sections: Community Goals and Objectives; Regional Location; History; Demographics and Socioeconomic Trends; Land Use Characteristics and Development Trends; Natural Resources; Open Space and Farmland Preservation; Historic, Recreational, and Scenic Resources; Residential Development; Nonresidential Development; Community Facilities; Transportation and Circulation; Wastewater and Water Issues; Stormwater Management; Solid Waste Management; Future Land Use and Growth Management; Township Finances and Budgeting; and Implementation.

Through the goals, objectives, and recommendations of the Springfield Township Comprehensive Plan, the township hopes to appropriately guide future development, effectively protect and manage the township's resources, and maintain a high quality of life for its residents.

Community Vision Statement

Springfield Township seeks to protect the township's various natural, historic, cultural, and scenic resources from negative impacts posed by future development, incompatible land uses, or other nuisances. The comprehensive plan seeks to accommodate an appropriate mix of residential and nonresidential uses to accommodate future growth, while providing community services that are necessary to satisfy resident's demands. The

township intends to nurture sound land use planning and growth management principles that seek to manage natural, economic, and social systems and resources in a fashion that enhances the resident's quality of life.

Community Goals and Objectives

The following are the community goals and objectives by topic for each section of the comprehensive plan. A goal is an ideal or desired future condition and is usually not quantifiable or time dependent. An objective defines the purpose and commitment to achieve a desired goal or condition. A proposed recommendation is a specific measure, program, or technique that will accomplish a stated objective or attain a defined goal. A summary of all plan recommendations is provided in the Implementation section at the end of the plan.

Natural Resources

Goal: Protect significant natural features and natural resources such as floodplains, woodlands, steep slopes, wetlands, sensitive geological formations, sensitive wildlife habitat, and bodies of water.

Objectives:

- Use natural features as a guide to determine the type and intensity of land uses to be permitted in the township.
- Minimize negative environmental impacts related to development and growth.
- Prioritize the Cook's Creek Watershed for preservation and protection.
- Protect surface and groundwater resources from point and nonpoint source pollutants through methods such as wellhead protection and source water protection measures.
- Promote regulations that will provide additional protection measures for the Cooks Creek watershed by prohibiting uses that will negatively impact the overall water quality and resource value.
- Maintain the natural biodiversity within the township that provides a healthy living environment for plants and animals.
- Preserve natural corridors throughout the township to allow for the movement of wildlife and link habitat areas.

Open Space & Farmland Preservation

Goal: Promote open space and farmland preservation that contributes to the overall rural character of the Springfield Township.

Objectives:

- Preserve open space and farmland in strategic locations throughout the township.
- Support and strengthen the economic viability of the township's agricultural base.
- Promote the preservation of agricultural land through sound land use policies and regulations.
- Encourage farmland preservation through conservation easement purchase or donation.
- Provide flexibility in the agricultural zoning regulations to promote alternative sources

of income to farmers.

- Promote private initiatives (in conjunction with public funding sources) to protect the strategic open space lands.

Historic Resources

Goal: Preserve significant historic and cultural resources throughout the township.

Objectives:

- Plan for future development that safeguards historic and scenic resources.
- Encourage maintenance and restoration of historic properties.
- Promote land use methods (such as adaptive reuse of a structure) that help to retain and enhance the character of historic buildings and village areas.
- Guide the management of historic resources to protect significant sites from demolition and neglect.
- Promote continued education and outreach to municipal officials, developers, and residents concerning the importance of providing sensitive treatment and protection of historic resources.
- Endorse historic preservation activities by the Springfield Township Historical Society and the Springfield Township Historic Commission.

Recreational Resources

Goal: Enhance the health and quality of life of residents through the provision of adequate parkland and recreational facilities.

Objectives:

- Satisfy the recreational needs of and provide convenient recreational opportunities for township residents.
- Provide comprehensive planning strategies for the park and recreational needs of township residents.
- Require passive recreational facilities (such as walking trails and benches) or fees-in-lieu of recreational facilities for major residential development proposals.
- Satisfy active and passive recreational needs of residents (as suggested in the resident survey) within township parks.
- Provide walking and biking trails that connect various points of the township.
- Consider the requirements of persons with special needs for using and accessing recreational facilities.

Scenic Resources

Goal: Maintain scenic views and scenic vistas that add to the pastoral character of the township.

Objectives:

- Protect scenic landscapes from the impact of future development through appropriate

regulatory measures.

- Promote land use, landscape buffering, or other appropriate methods that help to retain and enhance the character of scenic areas.

Residential Development

Goal: Provide for safe and adequate housing for present and future residents of the township.

Objectives:

- Provide for a variety of housing types and arrangements to accommodate the projected population growth, provide a fair share of housing needs, and promote housing affordability.
- Provide for continued residential development as necessary.
- Explore innovative residential zoning techniques that will enhance the preservation of the rural landscape and scenic views.
- Consider expanding senior citizen housing opportunities in appropriate areas of the township.
- Encourage the rehabilitation of the existing housing stock.
- Maintain compliance with existing building codes.

Nonresidential Development

Goal: Encourage nonresidential development that is well integrated and compatible with the predominately rural residential character of the township.

Objectives:

- Establish sufficient opportunities for nonresidential development that provides employment opportunities and a range of commercial services for residents.
- Develop commercial and industrial use regulations that protect the health, safety, and welfare of the township residents.
- Minimize potential land use conflicts of nonresidential uses upon adjacent residential uses through appropriate land use and zoning measures.
- Concentrate nonresidential development in areas zoned for such uses and which contain adequate infrastructure to support this development.
- Promote planned business/commercial development in place of strip commercial development.

Community Facilities

Goal: Promote the adequate provision and accessibility of community facilities in cooperation with the public, government agencies, and providers of community services.

Objectives:

- Maintain and/or enhance facilities serving the existing and anticipated service requirements of residents, allowing for expansion as needed.

- Provide adequate public safety and protection and preserve Springfield Township as a safe and desirable community.

Wastewater and Water Issues

Goal: Ensure that wastewater and water facilities will satisfy the needs of township residents.

Objectives:

- Maintain and/or enhance wastewater and water facilities in order to provide adequate service to existing and future residents.
- Plan for public water and sewer service within the designated Development Area to promote concentrated growth in the township.
- Plan for water supply and sewage disposal system that will protect surface and groundwater quality and quantity.
- Plan for the reliable supply of water, considering current and future water resources availability, uses and limitations, and provisions to protect water supply sources.
- Provide the balance of aquifer withdrawals and recharge so that the long-term safe-yield of the aquifer is not exceeded.
- Where beneficial, develop intermunicipal cooperation for water service and wellhead protection.
- Develop cooperative efforts among municipalities in water supply and fire protection.

Stormwater Management

Goal: Promote sound stormwater management for existing and future development in the township.

Objectives:

- Manage stormwater runoff created by new development activities taking into account the cumulative watershed-wide stormwater impacts from peak runoff rates and runoff volume.
- Preserve existing natural drainageways and watercourses and provide for proper maintenance of all stormwater management facilities.
- Maintain and/or improve existing water quality, especially in those areas, which drain to existing lakes and reservoirs, by preventing additional loading of various stormwater runoff pollutants into the stream system.
- Maximize groundwater recharge where appropriate and attainable throughout the watershed where feasible and attainable throughout the watershed to maintain the existing hydrologic regime.

Transportation and Circulation

Goal: Protect, maintain, and improve the capacity of the township's highway network to

reduce travel times, minimize congestion, and eliminate hazardous conditions.

Objectives:

- Link transportation planning efforts with the future land use planning.
- Provide appropriate road improvements and implement traffic impact requirements that will promote safe road conditions.
- Regulate land use along the major roadways in the township to avoid hazardous situations and to maintain the road's primary function of serving through traffic.
- Classify the roads in the township according to their present and potential future use.
- Provide limited cartway paving along rural collector roads and construct only those improvements necessary to maintain the safety of road and lanes for turning, acceleration, and deceleration.
- Promote access management techniques that will protect the function of arterial streets. Reverse-frontage access roads, marginal access roads, or shared access driveways should be provided for properties fronting on arterial roads.
- Plan for improvements to the pedestrian and bicycle network to serve the needs of other users of the transportation network.
- Support the possible reactivation of the Quakertown-Stony Creek Rail.
- Consider multimunicipal planning to address what essentially is a regional issue.

Solid Waste Management

Goal: Ensure the proper storage, collection, and transportation of municipal waste.

Objectives:

- Reduce municipal solid waste streams to ensure future landfill space and reduce environmental impacts.
- Periodically monitor licensed waste haulers to ensure municipal waste haulers are properly collecting, transporting, and disposing of solid waste and recyclables.
- Consider reopening the township's recycling drop-off facility to enable residents to help reduce solid waste streams.

Future Land Use/Growth Management

Goal: Guide the form, location, and timing of future development within Springfield Township while protecting the natural environment, maintaining visual quality, and providing services and facilities necessary for its residents.

Objectives:

- Foster a community with a well-balanced mix of agricultural, residential, commercial, and industrial land uses.
- Provide for future growth in areas best suited for development and provide appropriate land uses that will promote the protection the township's overall character.
- Encourage growth in a coordinated and timely manner through the implementation of the Development District concept.
- Locate the Development Area where more intensive future growth can be concentrated

and supported by infrastructure (e.g., public water and sewer) and basic services.

- Use growth management techniques to preserve open space, protect environmental resources, and minimize site development costs.
- Maintain the integrity of agricultural and rural areas by limiting development and the extension of public infrastructure and services into these areas.

Township Finances and Budgeting

Goal: Maintain a balanced budget and responsibly plan for future capital expenses.

Objectives:

- Examine future growth trends to gauge the effect of development on the township budget and the residential tax burden.
- Link the financial planning of the township with the policies set forth in the Comprehensive Plan.
- Purchase agricultural conservation easements, open space, historic property, and recreational land (as identified by the Springfield Township Open Space and Farmland Preservation Plan) using revenue generated from the open space tax.

Historical Overview

The first permanent settlers of Springfield Township were English and Scotch-Irish who moved up the Cooks Creek valley from the Delaware River. German colonists joined this settlement by moving up from Philadelphia to Quakertown and finally to Springfield. Most of the English were land speculators, while most of the Germans were settlers. Thus, it was the Germans who would have the largest influence on the development of the township.

Colonists first settled in Springfield Township along streams or near the many springs found throughout the hillsides. There they built their homes and cleared the land for farming. This could be exhausting work because the land was heavily forested and, in some areas, very rocky. It was many years before farms became productive and reliable sources of income.

Springfield Township was, of course, originally a part of lands belonging to the Lenape Indians. William Penn, although already holding title to all land in the province under a grant from Charles II of England, still negotiated land purchases from the Lenape. The areas composing Springfield Township were not acquired from the Lenape until the Walking Purchase of 1737, when John and Thomas Penn secured the remainder of Bucks County, as well as lands composing present-day Lehigh and Northampton counties.

In 1743 Springfield's residents petitioned the court to incorporate their settlements into a township. The petition was granted and the township was surveyed and laid out in that same year. The township was named for its abundance of hill and meadow springs. As the agricultural economy of Springfield Township developed, schools, mills, churches, and general stores were built to serve the growing population. Roads were improved to

the point where travel to the Lehigh Valley and Philadelphia was possible. Profits rose as these markets were opened to local farmers, craftsmen, and mill operators.

During the remainder of the 1700s, villages developed at crossroads where waterpower was available to operate the grist and saw mills. Springtown became the largest of these villages. Springtown was located along a major road and surrounded by some of the best farmland in the area. In 1737 the town contained six to eight houses, a tavern, and a store. By 1896, the village contained two churches, a tavern, a store, mills, and 40 houses.

Springfield Township remained a largely agricultural-based community throughout its entire history, supplying meat, crops, and dairy products to the region. With the development of Allentown, Bethlehem, and Philadelphia as centers for manufacturing in the late nineteenth and early twentieth centuries, the population of Springfield declined. With food prices falling, farming became less profitable and the prospect of better wages lured many to the big cities. Local industries were unable to compete and went out of business. Lacking the necessary support of the community, civic institutions, such as the literary and music society and the newspaper, also gradually disappeared.

Between 1980 and 1990, Springfield's population grew slightly, followed by a slight decrease between 1990 and 2000. Despite the construction of I-78 and development pressures moving northward through the county, the anticipated growth in the past decade has not occurred. However, given the township's wealth of natural and historical resources and proximity to major transportation routes make future growth in Springfield Township a distinct possibility. New development may result in a loss of the qualities that make Springfield unique and livable unless sound growth management policies and regulations are successfully implemented.

Demographics and Socioeconomic Trends

Regional Perspective

Springfield Township is located on the southeastern edge of eastern Pennsylvania's mountain system along the northern border of Bucks County. In Bucks County, the municipalities of Durham, Nockamixon, Haycock, Richland, and Milford townships surround Springfield Township. To its north, it is bordered by Lower Saucon and Williams townships in Northampton County and by Upper Saucon Township in Lehigh County. Springfield Township is also part of the Palisades Planning Area consisting of Bridgeton, Durham, Nockamixon, Springfield, and Tinicum townships and Riegelsville Borough. Springfield Township is roughly 5 miles southeast of the Allentown/Bethlehem metropolitan area and 40 miles north of the City of Philadelphia.

Springfield and its surrounding municipalities have grown by about 3,181 housing units and 7,002 people as shown in Table 1. Municipalities in this region undergoing the most growth are Upper Saucon Township, Lower Saucon Township, Milford Township, and Richland Township, as the major highways of I-78, the Northeast extension of the PA turnpike, and Route 309 run through these communities. As these areas become more built out, Springfield, Williams, Durham, Haycock, and Nockamixon townships will become more likely candidates for development. Springfield Township can expect to

experience increased growth pressures, because of the amount of vacant land it has and its proximity to the major highways mentioned above.

Table 1. Housing and Population, Springfield Township Region, 1990-2000

	HOUSING			POPULATION		
Municipality	1990	2000	1990-2000	1990	2000	1990-2000
Springfield	1,938	1,972	34	5,177	4,963	-214
Durham	485	525	40	1,209	1,313	104
Nockamixon	1,260	1,411	151	3,329	3,517	188
Haycock	791	841	50	2,165	2,191	26
Richland	3,344	3,877	533	8,560	9,920	1,360
Milford	2,525	3,161	636	7,360	8,810	1,450
Lower Saucon	3,169	3,195	746	8,448	9,884	1,436
Upper Saucon	3,360	4,117	757	9,775	11,939	2,164
Williams	1,504	1,738	234	3,982	4,470	488
Total	18,376	21,557	3,181	50,005	57,007	7,002

Township Perspective

Springfield Township has an estimated population of 4,963 people (2000 Census). This estimate is down slightly from the 1990 Census, when Springfield reached an all-time high of 5,177 people. Housing units increased from 1,938 units in 1990 to 1,972 units in 2000. (For more discussion on housing and future housing needs, see the Residential Development section.) Springfield's average household size fell from 2.70 persons per household in 1990 to 2.61 persons per household in 2000. (See Table 2.) This trend, which is occurring throughout the county, is due to an increase in the number of smaller families and singles living alone. It may also reflect an increased number of people whose children have grown up and left home.

Table 2. Demographic Characteristics, 1990-2000

Characteristic	1990	2000
Median Age	38.1	41.8
Households*	1,856	1,900
Family household**	1,485	1,471
Married Couple Families	1,310	1,279

Nonfamily Households***	371	429
Householders Living Alone	301	338
Average Household Size	2.70	2.61
Average Family Size	3.04	2.96

*A household is an occupied housing unit.

**A family household is a household with two or more individuals related by marriage, birth, or adoption.

***A nonfamily household is a household with a group of unrelated individuals or a person living alone.

Springfield Township contains 1,900 households. Of these households 1,471 of them are considered family households. Of the family households, 1,279 are married-couple families. This is down slightly from 1990, when there were 1,310 married-couple families. The average family size in Springfield Township is 2.96 persons. Nonfamily households rose from 371 in 1990 to 429 in 2000. Of these nonfamily households, 338 consist of a householder living alone.

Age Composition

Almost 13 percent of Springfield residents is age 65 years or older and about 12.4 percent of Bucks County residents is age 65 years or older. Since 1990 the number of people in Bucks County age 65 years or older has increased by 25 percent. By comparison, Springfield has actually experienced a loss of people in this age group since 1990 (about a 17 percent decline). However, because the baby boom generation is beginning to hit retirement age, the percentage of people over the age of 65 will certainly increase within the next 10 to 20 years. Even in a relatively sparsely populated municipality such as Springfield Township, much of its current population is between the ages 45 and 64. In 1980 this generation comprised people age 15 to 34, in 1990 it comprised people age 25 to 44, and in 2000 it comprised people age 35 to 54. We can expect the spike to show up in people age 45 to 64 in the 2010 Census. Table 3 provides an overview of this population trend.

Table 3. Population by Age, Springfield Township, 1980-2000

	1980		1990		2000	
Age	Population/Percentage		Population/Percentage		Population/Percentage	
Under 5	322	6.7%	322	6.2%	219	4.4%
5 to 9	370	7.7%	336	6.5%	297	6.0%
10 to 14	425	8.8%	339	6.5%	378	7.6%

15 to 19	376	7.8%	317	6.1%	319	6.4%
20 to 24	302	6.3%	247	4.8%	182	3.7%
25 to 34	811	16.8%	770	14.9%	477	9.6%
35 to 44	667	13.8%	916	17.7%	931	18.8%
45 to 54	469	9.7%	680	13.1%	878	17.7%
55 to 64	455	9.4%	479	9.3%	641	12.9%
65 to 74	326	6.8%	402	7.8%	367	7.4%
75 and over	294	6.1%	369	7.1%	274	5.5%
Total	4,817	100%	5,177	100%	4,963	100%

Under 18	1,364	28.3%	1,194	23.1%	1,110	22.4%
18-64	2,833	58.8%	3,212	62.0%	3,212	64.7%
65 and over	620	12.9%	771	14.9%	641	12.9%
Total	4,817	100%	5,177	100%	4,963	100%

Although Springfield Township shows a loss of people age 65 years or older within the last 10 years, population pressures from within Springfield and from surrounding townships and the demand for senior housing could have a dramatic effect on the future composition of the township. Like many parts of Bucks County, the township will likely be composed of older residents. With this projected rise in elderly residents, Springfield Township should consider adjusting its ordinances to accommodate age-specific housing such as retirement communities, assisted living facilities, and nursing homes.

Finally, the township should also take into account the loss of younger residents. Since 1980, the township (and the county) shows a decline in the number of people age 20 to 34 (as shown in Table 3). Part of this loss is due to the baby boom generation getting older and moving out of these age categories. But another part of this loss is due to these age groups moving out of the township. Possible reasons for moving out include a lack of employment opportunities, a lack of affordable housing, and lack of sufficient goods and services in the region. One of the decisions the township will have to make is whether efforts should be made toward maintaining and attracting this segment of the population. Such efforts may consist of zoning for higher density uses and attracting a greater diversity of commercial uses.

Population Projections

Population projections are useful in helping a municipality plan for future needs, such as park and recreation facilities, emergency services, and senior services. The following

population projections shown in Table 4 were developed using an age cohort survival model. The age cohort survival model simulates the process by which population actually changes by applying birth (fertility), death, and migration rates to a starting population (2000 Census). Under the process, the starting population was broken down into five-year increments (called cohorts) according to the age structure and sex of the population. Fertility, death, and migration rates based on past trends were applied to the cohorts of the starting population to produce a 2010 projected population. Holding past death and fertility rates the same, three possible migration rates were used to produce three different population projections.

Table 4. Springfield Township Population Projections, 2010

	2000 Census		2010 Projections					
			Low		Medium		High	
Age	Male	Female	Male	Female	Male	Female	Male	Female
0-4	101	118	111	125	118	132	130	143
5-9	163	134	148	121	154	126	162	134
10-14	178	200	139	171	145	177	154	186
15-19	171	148	193	137	198	142	206	150
20-24	96	86	142	129	149	369	161	148
25-29	101	97	164	140	175	151	193	169
30-34	133	146	151	147	161	157	177	173
35-39	206	228	144	176	149	181	157	189
40-44	254	243	166	184	170	188	177	195
45-49	201	216	197	235	199	237	202	240
50-54	240	221	272	232	274	234	278	238
55-59	190	171	208	213	210	215	213	218
60-64	151	129	222	206	223	207	225	209
65-69	97	95	170	142	171	144	173	147
70-74	88	87	114	96	115	97	116	99
75-79	63	78	66	63	67	64	68	66
80-84	33	50	40	45	40	46	40	47
85+	19	31	18	35	18	36	18	37
Total Male/Female	2,485	2,478	2,665	2,597	2,736	2,670	2,850	2,788
Total	4,963		5,262		5,406		5,638	
Migration Rate*	-1.37%		-2.74%		0%		4.33%	

*Migration is determined by subtracting the change in population due to births and deaths from the change in population. Migration rates are calculated by dividing migration by the total population. The low

projection uses a migration rate twice that seen in the 1990's, the medium projection assumes no migration in or out of the township, and the high projection uses a migration rate seen during the 1980s.

The low-growth scenario projects an additional 300 people in 2010, the medium-growth scenario projects an additional 440 people, and the high-growth scenario projects an additional 670 people. It should be noted that these numbers are not definitive and that any forecast of future growth is tentative and subject to a given set of assumptions holding true for a defined period of time and constraints of the projection model employed. However, these projections should provide a fairly good picture of population growth to the year 2010.

Land Use Characteristic and Development Trends

Regional Perspective

Springfield Township is part of the Palisades Planning Area consisting of Bridgeton, Durham, Nockamixon, Springfield, and Tinicum townships and Riegelsville Borough. Historically, the Palisades Area has been relatively undisturbed by the wheels of change. To this day, the character of the area is still reminiscent of earlier times, with numerous pristine farms, historic villages, bridges, and inns. While growth (primarily in the form of single-family detached lots) has been minor, growth is expected to continue throughout the area. Given the relatively easy access to Interstate 78 via Routes 611 and 412, this area may see increased development pressures from commuters to and from the Allentown-Bethlehem-Easton corridor and New York City metropolitan area. Over the past decade, growth and development was not as significant as anticipated in the Palisades Area, but lower interest rates and the recent approval/construction of several large-lot residential subdivisions in Lower Saucon Township, Northampton County may be a signal of increased development across the region.

Township Perspective

Springfield Township is the second largest Bucks County municipality in land area (30.78 square miles) and is predominately rural in character. Table 5 provides a snapshot of the land use characteristics within Springfield Township in 1990 and 2001 and Figure 1 highlights existing 2001 land use.

Nearly 83 percent of the township land area consists of three primary land use categories-rural residential (6,627 acres or 33.6 percent of the total land area), agricultural (6,057 acres or 30.7 percent of the total land area) and vacant (3,659 acres or 18.6 percent). A majority of the agricultural land is concentrated within the central portion of the township, which generally corresponds to the township's Agricultural Zoning District.

[View Existing Land Use Map](#)

Table 5. 1990 and 2001 Land Use Characteristics

Land Use Category	1990 Acreage	1990 %	2001 Acreage	2001 %	1999-2001 Amt. Chg.	1999-2001 % Chg.
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Single Family Residential	1,930	9.8	2,271	11.5	341	15
Multi Family Residential	62	0.3	19	0.1	-43	-226
Rural Residential	6,013	30.5	6,627	33.6	614	9
Agricultural	6,625	33.6	6,057	30.7	-568	-9
Minig & Manufacturing	28	0.2	51	0.3	23	45
Commercial	220	1.1	252	1.3	32	13
Transportation & Utilities	581	3.0	593	3.0	12	2
Governmental & Institutional	117	0.6	148	0.8	31	21
Park & Recreation	22	0.1	22	0.1	0	0
Vacant	4,101	20.8	3,659	18.6	-442	-12
Total	19,699	100 %	19,699	100 %		

Note: 1990 and 2001 % represents the percentage of the respective land use category based upon the total land area of the township.

Single-Family Residential category contains single-family detached dwellings on lots less than 5 acres. Rural Residential land use contains a single-family detached dwelling but is located on lots that are 5 acres or greater. (For a detailed description of land use classification definitions, see Appendix 1.) The purpose of Rural Residential land use category is to identify large residential lots that may have future development potential for future subdivision or development. This category will be useful for identifying potential areas for future development in the township as discussed in the Future Land Use and Growth Management section.

Multifamily Residential land uses are generally limited to the Route 309 corridor and within or adjacent to the villages Zion Hill, Pleasant Valley, and Springtown corresponding to the Highway Commercial, Village Commercial, or Village Residential Zoning District where this is a permitted use. Multifamily Residential consist of 19 acres or 0.1 percent of the total land area. The current Development District is intended to accommodate a variety of residential and nonresidential uses, including higher density housing types. The provision of public infrastructure may provide incentives for the provision of multifamily residential uses within this area (as discussed in the Future Land Use and Growth Management section).

Mining & Manufacturing land uses (51 acres or 0.3 percent of the total land area) are limited to the Route 309 corridor which corresponds to the Planned Industrial zoning district. Other nonresidential land uses (i.e., Commercial and Government & Institutional) consisting of approximately 400 acres or 2 percent of the total land area, are scattered around the township.

The only Park and Recreational land use in the township is a portion of Locust Valley Golf Course (22 acres or 0.1 percent of the total land area) which is predominately located in Upper Saucon Township, Lehigh County. Private recreational facilities (fraternal organizations/clubs) are considered Government & Institutional for the purposes of identifying land use characteristics.

Existing Nonconformities

A nonconformity is defined as an existing condition (e.g., use, building, or lot) that does not comply with the zoning ordinance for the jurisdiction as it predated the zoning regulations in the municipality. Based upon a cursory review of the existing land uses in Figure 5 and the township's zoning map, there appears to be only a few existing nonconformities based solely on use. Additional analysis will be performed in the Future Land Use and Growth management section to determine if the future land uses categories from the previous comprehensive plan are still appropriate or require changes. Certain zoning district boundaries may need to be altered (e.g., increased, decreased, or eliminated) to reflect the current land use policies while eliminating specific nonconformities that are determined to be appropriate.

Development Trends

Historically, there have been subtle shifts in land use characteristics in Springfield Township. An examination of the land use and development trends between 1990 and 2001 are provided in Table 5, above. Every attempt was made to provide consistency between the methodology between the 1990 and 2001 land use statistics and mapping; however, there are several discrepancies. The comparison of land use acreage change and percentage change are only intended to be a general planning tool, reflecting overall development trends that have occurred within the township in the past decade.

Most of the development in the past decade was in the form of single-family detached dwellings as reflected in the increase of single-family residential land use by 341 acres (or 15 percent). Significant acreage will be added to Single-Family or Rural Residential land use categories in the future as the recently approved development proposals (shown in Table 6, below) received building permits. Reflecting land available for subdivision and land development, the vacant and agricultural land use categories decreased by approximately 442 acres (6 percent) and 568 acres (9 percent), respectively between 1990 and 2001. The reduction of agricultural acreage may also be due to a trend of loss or discontinuation of agricultural activities since 1990.

Rural Residential acreage increased by approximately 614 acres (9 percent) as the result of the subdivision and subsequent construction of a single-family dwelling on previously agricultural and vacant land.

The decrease in Multi-Family Residential by 43 acres (226 percent decrease) is not a result of a loss or conversion of multi-family apartments or units but rather changes in the classification. In 1990, the Multi-Family Residential category included uses such as nursing home and parsonages. However, in the 2001 land use update, the reclassification of these uses to Government & Institutional was deemed appropriate.

Development trends over the decade suggest only modest increases to Commercial (32 acres or 13 percent), Mining & Manufacturing (23 acres or 45 percent), and Government & Institutional (31 acres or 21 percent) land use categories.

Since there has not been additional park and recreational land provided over this time period, park and recreational acreage has remained the same.

Approved Development Proposals

As of September 2002, various development proposals have received approval or preliminary plan approval status from the township, but have not received a building permit as shown in Table 6. The inclusion of the following subdivision and land development proposals into the 2001 land use statistics and mapping was deemed inappropriate at this time, since there is no guarantee of their implementation. However, there is potential that one or more of the proposals will be completed in the future.

Table 6. Recently Approved Development Proposals

Proposal Name	Location	Total Acres	Review Type
Cummings	Moyer Road & Route 412	39.9	2 Single-Family Lots
Cross Creek	Drifting Drive	44.79	4 Single-Family Lots
Mager Tract	Harrow Road	87.7	24 Single-Family Lots
Marsh	Route 412 & New Hill Way	1.86	2 Single-Family Lots
Hidden Ponds (Mager)	Old Bethlehem Road	20.60	4 Single-Family Lots
Schnell	Winding Road	61.00	2 Single-Family; 1 Commercial
G&H	Hickory Lane	58.70	4 Single-Family Lots
Springhill	Drifting Drive	21.36	16 Single-Family Lots
Thompson	1550 Maple Road	11.42	2 Single-Family Lots
Quay	School and Maple	41.21	3 Single-Family Lots
Station House Farm	Bursonville Road	71.00	7 Single-Family Lots
High Meadow	Peppermint Road	63.85	10 Single-Family Lots
Martin's Estates	Route 412 & Lehnenberg Road	39.00	9 Single-Family Lots
Rick	Route 412 & School Road	43.57	2 Single-Family Lots
Brink	Carlton Road	38.46	2 Single-Family Lots
Oppecker	Ebert & Nemeth Roads	9.56	2 Single-Family Lots
Saddle Ridge Phase 2A	Highpoint Road	13.20	3 Single-Family Lots
Pfeiffer Farm	Highpoint Road	45.06	4 Single-Family Lots

Natural Resources

Geology

Springfield Township lies within the physiographic provinces of the Triassic lowlands of the Piedmont province and the Reading prong of the New England province. The township is characterized by large rocky hills cut by stream valleys. The rock types in the township consist of gneiss, Lockatong lithofacies, red shales and sandstones, diabase, limestone, and quartzite. (See Figure 2: Natural Resources.)

Rock types determine groundwater supplies. By identifying rock types, the township can plan for the water supply needs for future residents. Quartzite and gneiss, located in the north corner of the township, provide small to moderate supplies of groundwater. Red shales and sandstones, which are rocks of the Brunswick formation, represent significant supplies of water to the township. These rocks are located in the township's south-central region and also extend in a band from this area toward the township's eastern portion. The Lockatong lithofacies, which are generally a poor source of water, are located in a small area at the eastern corner of the township. Diabase, which makes up most of the western portion as well as areas in the eastern portion of the township, has among the poorest water supply yields in the county.

The limestone areas of the township are part of the Durham Carbonate Valley, which is an area that stretches from Riegelsville, across the northern half of Durham Township, to the northern corner of Springfield Township. Limestone varies greatly in its supply of water and is susceptible to groundwater contamination, sinkholes, and solution channels. Groundwater contamination is a particular problem because contaminated water can move rapidly through solution channels, threatening an extensive area in a short period of time. Other carbonate valley phenomena include disappearing and influent streams, ghost lakes, land surface mottling, and cave formation.

For areas underlain by carbonate geology, the Springfield Township Zoning Ordinance requires subdivision and land development applicants to identify all carbonate geologic features. The mapping and identification of these features must be based on a field survey and published data and the qualifications of the individual performing the survey must be listed. Stormwater management facilities are required to meet specific design standards. Proposed buildings, sewage disposal facilities, and utilities must meet setback requirements from susceptible areas. Uses such as landfills, junkyards, fuel storage and distribution, and truck terminals are prohibited in these areas.

Consideration should be given to requiring applicants for land development or subdivision to use geologists and/or hydrogeologic professionals specified by the township to identify carbonate features. This could provide a more independent analysis of the geology of the site.

[**View Natural Resources Map**](#)

Groundwater Resources

About 90 percent of the township gets its drinking water from private wells, located throughout the township. Groundwater supplies largely depend upon geology, surface characteristics, water use, and seasonal precipitation. There are two public wells operating in the township. One public well is operated by Scenic View Apartment (located in Lower Saucon and Springfield townships). The other public well is operated by the Springfield Township Authority (STA) located in Springtown. As mentioned in the geology section above, however, much of this area is underlain by carbonate geology. Compounding this situation is the fact that Springtown has been identified as an area of failing septic systems. Clearly, this is an area that is very susceptible to groundwater contamination.

To protect groundwater resources in this and other vulnerable areas, the township should seriously consider the development of a wellhead protection ordinance. Such an ordinance would offer protection for aquifer recharge areas from land uses that could potentially threaten Springfield's future groundwater supply. (See Future Land Use and Growth Management section for further details on wellhead protection programs.) Careful consideration should be given to the recommendations of both the Springfield Township Sewage Facilities Plan (1994), which recommends a public disposal system that accommodates only areas within the existing village area, and the Springtown Village Study (2000), which recommends that the township also consider a system most appropriate for the types and intensities of future land uses in this area. Water supply and methods of protecting water supply will be discussed more thoroughly in the Wastewater and Water Issues section.

Woodlands

Springfield Township remains heavily wooded. Over 44 percent of the township consists of woodlands as shown in Figure 2. A woodland is an area 1/4 acre or more in size, where trees form a canopy with ten or more of the trees measuring at least 10 inches in diameter at breast height or 4 1/2 feet from the ground. Woodlands are an integral part of many land ecosystems. Their benefits to the environment include water and air purification, regional and local climate control, open space, erosion control, and habitat for wildlife. In addition to their aesthetic value, woodlands also filter out upland pollutants in stormwater runoff and are prime areas of aquifer recharge.

The Springfield Township Zoning Ordinance provides for the protection of woodlands. The percentage of protection ranges from 30 percent in the HC Highway Commercial district to 80 percent in the RP Resource Protection district. Mature trees with a circumference of 60 inches or greater, measured 14 inches above ground must be preserved. In addition, the ordinance requires a tree protection area around protected woodlands so that they do not suffer damage from site development.

Steep Slopes

Due to its hilly topography, the township contains many areas of steep slopes. Almost 27

percent of the township is covered by slopes of 15 percent or greater. (See Figure 2.) Development on steep slopes, if not regulated and designed properly, can lead to accelerated erosion, instability of structures, limited access, and screening of scenic views.

The Springfield Township Zoning Ordinance restricts the development of areas with slopes of 15 percent or greater. For areas with slopes of 15 to 24 percent, 70 percent of the area shall be protected; for areas with slopes of 25 to 30 percent, 85 percent of the area shall be protected; and for areas with slopes of greater than 30 percent, 100 percent of the area shall be protected. These standards apply to all zoning districts except the AD Agriculture district, where the steep slope protection standards are 20, 30, and 50 percent respectively. The reduced standards are intended to allow more agricultural development on steep slopes and greater protection of agricultural soils on sites located in the AD district with both natural resources.

Surface Water Resources [View Hydrological Resources Map](#)

Almost all of the significant aboveground water resources in the township are creeks and streams as shown in Figure 3. In the western portion of the township are the headwaters of the Hickon, Tohickon and Saucon, and Unami creeks. A few miles south in Richland Township, the Hickon Creek empties into the Tohickon Creek. In the east, a small area of the township contains the headwaters of Haycock Creek and Gallows Run. At Lake Nockamixon, Haycock Creek also empties into the Tohickon. The Tohickon then meanders eastward, where it eventually empties into the Delaware River. Gallows Run moves in a northeasterly direction until reaching the Delaware.

The primary aboveground water resource in the township is Cooks Creek. The Cooks Creek watershed is about 30 square miles in size and covers the eastern two-thirds of Springfield Township and the western half of Durham Township. From its headwaters the creek runs eastward into Durham Township where it eventually empties into the Delaware River. Cooks Creek has been designated an Exceptional Value stream by the Pennsylvania Department of Environmental Protection and is the only stream in the county that supports a natural population of brown and brook trout.

In 2000, the Durham Township Environmental Advisory Council (DTEAC) sponsored a study of the Cooks Creek watershed. The goal of the project was to provide information to the DTEAC on wetlands and watershed conservation to be integrated with a total water resources management plan of the watershed. Phase I is the Wetlands Management Plan and Phase II is the Watershed Conservation Plan. The goal of Phase I was to provide information to the DTEAC for a wetlands conservation plan to be integrated with a total water resources management plan of the watershed. The plan delineates wetlands, identifies area soils, delineates karst features and other hydrogeologic features, determines important hydrologic characteristics, and develops a GIS base for the inclusion of future information.

Some unique features of the Cooks Creek Watershed identified in the plan include:

- Cooks Creek has been designated as 1-A priority for consideration as a state scenic river, although a state moratorium exists on the designation of new state scenic rivers;
- The watershed supports federally and state-listed endangered and threatened species;
- The watershed contains unusual geologic conditions, such as karst-prone areas and a Triassic basin. The local geology, particularly karst areas, makes the stream and area groundwater particularly vulnerable to contamination.

To protect and manage this critical resource, the plan recommends several actions, all of which can be incorporated into the recommendations of the Springfield Comprehensive Plan:

- Watershed Management-Use a holistic approach that recognizes the connections between different elements.
- Comprehensive Planning-Discuss the social and environmental value of the watershed in future comprehensive plans. The environmental section of the comprehensive plan should include an inventory of sensitive resources and goals, objectives and strategies for protecting these resources.
- Overlay District-Adopt overlay zoning districts that would require new development projects to identify sensitive resources and use best management practices to protect these resources.
- Growth Management-Incorporate growth management tools such as cluster development, open space preservation, riparian corridor protection, wellhead protection, and transfer-of-development rights.
- Education and Public Outreach-Conduct seminars and distribute newsletters to educate the community about the importance of protecting the watershed.
- Water Monitoring Program-Develop a water-quality monitoring program of the stream and primary water supply aquifer.
- Funding-Seek additional funds to develop a watershed approach for management and preservation of the Cooks Creek natural resources and water supply.
- Protection of Sensitive Areas and Vulnerable Wetlands-Promote the protection of sensitive segments of the watershed and wetlands through acquisition and the establishment of vegetated buffers. The plan identifies particular resources and areas to be protected including riparian zones, endangered or threatened species habitat, wetlands, recharge areas, springs and seeps, and headwater areas of the Cooks Creek tributaries.

The Watershed Conservation Plan (Phase II), adopted by the Board of Supervisors in March, 2002, is a compilation of numerous studies that have been conducted within the Cooks Creek watershed. These studies include: geologic and wetland surveys, well water level monitoring, stream gauge data collection, water quality chemistry, bioassessment surveys, stream corridor evaluations, and GIS database development. This WCP references all these studies and the appendices to this report include the results of many of the studies performed. The notable exception being the results of studies performed in support of the Wetlands Management Plan that was prepared for the USEPA (published under separate cover).

The overall goal of the Cooks Creek Watershed Conservation Plan is two fold: 1) to formulate a management program that truly sustains water resources through utilization of Best Management Practices (BMPs) and 2) to highlight those characteristics or critical issues in the watershed that require further study. This can be achieved through projects conducted in cooperation with watershed associations, agricultural organizations, various governmental agencies and others. Management options will include maintenance, enhancement and restoration activities. The following management options and recommendations should be considered for protecting, enhancing, and preserving the Cooks Creek Watershed resources:

1. Develop a Water Management Plan
2. Monitoring Cooks Creek Flow
3. Monitoring Aquifer Levels
4. Generate an Upgraded Water Table Map
5. Expand the GIS Database
6. Continue to Develop the Hydrologic Database managed using the computer interface WAMOS
7. Develop a Nutrient Management Plan
8. Develop a Township Level Storm water Management Plan
9. Develop a Comprehensive Biological Inventory
10. Expand and Maintain a Water Quality Monitoring Program
11. Educational Activities
12. Riparian Buffer Improvements
13. Ordinances and Planning Documents

The following critical areas should be considered for zoning ordinance and Comprehensive Plan preparation:

- .. Storm water management and erosion control;
- .. Wetlands protection;
- .. Baseflow protection;
- .. Conservation easements and open space;
- .. Endangered and/or threatened species habitat protection;
- .. Karst and sinkhole land development standards;
- .. Overlay districts of critical areas (first order sub-basins, wetland buffers, riparian floodplain, and lakes and ponds);
- .. Septic systems types based upon soil districts;
- .. Steep slopes;
- .. Stream or riparian buffers; and,

- .. Wellhead protection.

Richland Township is proposing a similar watershed conservation plan for Tohickon Creek, and has requested the participation of Springfield Township. Regional cooperation by those municipalities affected is important to the overall success of watershed planning programs and activities. The Cooks Creek Watershed Association intends to conduct a biological assessment of wildlife present in the Cooks Creek Watershed; however, are awaiting the approval of a grant to proceed with this activity.

The Springfield Township Zoning Ordinance requires streams and watercourses to remain 100 percent open space. The ordinance also requires a 75-foot margin adjacent to the stream or watercourse in which no development or site alterations may take place. This stream margin, also known as a riparian buffer zone, serves to maintain stream temperature, stabilize stream banks, control erosion, and absorb nutrients and sediments from stormwater runoff. Additional requirements, such as larger margins and maintenance requirements, should be considered for riparian corridors. In general, the larger the corridor is, the greater the habitat and stream protection provided.

Floodplains

While Springfield Township is not a municipality usually given to flooding problems, there are many floodplain areas throughout the township as shown in Figure 3. These areas are adjacent to the township's streams and watercourses. The 100-year floodplain is defined by the Federal Emergency Management Agency (FEMA) as the area adjoining a stream or river that accommodates floodwater produced by the 100-year storm (or base flood event), which has a 1 percent chance of being equaled or exceeded in a given year.

The township zoning ordinance contains provisions for the protection of floodplain areas that comply with the National Flood Insurance Program and the Pennsylvania Floodplain Management Act. The ordinance contains provisions that limit the expansion and enlargement of existing structures that would cause an increase in the elevation of the 100-year flood heights, provisions that deny the granting of any variance for any construction, development, use, or activity that would cause an increase in the elevation of the 100-year flood heights, and provisions that set out elevation and floodproofing requirements for residential and nonresidential structures built in the floodplain.

Wetlands

Wetlands are dynamic ecosystems that encompass areas inundated with water for all or part of the year. They provide many beneficial functions to the environment, including habitat for wildlife, water quality protection and improvement, and flood and stormwater management.

A little over 2 percent of the township consists of wetlands as shown in Figure 3. They are located throughout the township, mostly along stream corridors and in isolated, low-lying areas. The township zoning ordinance requires 100 percent protection of all wetlands and wetland margins. The wetland margin consists of a 25-foot area extending from the outer limit of the wetland. No development, alteration, regarding, filling, or piping may take place within the margin.

Agricultural Soils [View Agricultural Soils Maps](#)

Springfield Township contains significant agricultural soils. The quality of these soils is determined by the Natural Resource Conservation Service (NRCS) of the U.S. Department of Agriculture. NRCS has recently recertified soils in Bucks County and Figure 4 highlights Prime Agricultural Soils and Soils of Statewide Importance.

Most important agricultural soils in the township are located in the north and northwestern portion of the township. Areas to the south, east, and west of Springtown contain mostly Prime Agricultural Soils with some Soils of Statewide Importance. Areas surrounding Passer and Pleasant Valley contain mostly Farmland Soils of Statewide Importance with some Prime Agricultural Soils. The southwest and eastern portions of the township contain lesser amounts agriculturally important soils, except for the Bursonville and Zion Hill areas, which contain both Prime Agricultural Soils and Soils of Statewide Importance.

The township currently designates the area south of Springtown and north and east of Pleasant Valley as its AD Agriculture zoning district. The Springfield Township Zoning Ordinance restricts development on both Prime Agricultural Soils and Soils of Statewide Importance in its AD Agriculture district. Prime Agricultural Soils must be 70 percent protected from development and Soils of Statewide Importance must be 60 percent protected.

The existing agricultural zoning district is based largely on the soils maps provided by NRCS. Since the soils locations on the new maps may vary from the previous maps, the township should consider adjusting the boundaries of its agricultural zoning district to reflect the new locations of Prime Agricultural Soils and Soils of Statewide Importance. However, if the new soils maps are not significantly different, no adjustments may be necessary.

Open Space and Farmland Preservation [View Protected Farmland & Open Space Map](#)

Springfield Township's open space resources include areas containing rural residential, vacant, agricultural, and park and recreational land uses. It may not seem important to preserve open space and agricultural resources in Springfield Township, since approximately 83 percent of the total land area falls within these four land use categories. However, a significant portion of this area may not be protected from future development. This chapter examines the type, nature, and extent of the township's existing open space and farmland resources and identifies potential preservation strategies and techniques that may be appropriate for implementation in Springfield Township.

Open space resources can be classified into three categories: permanently protected, temporarily protected, and unprotected. Permanently protected lands include areas that are more likely to be preserved due to its ownership, such as publicly-owned lands (e.g., parks or vacant lands), lands owned by nonprofit conservation organizations or homeowner's associations. In February 2002, the township acquired land for future public park use and there are a few private recreational facilities (to be discussed in the next section). Nockamixon, Ralph Stover, and the Delaware Canal State parks and Tohickon Valley, Tinicum, Weisel, Lake Towhee, and Ringing Rocks County parks are located within a 10-mile radius of the township.

Temporarily protected lands are areas that are in open space or partial open space use. However, these property owners reserve the right to develop the land in the future (under the parameters of the underlying zoning). The most common lands comprising temporary open space are properties enrolled in preferential tax assessment, agricultural security areas, and school facilities.

Unprotected lands include any vulnerable resources that do not have an inherent mechanism in place that would discourage or prevent land from being developed or being impacted from the development in the future. This includes a significant portion of the township's existing natural, historical, and scenic resource lands.

Permanently Protected Lands

The following provides a brief description of all permanently protected open space lands. The permanently protected lands comprised approximately 262 acres or slightly over 1 percent of the total area in the township. The location and extent of these lands are illustrated in Figure 5.

County-Owned Lands

Since the 1970s, the county has been actively acquiring land between Lehnenberg and Buckwampum roads (along Buckwampum Mountain), near the Durham and Springfield Township border. Initially, the County intended to construct a ski slope but these plans were later dashed. Currently, the land is being used for access to the county-owned radio tower located on one of these parcels (TMP #42-22-57). Collectively, the 20 county-owned parcels total approximately 130 acres and contain a restrictive covenant limiting the use of the land to passive recreation (i.e., park, wildlife preservation, and open space).

Township-Owned Lands

The township owns three parcels totaling approximately 69 acres. Two of these parcels contain the municipal building and recycling/maintenance building. In February of 2002, the township acquired the Kurtesan Farm, which is a 45.3-acre tract located on Peppermint Road. The property was purchased through the Bucks County Open Space Program and is intended for future park use. The township also has an option to purchase an additional 25 acres of land on the opposite side of Peppermint Road.

Heritage Conservancy-Owned Lands

There is one property that is owned in fee-simple by the Heritage Conservancy totaling about 63 acres and at this time, is being held for open space conservation purposes.

Lands with Conservation Easements/Deed Restrictions

There are 13 properties in the township totaling approximately 477 acres that contain conservation easements or deed restrictions. It is important to note that a conservation easement or deed restriction does not necessarily prohibit development from occurring over the entire tract. Often, only a portion of a property may be protected from future development depending upon the legal descriptions or conditions established as part of the individual conservation easement and deed restriction.

There are six properties totaling approximately 166 acres that contain conservation easements that is held by the Heritage Conservancy. The Heritage Conservancy notes that only a portion of these properties (and not necessarily the entire property) contains a conservation easement restricting future development.

Two properties in the township are enrolled in the Bucks County Agricultural Preservation Program-the Fleishman farm (96.8 acres located northwest side of Slifer Valley Road) and a portion of the Berger farm, predominately located in Nockamixon Township (12.9 acres located in Springfield Township on the northwest side of Berger Road). These properties contain an agricultural conservation easement restricting its use substantially to agricultural and directly associated uses. Several properties may be eligible for future designation. (See the description under Agricultural Land Preservation Program section below.)

The Matcak property totaling 100.68 acres is enrolled in the Bucks County Natural Areas Program. This property has been placed under a conservation easement that restricts specified future uses and activities on the site. (See the description under the Natural Areas Program section below.)

Lastly, there are various parcels in the township that contain deed restrictions. Based upon a review of subdivision and land development plans since 1989, there are four properties totaling about 101 acres containing deed restrictions that prohibit further subdivision, but not necessarily further development. This is a partial listing, since plan notations and deed records were not researched for this publication prior to this date.

Temporarily Protected Lands

The following provides a brief description of all temporarily protected open space lands that comprise approximately 10,385 acres or about 53 percent of the total area in the township. The location and extent of these lands are illustrated in Figure 5.

School Facilities

There is one public school located within the township totaling approximately 12 acres. The Springfield Elementary School property is located on the northeast side of Bethlehem Road (Route 212) and contains a playground.

Lands with Preferential Assessment

Numerous residents within the township have registered their properties with the county under the preferential assessment programs. Bucks County has entered into voluntary covenants with owners who have valuable open space resources (e.g., farmland, forested areas, water resources) in order to preserve open space. Consequently, the property is assessed by the county at the fair market value (or at less than its highest and best use). As a result, the property owner is afforded a significant savings through preferential property tax assessment as an incentive to maintain the land as open space. Two acts are applicable to preferential assessments:

Act 319 Lands (Pennsylvania Farmland & Forest Land Assessment Act of 1974)-This legislation, also known as the "Clean and Green Act," is available to landowners for the following uses: agricultural use, agricultural preserve, and forest preserve. Under this

program, soil classification and yield per acre determine a property's individual assessment. Enrollment in this program is continuous unless dissolved by the landowner or eligibility requirements are not met. There are 147 parcels enrolled in this program totaling approximately 5,126 acres.

Act 515 Lands (Pennsylvania Open Space Covenant Act of 1966)-This act enables a property owner to enter into a covenant with the county to preserve farm, forest, water supply, and open space land. However, in 1993 the county commissioners gave a 10-year termination notice of the Act 515 program. Consequently, properties under this the program will continue to be honored until the end of 2003. At this time, participants are allowed to convert their properties into the sister program known as Act 319. However, applicants must satisfy Act 319 requirements, which are more stringent. There are 114 parcels totaling approximately 3,362 acres protected under Act 515.

Lands covenanted under Acts 319 or 515 are considered only temporarily protected because the property owners have the right to terminate the agreement at any time. However, as a result, the property owner must pay a penalty in the form of rollback taxes (i.e., the difference between the preferential assessment value and the fair market or development value) and accumulated interest (i.e., 7 years for Act 319 and 5 years for Act 515). Although covenanted lands are only temporarily protected, it shows a willingness of landowners to maintain their properties in open space. Commitment into Act 319 and 515 programs is an example of a local grassroots action that should be considered in the overall comprehensive planning process. In total, there are 8,488 acres of land covenanted under Act 319 and 515 within the township.

Agricultural Security Areas

Similar to lands covenanted under the preferential assessment programs, enrollment into an Agricultural Security Area (ASA) suggests a significant commitment by property owners for ongoing farmland preservation. The ASA program was created by the Agricultural Security Area Law (Act 43 of 1981) to protect the agricultural industry from increasing development pressure. ASAs are intended to promote more permanent and viable farming operations by strengthening the farmer's sense of security in their right to farm.

For properties to be eligible for enrollment into an ASA, the aggregate total of the properties must be a minimum of 250 acres in viable farmland, and the zoning district in which these properties are located must permit agricultural uses. Individual parcels comprising a designated ASA must be at least 10 acres in area and at least 50 percent of which contains Class I-IV soils. Respective property owners must petition the township supervisors in order to gain approval into the program. Consequently, once enrolled into an ASA, farmers gain the following benefits:

- o Protection from municipal nuisance ordinances which restricts odors and noise in a community;
- o Protection from governmental acquisitions of land through condemnation or eminent domain; lands proposed for such action within a ASA must first be approved by Agricultural Lands Condemnation Approval Board;
- o Enrollment into the county's easement purchase program requires previous establishment of properties in ASA.

Three are 61 properties in Springfield Township enrolled into an ASA totaling approximately 1,760 acres.

Springfield Township Open Space Plan

In 1999, the township prepared an open space plan to qualify for county open space preservation funding. Springfield Township was eligible for up to \$531,000 for the preservation of open space and farmland in the township. Among the plan's major findings:

- Cook's Creek is important because it is an Exceptional Water Quality Stream (the only one in southeastern Pennsylvania), it is only one of two streams in the state that are natural spawning grounds for trout, and the watershed contains significant wetland, floodplain, and woodland areas.
- The township has good agricultural soils, a strong farming heritage, and a viable farming community.
- Less than 1 percent of the township has been permanently preserved. No public recreation areas exist in the township. Most open spaces are vulnerable to development.
- A number of farms and open areas, however, have been temporarily preserved as Act 319 and 515 land.

The vision for the township is to preserve as much open space and farmland as possible. The plan recommends nine priorities for its preservation program: farmland preservation, resource protection, the Cooks Creek watershed, water supply, recreational areas, linkages and greenways, a workable and affordable implementation program, regional cooperation, and public participation. The plan lists action steps for carrying out each of these nine priorities and identifies alternative funding sources to acquire properties. A system of ranking potential properties is included in the plan, but it does not identify specific properties for acquisition. In February of 2002, the township purchased the Kurtesan Farm (56.7-acres) located on Peppermint Road through the County's Open Space Program. The township also has an option to purchase an additional 25 acres of land on the opposite side of Peppermint Road.

Agricultural Land Preservation Program

In May 1989, the Bucks County Commissioners appointed a nine-member board to develop and oversee a county farmland preservation program. The Bucks County Agricultural Land Preservation Program (BCALPP) seeks to acquire agricultural conservation easements on viable farmland within the county.

An agricultural conservation easement secured through acquisition is a legally binding document that is filed in the land records with the deed of a farm property, restricting its use substantially to agricultural and directly associated uses. As an easement in gross, restrictions are binding upon the owners and future owners, carrying with the land. A conservation easement allows a landowner to protect his farmland for agricultural uses while retaining private ownership of the farm.

The BCALPP compensates farmers for the difference between the fair market value

(development value) and the agricultural value of their land. To be eligible for this program, the following criteria must be satisfied for eligibility:

- o Size restriction: 50 acres (minimum)
- o Location: within agricultural security area
- o Soil criteria: at least 50 percent Class I-IV soils
- o Harvest criteria: at least 50 percent harvested cropland/pastureland
- o Plan approval: approved U.S.D.A. Soil Conservation Plan in effect

Once a farm is accepted into the program, the property owner may sell or convey a conservation easement and receive cash for the respective development rights. The easement is placed in perpetuity. As of December 2001, approximately 5,500 acres of agricultural land in Bucks County (consisting of 60 farms) have been preserved through the BCALPP.

Natural Areas Program

The Bucks County Natural Areas Program is intended to protect significant natural habitat areas identified by the Natural Areas Inventory of Bucks County, Pennsylvania. This document ranks sites throughout the county by assigning sites one of four priority levels.

- Priority 1 sites-areas that have statewide or countywide significance based on uniqueness or exceptionally high quality of natural features.
- Priority 2 sites-areas that have countywide or statewide significance based on the overall quality and the diversity and importance of the resources.
- Priority 3 sites-areas that have local or countywide significance that may contain small or degraded resources.
- Priority 4 sites-areas that have biological or ecological resources that are important at the local level.

Springfield Township contains several of these identified areas. These areas consist of land in the entire Cooks Creek watershed (identified as a priority 1 site), Cressman Hill (a priority 1 site), the Lookout (a priority 2 site), and Buckwampum Mountain (a priority 3 site). (See Figure 6: Natural Areas Inventory, Bucks County.)

The Natural Areas Program is a competitive grant program. Sites with higher priority levels are given greater consideration when competing for grant funding. This program should be a primary source of future open space funding for Springfield Township.

Agricultural Preservation Zoning

Because of the widespread distribution of active, productive farms in the township, a primary goal of this comprehensive plan is to promote the preservation of prime agricultural land. Agricultural preservation zoning, also known as effective agricultural zoning, is one approach that municipalities can use to limit the conversion of farmland

into nonagricultural uses. It focuses on permitting landowners to subdivide a limited number of residential lots from their property based on a minimum acreage necessary for a viable farm unit.

One Approach to Agricultural Preservation Zoning

In 1995, Bedminster Township officials initiated the preparation an update to township's comprehensive plan. The plan set the stage for agricultural preservation and the need for implementation techniques such as zoning revisions. Natural resource protection and preservation was considered important since more development was expected to occur in the township. Over 80 percent of the soil in the township was determined to be farmland. Additional action was deemed appropriate to preserve these agricultural areas, particularly the local Agricultural Security Area properties. The existing ordinance did not assist in this preservation effort.

Several approaches to agricultural preservation were examined from a land use regulatory standpoint. Input was provided from the local farming community, agricultural extension service, the County agricultural preservation board, and the conservation district on how certain approaches would affect the farming industry, the development rights of landowners, and the natural resources in the township. As a result of this work, the township officials, in August 1996, adopted revisions to the zoning ordinance that included a set of agricultural protection standards as a backbone for regulating development in a new Agricultural Preservation (AP) zoning district.

The AP zoning limits the subdivision and development of a tract of land consisting of 10 acres or more. A site analysis must be performed to identify the "nonbuildable site area, the area composed of portions of the site protected from development in accordance with environmental performance standards. This includes protection of 60 percent of prime farmland and 50 percent of farmland of both statewide importance and local importance. After determining the protected, nonbuildable portions of the site, the landowner subtracts the nonbuildable site area from the "base site area" to arrive at the net buildable site area. A landowner may subdivide and develop the net buildable site area into lots containing a contiguous area of at least 1 acre. The proposed lots must have a contiguous "building envelope" of at least 10,000 square feet to provide sufficient area and flexibility for the location of the building, driveway, parking, and other improvements and site alteration while meeting the natural resource protection and minimum setback requirements.

Four possible options are available for addressing the nonbuildable area: (1) fee simple dedication the township; (2) transfer to a private conservation organization that will continue to make the land available for agricultural activities; (3) transfer to private ownership with the agreement that the land is intended for agricultural activities and/or protecting natural resources and shall not be subdivided or developed; and (4) ownership by a homeowners association, which is encouraged to make the area available for an agricultural enterprise.

Upheld in Court

Recently, the courts have shown their support for agricultural preservation. In April 2001, the Commonwealth Court affirmed a lower court's ruling that upheld Bedminster Township Zoning Hearing Board's decision to deny C&M Developers validity challenge to the AP zoning district. Subsequently, C&M Developers have appealed the decision to the Pennsylvania Supreme Court and a decision is expected in the near future.

Since 1996, 11 developments have been proposed under the AP zoning requirements in Bedminster Township, which could result in the preservation of approximately 280 of agricultural land. In addition, five municipalities have considered adopting similar agricultural preservation requirements: East Rockhill, Hilltown, Warwick, and Plumstead townships. Several others have begun analyzing the technique and its potential benefits. With the recent judicial support, many more may become interested in using the approach to preserve their agricultural heritage.

Agricultural Preservation in Springfield Township

[View Map of Historic, Recreational, & Scenic Resources](#)

While Springfield Township provides significant protection of farmland with Prime Agricultural Soils and Farmland Soils of Statewide Significance, the AD district may need additional provisions. For example, in Bedminster Township the agricultural protection standards only apply to sites containing 10 acres or more. Sites containing less than 10 acres as of the effective date of the ordinance do not have to comply with the agricultural protection standard. In addition, farmland that has been set aside as required by the protection standard must meet certain minimum standards so that the land is suitable for farming. The ordinance also allows the farmer to maintain the existing farmhouse and accessory buildings as well as build a new house and accessory buildings on the protected land as long as the lot size is 20 acres or more.

Historic, Recreational, and Scenic Resources

Historic Resources

Established in 1743, Springfield Township has an abundance of historic resources, and their recognition is important in maintaining the township's cultural heritage and identity. Residential and nonresidential development proposals often pose a potential threat to historic and archeological sites. The Springfield Township Historic Commission and Springfield Township Historic Society have been instrumental in the identification and prompting the protection of historic properties. The Township Historic Commission has identified and documented various historic sites and has compiled the Township Historic Registry. The Historic Registry contains a listing of properties that possess architectural integrity and local significance and participation is entirely voluntary. The Historic Commission and Historic Society have also identified other significant historic properties, including sites that have received a 250th Springfield Township Anniversary commemorative plate due to their historic value (see Appendix 2 for a brief description of the township's historic resource sites).

The township's historic resource sites are listed in Table 7 below. The table also identifies sites that are listed on the National Register of Historic Places and the Heritage Conservancy Register of Historic Places.

Figure 7 identifies the location of these historic sites within the context of the township.

Table 7. Summary of Springfield Township Historic Resource Sites

(Refer to Figure 7 for Map Number locations)

Map Number/Historic Resource Sites

1. Knight Property*
2. Gunster Residence*
3. Buckwampum Farm*
4. Opp's Tavern*
5. Passer Schoolhouse*
6. Knecht's Covered Bridge* t
7. Smith-Leith House
8. Nusbickle House
9. Pleasant Valley Schoolhouse
10. Passer Creamery
11. Ritter House
12. Boyer House
13. Church School
14. Funk's Mill
15. Kockert's Tavern
16. Slifer's Log House
17. Springfield Meeting House
18. Post Office and Henry Mill's General Store
19. Springfield High School
20. Blacksmith Shop
21. Zion Hill Lutheran Church
22. Walking Purchase Monument
23. Meyer-Moyer/Kirkland/Meyer
24. White Horse Inn/Hess/Strock
25. Times Building-Funk
26. Johannes Cyphert/George Seifert/Homer Strock
27. Springtown Hotel
28. Frankenfield Homestead
29. Pleasant Valley Three Stone Arch Bridge
30. Milestone 1793 "43 m to P"
31. Weierbach's Store
32. Pleasant Valley Inn
33. Pleasant Valley Feed Mill- Yost Mill
34. Schuckenhausen Evangelical and Reformed Church
35. Passer Hotel

Notes:

t Listed on the National Register of Historic Places

* Listed on the Heritage Conservancy Registry of Historic Places

Figure 7 also identifies four historic villages in the township-Springtown, Pleasant Valley, Passer, and Zion Hill. Other villages or hamlets that do not contain an existing village zoning district are not shown.

While a comprehensive township-wide historic survey has not yet been prepared, the Heritage Conservancy is currently seeking support from the township officials to conduct such a survey in the near future.

Methods of Preservation

Register of Historic Places

The National Historic Register is the official list of the nation's cultural resources, providing recognition that buildings or districts have historic, architectural, or archeological significance. A building or district that is listed will be protected from alterations to the extent that any Federal or federally funded, assisted, or licensed project will be reviewed if the project might have a negative impact on the specific resource. The National Register does not place restrictions on the actions of private property owners, but has the effect of alerting landowners to its historic significance. Listing on the National Register does not in any way limit what a private property owner may do to a property. Buildings of historic significance that are listed on the National Register may still be altered beyond recognition or demolished.

Designated in 1980, the Knecht's Covered Bridge in Springfield Township is the only site in the township listed on the National Register of Historic Places. Well-preserved, this covered bridge was one of two in the township; however, Haupt's Mill Covered Bridge was destroyed in a fire in January of 1983. Kockert's Tavern (built 1738) is the oldest tavern and store in the township and was declared eligible to the national register by the Pennsylvania Historic Museum Commission in 1994; however, its designation was never pursued.

The Heritage Conservancy maintains a separate historic registry for sites throughout the region. In Springfield Township, six properties have been listed on the Heritage Conservancy Registry of Historic Places (formerly the Bucks County Registry of Historic Places) as shown in Table 7. The purpose of this listing is to identify and promote public awareness of architectural and historic significance.

Historic Districts

A common used planning strategy for historic preservation is the adoption of ordinances that establish historic districts. The Springfield Township Historic Commission is in the process of preparing detailed site surveys of historic properties within the villages of Springtown and Pleasant Valley for the purpose of obtaining a local historic district designation.

The Pennsylvania Historical and Museum Commission must approve historic districts before local regulations can be enforced. This planning strategy is most appropriate in those municipalities that have concentrations of historic structures or sites (such as villages). A local historic district ordinance designates an area containing historic structures and protects it by (1) limiting the type of alterations that may be made to existing buildings, (2) reviewing proposed demolitions, and (3) ensuring compatible design of new construction. Act 167 of 1961, the Historic District Act, provides authorization for Pennsylvania municipalities to designate historic districts and regulate the alteration of buildings within them based on the historic context. Historic districts created under the authority of Act 167 are not zoning districts but a review process separate from zoning concerns. The preservation of historic districts has many benefits. Historic buildings give a community a unique character and heritage, providing a source of pride to residents. The character of historic neighborhoods is valued as an attractive environment and some communities have capitalized on their historic character to promote economical development and tourism.

Communities creating historic districts must follow procedures outlined in Act 167 for regulating alterations to structures within the districts. A local historical architectural review board (HARB) must be appointed and must consist of an architect, a real estate broker, a municipal inspector, and at least two citizens with an interest in or knowledge of historic preservation. The HARB reviews and advises the governing body regarding any proposed erection, reconstruction, alteration, restoration, demolition or razing of a structures in the Act 167 historic district. The governing body then makes the decision to approve or deny the proposal. In determining if a change is appropriate, the HARB and governing body may consider its visibility from the public right-of-way, and general design, arrangement, texture, material, and color of the building or structure and its relation to the historic character of the district.

Local historic districts provide the "teeth" that are lacking in the nomination of a district to the National Register of Historic Places. A local historic district ordinance provides a means for limiting the amount of change that can occur to historic structures. The National Register program is a credible way to identify a community's historic resources while the local district designation can further protect and enhance them. Thus, what the National Register helps identify, the local district helps to protect.

Landmark Designation

Often, a municipality's historic structures are not located within an easily defined district. A historic preservation ordinance can contain provisions to encourage property owners of historically significant properties to use and maintain significant historic structures in order to protect a township's individual landmarks throughout the township. The preservation of individual structures or landmarks is often more difficult than establishing historic districts, but their preservation has been used successfully by various communities. Section 605(2) (vi) of the Pennsylvania Municipalities Planning Code (MPC) allows municipalities to pass ordinances for the "regulation, restriction, or prohibition of uses and structures at, along or near places having unique historical, architectural, or patriotic interest or value." This approach may allow for additional uses

within historic buildings in order to encourage the continued use rather than demolition. Additional uses are often permitted by special exception only and standards for use would have to be met to protect surrounding areas.

The township's zoning ordinance provides additional use opportunities for historic structures. The purpose is to encourage the continued use (and reuse) of historic resources and facilities, and to regulate the use of places having unique historical value. Eligible properties are only those that are listed on the township's official list of Historic Resources; however, the township has not adopted an official list. Therefore, the provisions of this zoning provision are not applicable. The township's historic registry and other sites of historic significance that have been identified may be appropriate for inclusion on the official list.

Village Planning Studies

There are still over one hundred identifiable villages remaining in Bucks County, however, many have been lost or overshadowed by growth and development. Historic villages are a unique resource and once they are lost are irreplaceable. While municipalities cannot prevent growth, they can alleviate the effects that development can have on villages through appropriate land use policies and regulations (more on village planning in the Future Land Use and Growth Management section). Additionally, residents can work together to maintain or improve the positive aspects of their village.

As a general rule, villages are classified into three basic categories: hamlets, residential villages, and commercial villages. The village of Springtown is a sizeable commercial village. The villages of Pleasant Valley, Passer, and Zion Hill can be classified as residential villages while Amity, Bursonville, and Gallows Hill are hamlets since they contain a limited number of buildings or structures. (For a brief description of the villages and hamlets in Springfield Township, see Appendix 3.)

Lands within a village can be used for a wide variety of uses. How the land will be used or developed is partially dependent on the actions of local officials. Controlling where land uses will occur is governed by the land use policies and land use regulations. Inappropriate land use policies and regulations have resulted in various problems for communities such as the loss of valuable natural resources and the degradation or loss of many of Bucks County villages.

Currently, the villages of Springtown, Pleasant Valley, Passer, and Zion Hill are recognized as villages though the establishment of village zoning district designations, but Amity, Bursonville, and Gallows Hill lack this distinction. There may be a need to explore the appropriateness of village protection strategies and techniques not only in those villages with village zoning districts, but also those that lack the village zoning protection. The preparation of a village planning study can establish a community vision and a set of standards for public improvements and guidelines for future action.

The Springtown Village Study (2000) prepared by the BCPC, analyzes various components of village enhancement, protection, and revitalization. The study examines

the current zoning regulations and district boundaries for Springtown to determine their appropriateness based upon the existing conditions. Study recommendations include: amending the zoning ordinance to revise the village zoning district's area and dimensional requirements and use summary table, redistricting the village district boundaries to be more responsive to the existing land uses and conditions, implementation of public improvements (e.g., sidewalks, parking facilities, and streetscape amenities), and examination of implementing adjacent village protection alternatives (e.g., village protection overlay district, transfer of development rights program, and placement of easements, and outright purchase of strategic land).

Each of the villages and hamlets in Springfield Township are unique, and township officials should determine if separate village planning studies or specific preservation techniques should be implemented in order to preserve and enhance the historic character of these valuable historic resources.

Recreational Resources

Springfield Township has several private recreational facilities, but until recently, lacked a township land to provide public park and recreational facilities. In February of 2002, the township acquired the Kurtesan Farm which is a 45.3-acre tract located on Peppermint Road. The property was purchased through the County's Open Space Program and is intended for future park use. The township also has an option to purchase an additional 25 acres of land on the opposite side of Peppermint Road. The property is suitable to satisfy a wide-range of active and passive recreational opportunities. Responses from the township survey mailed out at the beginning of the comprehensive planning process will allow township officials to identify the specific park and recreational activities requested by residents.

In 1991 Springfield Township developed a park and recreation plan to enable the township to acquire or develop (via fees in lieu of dedication) park and recreation facilities through the subdivision and land development process as permitted by Section 503 (11) of the municipalities planning code. The plan was also intended to provide guidelines to the Supervisors as to the size, location, design, and types of park and recreation facilities that are appropriate to the township. The plan was completed but never adopted. The plan analyzed five different park types: tot lots and miniparks, neighborhood parks, community parks, regional parks, and linear park and provided an inventory of available facilities. Private park and recreational facilities are as shown in Figure 7 and in Table 8, below.

Missing among these facilities in the township are tot-lots, public community parks, linear parks, and a regional park. The linear park, while desirable, may be difficult to develop because land along township linkages is mostly in private hands. Tot-lots are generally not recommended by the park and recreation plan, unless a high-density development comes to the township. The park and recreation plan recommends that neighborhood parks be placed in or near the villages of Zion Hill, Springtown, and Pleasant Valley or future high-density areas. The plan suggests a need to further study whether a community park is appropriate for the township and where such a park should

be located. Although the township has no regional facilities, the plan identifies 12 regional parks in Bucks, Lehigh, and Northampton counties that are within one hour's drive. As with community parks, the plan suggests the need to further study whether a regional park is needed within the township.

Table 8. Springfield Township Recreational Facilities

Name	Park Type	Facilities	Acreage	Ownership
Springfield Elementary School	Neighborhood	Baseball Field, Basketball Courts, Playground Equipment	0.43	Public
Passer Community Center	Neighborhood	Basketball Court, Swing	3.75	Private
Zion Church	Neighborhood	Baseball Field, Basketball Courts, Playground Equipment	3.74	Private
Locust Valley Golf Club (Springfield Township Portion)	Golf Course	18-hole Public Course	22.0	Private
Ridge and Valley Rod and Gun Club	Community	Archery Shooting Range	11.38	Private
Springtown Rod and Gun Club	Community	Picnic Area, Shooting Range	30.7	Private
Silver Creek Athletic Association	Community	Baseball Fields , Basketball & Tennis Courts, Picnic & Playground Facilities	31.82	Private

The Springfield Township Park and Recreation Plan provides a good analysis of the park and recreation needs of the township. The plan uses the population ratio method to determine the amount of acreage needed for each park type. This method assumes that acreage needed can be directly related to the local population. The types of parks, their sizes, and the standards used to determine the recommended amount of space are based on guidelines available from the National Recreation and Park Association (NRPA).

While the population ratio method was an accepted way of determining park needs when this plan was written, the NRPA now prefers to determine park needs by means of user surveys and observation. One of the difficulties Springfield Township has encountered with the population ratio method is the unexpected loss of population from 1990 to 2000. The Park and Recreation Plan assumed a 2000 population of 6,400 people. Springfield's 2000 population stands at 4,973 people, significantly less than the projected figure.

Thus, to help determine park and recreation needs, the township has decided to survey its population on whether new park and recreation facilities are needed (as part of a general survey) and if so, the types of facilities residents would like to see. The survey asked residents five questions on parks and recreation in the township:

1. What type of activity does your family currently participate in? (Among a list of responses, respondents were asked to check all that applied).

2. What type of activity would your family like the township to plan for or provide facilities for? (Among a list of responses, respondents were asked to check all that applied).
3. What three activities did the adults participate in most?
4. What three activities did the children participate in most?
5. What type of park and recreation facility would you like to see the township develop? (Among five responses, respondents were asked to check all that applied).

The responses were as follows:

1. Hiking/walking, fishing, exercise/fitness, camping, and bicycling (top five responses)
2. Senior citizen programs, teen activities, bicycling, playgrounds, and community groups (top five responses)
3. Walking, hiking, biking, and fishing (top four responses)
4. Baseball, biking, soccer, and swimming (top four responses)
5. 27 percent felt a limited number of larger, well equipped parks should be provided in central locations, 18 percent felt numerous smaller parks with fewer facilities that are dispersed throughout the township should be provided, 60 percent felt a walking or biking trail which connects various points of interest in the township should be provided, 14 percent felt the township should look to neighboring townships for relief in this area, and 31 percent felt the township should not provide parks.

It appears from the results of the survey that hiking and walking are popular adult activities and that residents would like to see the township plan for these activities. Bicycling appears to be another popular activity, making the list of activities in the first four questions. Outdoor activities, such as camping and fishing, were also popular. The responses to the second question points to the need to provide facilities for underserved groups, including seniors, teens, and young children. Other than walking and biking trails, residents seem cool to the idea of providing additional park and recreation facilities.

Scenic Resources

The township's scenic resources including sweeping views of rolling topography and farmland many of which can be seen from the area roadways. Flint Hill at 980 feet is the highest point in Bucks County, and contains spectacular views to low lying areas below. Identifying the aesthetic value of scenic areas, vistas, and roads is based upon the opinion of an individual or group and consequently is a subjective process.

Those areas identified as scenic areas do not necessarily need to be located adjacent to roads or be directly visible from roads. Scenic areas can be visually attractive because of special geologic formations, unique landscapes, natural and historic resources, and agricultural ambiance. Therefore, special attention can be placed on them to emphasize the importance of preserving their inherent scenic qualities.

Scenic roads are segments of roadway that contain natural, historic, or cultural resources in close proximity or contain an area of concentrated scenic vistas. Scenic vistas are

points along a roadway (or stretches of roadway) that have sweeping views of the landscape. Collectively, scenic roadways and vistas are unique resources, which may be lost or overshadowed by inappropriate or insensitive development activities.

The township has established scenic overlay provisions to encourage use of land that will be compatible with the rural character and to provide protection for scenic vistas from roadways, the entrances to historic villages, and overall scenic character of the township. The township's Scenic Roadway Overlay is shown in Figure 7. The overlay district concept does not affect the underlying use, density, or area and dimensional requirements, nor is it intended to reduce the development opportunity of the site; however, applicants must provide a scenic resource map, visual analysis, and satisfy certain performance standards when proposing development within the Scenic Overlay District.

Residential Development

Housing Composition

Springfield Township has an estimated 1,972 housing units which results in 34 additional units since 1990 as shown in Table 9.10 Because Springfield is a rural, relatively undeveloped area, most of the housing units are single-family detached houses on lots of one acre or more. The 2000 U.S. Census estimates that, of the total number of units, 1,693 are single-family detached, 54 are single-family attached, 111 are multifamily units, 91 are mobile homes, and 22 are seasonal units as shown in Table 10. About 1,900 units in the township are occupied. Almost 88 percent of the occupied units are owner-occupied.

Table 9. Housing Units, Springfield Township, 1980-2000

	1980	1990	1980-1990	2000	1990-2000	1980-2000
Total Units	1,635	1,938	303	1,972	34	337

Table 10. Housing Units by Type, 1990-2000

Housing Type	1990		2000	
	Number of Units	Percentage of Total	Number of Units	Percentage of Total
Single-Family Detached	1,659	85.6	1,693	85.9
Single-Family Attached	54	2.8	54	2.7
Multifamily	111	5.7	111	5.6
Mobile Homes	91	4.7	91	4.6
Seasonal Units	22	1.1	22	1.1
Totals	1,938	100.0	1,972	100.0

The age of the housing stock in the township varies greatly. About 25.3 percent of the housing units in Springfield Township were built before 1939. Another 27.5 percent were built between 1940 and 1969 and 47.1 percent were built between 1970 and 2000. Roughly 592 units were built in the 1970s and 303 units were built during the 1980s. According to census figures, only 34 houses were built during the 1990s.¹¹

Housing Affordability

According to the Bucks County Planning Commission study, Bucks County 1999 Housing Affordability, the median-priced home in Springfield Township sold for \$160,500 during the second quarter of 1999. The study calculated that a home of \$160,500 would cost about \$1,222 monthly, including private mortgage insurance and property taxes. The minimum income necessary to afford a home of this price is \$52,388.¹¹ The study concluded that median-income families in the township could generally afford median-priced housing units in the township. As shown in Table 11, the study also found housing in communities surrounding the township to be about as affordable as housing in Springfield.

Table 11. Housing Prices, Springfield and Adjacent Communities, 1995-1999

Municipality	1995	1996	1997	1998	1999
Springfield Township	\$135,000	\$152,500	\$157,140	\$150,000	\$160,500
Richland Township	\$155,310	\$119,900	\$115,750	\$115,650	\$135,000
Milford Township	\$116,890	\$158,000	\$147,115	\$136,400	\$149,900
Durham Township	\$236,500	\$317,000	\$312,500	\$168,500	\$202,500
Nockamixon Township	\$139,900	\$150,000	\$172,250	\$159,000	\$162,500
Haycock Township	\$195,000	\$180,000	\$159,900	\$200,000	\$150,000

Source: Bucks County 1999 Housing Prices and Affordability, Bucks County Planning Commission.

*Fewer than 10 transactions occurred during one or more years of the five-year period; data may not be representative of local housing market.

Zoning

While the township's housing stock is composed mostly of single-family detached homes, the township's zoning ordinance does permit a reasonable range of housing types in a reasonable range of districts, as mandated by the Pennsylvania Municipalities Planning Code (MPC). Section 604(4) of the Code requires that the provisions of the zoning ordinance be designed:

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 types.

The following table provides a summary of how well Springfield Township current zoning ordinance meets the housing requirements of the MPC.

Table 12. Permitted Housing*

House Type	Zoning District								
	WS	AD	RP	RR	DD	VC	VR	HC	PI
Boarding House						S			
Group Home	S	S	S	S	S	S	S		
Halfway House				S					
Duplex					P	P	P		
Moble Home Park					C			P	
Multifamily					P	P	P		
Residential Conversion		S	S	S	S	S	S		
Senior Citizen Housing					P	P	P		
Single-Family Detached	P	P	P	P	P	P	P	P	P
Single-Family Detached, Cluster		P	P	P					
Townhouse					P	P	P		
Twin					P	P	P		
Village House					P	P	P		
Accessory Apartments for Family Members	P	P	P	P	P	P	P	P	P
Dwelling in Combination w/ Business					C	P			

*Not inclusive of all housing uses permitted by the zoning ordinance, only those uses that fit into a "house type."

Key

- WS Watershed District
- AD Agricultural District
- RP Resource Protection District
- RR Rural Residential District
- DD Development District
- VC Village Commercial District
- VR Village Residential District
- HC Highway Commercial District
- PI Planned Industrial District

- P Permitted
- C Permitted by Conditional Use
- S Permitted by Special Exception

Single-Family Detached and Accessory Apartments for Family Members are permitted in all zoning districts. Duplex, Multifamily, Senior Citizen Housing, Townhouse, Twin, and Village House are permitted in the Development District, Village Commercial District, and Village Residential District. These zoning districts are located in or adjacent to the township's villages. Single-Family Detached Cluster is permitted in the Agricultural, Resource Protection, and Rural Residential zoning districts. These districts cover significant portions of the township. Mobile Home Park is permitted in the Highway Commercial District and is a conditional use in the Development District. Dwelling in Combination with a Business is permitted in the Village Commercial District and is a conditional use in the Development District. Boarding House is permitted by special exception in the Village Commercial District. Halfway House is permitted by special exception in the Rural Residential District. Finally, Group Home is permitted by special exception in all districts except Highway Commercial and Planned Industrial, zoning districts that are located adjacent to Route 309.

Housing Development Patterns

As previously stated, the township is composed mostly of single-family homes on large lots. The preponderance of single-family detached units in the township is likely due to the makeup of the township and the consumer preferences of buyers looking to move in the area. Springfield Township is a rural area that does not have a wide variety of goods and services nearby. People living in the township like it because of its open spaces and relatively isolated lifestyle. Single-family homes on large lots are much more marketable than other house types because these home types fit this lifestyle choice more than other house types.

But large-lot development can destroy the character of a rural area if not adequately controlled. In the survey given to residents to shape the direction of this plan, individuals rank protecting the character of the township as their most important issue. Large-lot development threatens the township's character because in many instances the yards become manicured lawns instead of meadows and woods. Moreover, as development of large-lots spreads across the township, the landscape becomes dotted with homes and effectively ruins the rural character of the area.

Residents responding to the survey agree. When asked where they would like to see future development in the township, 30 percent of respondents said within concentrated growth centers and 44 percent said as a part of village expansion. Only 28 percent said they would like to see future growth scattered throughout the township.

Springfield Township has employed two methods to reduce the problems associated large-lot development. First, the township has attempted to encourage denser development in and around its villages so that housing demand might be guided to areas with existing higher densities. Townhouses, single-family attached and detached houses, duplexes, village houses, senior citizen housing, and multifamily housing are permitted house types in and around the villages of Passer, Zion Hill, Pleasant Valley, and Springtown. The zoning ordinance provides density incentives for developments that will be served by public water and sewer. Through these incentives the township seeks to gain

valuable public infrastructure and steer housing development to areas away from sensitive natural resources and open farmland. Second, the township requires a minimum amount of open space for performance subdivisions, cluster development, and multifamily and senior housing development. Such uses allow a greater intensity of development while preserving valuable open space. Ten suburban-style houses on lots of 5 acres each will consume 50 acres of open space. Ten houses clustered on the same site on lots of 1 acre each could save up to 40 acres of open land.

Since the employment of these methods, development has occurred in the village areas and open space has been preserved through the open space requirements of the ordinance. However, the vast majority of development proposals have been for single-family homes on large lots. According to Springfield Township's building permit data, 132 new single-family homes were built between 1990 and 2000. The average lot size surrounding these homes is approximately 7.3 acres. Thus, large-lot development will likely continue in the coming years, unless additional growth management techniques are employed.

Both the resident survey and sentiment from the Comprehensive Plan Steering Committee suggested that the comprehensive plan should encourage additional housing opportunities for senior citizens such as age-restricted, assisted living, nursing home, and independent housing in association with nursing homes. With the aging of the baby boomers (individuals born between the years of 1946 and 1964), the demand for senior housing opportunities is increasing throughout the Bucks County and the region, as witnessed by the frequency of these development types proposed in recent years. Additional senior housing opportunities can be provided through the expansion of an existing zoning district or the creation of a new zoning district that provides for the senior housing uses. (For more detail, see Future Land Use and Growth Management section.)

Housing Forecasts

The amount of future development in the township is dependent on: the desirability of the area, the availability of local goods and services, the land availability for future development, proximity of transportation networks, and the accessibility to regional employment. But housing development is mostly dependent on the perceived supply and demand of housing in the township. If developers perceive a strong demand and low supply for housing in the township, a large number of units will be built. If developers perceive a low demand and high supply for housing, a small number of units will be built. The demand for custom-built, single-family detached housing must also be taken into account. This type of housing composes a good amount of the overall housing stock of the township and will continue to be a large component of its future housing composition.

The following housing forecasts are based on the population projections (using an age cohort survival model) developed in the Demographics and Socioeconomic Trends section. The age cohort survival model simulates the process by which population actually changes by applying birth (fertility), death, and migration rates to a starting population (2000 Census). Under the process, the starting population was broken down into five-year increments (called cohorts) according to the age structure and sex of the population. Fertility, death, and migration rates based on past trends were applied to the

cohorts of the starting population to produce a 2010 projected population. To develop forecasts for future housing growth, we applied a tenure-by-age-of-householder rate to the cohorts of the projections. The resulting housing units for each cohort were then added to produce a total projected number of units as shown in Table 13 below.

Table 13. Housing Forecasts

2000 Housing Units	2010 Projected Housing Units					
	Low	2000-2010	Meduim	2000-2010	High	2000-2010
1,972	2,146	174	2,187	215	2,253	281

The above forecasts-low, medium, and high growth-produce three possible development scenarios for the township. (See below.) These scenarios will play a large part in subsequent chapters on development districts, future land use, and growth management strategies.

Low-growth- The low-growth scenario proposes a modest amount of housing growth consisting of 174 dwelling units. This type of growth is typical of the growth that has occurred in the past decade-primarily large-lot single-family detached subdivisions (with 10 or less lots) scattered across the township. Because of the limited amount of development, environmental and scenic impacts will be minimal, though many previously open lots will be lost for the foreseeable future.

Medium-growth- The medium-growth scenario proposes the development of 215 dwelling units. Growth may be a mix of mostly single-family homes on large lots with a few cluster subdivisions. The amount of land consumed in this scenario may be similar to the low-growth scenario, depending on the mix of development types.

High-growth- The fast-growth scenario proposes the development of 281 units. In this scenario, housing construction reaches levels seen in many central Bucks communities during the 1990s. Growth will consist primarily of single-family detached homes, located in large subdivisions. Some residential growth includes higher density residential detached or attached units. The locations of these possible subdivisions will determine the scenic and environmental impacts to the township. However, potential growth impacts may be limited if development is concentrated in specific areas of the township.

Once more, it should be noted that any forecast of future growth is tentative and subject to a given set of assumptions holding true for a defined period of time and constraints of the projection model employed. We feel these projections should provide a fairly good picture of housing growth to the year 2010. The nature of that growth will be dependent on future housing markets as well as the growth management policies and programs of the township. One of these policies is the "development district." This concept will be discussed in the following section.

Development District Analysis

Springfield Township, like many municipalities in Bucks County, has adopted the development district concept in its comprehensive plan and zoning ordinance. The development district concept is the underlying principal for accommodating future residential and nonresidential development. The fundamental objective of this concept is to concentrate future development in areas best equipped to handle growth (e.g., adequate public services and transportation network, areas that contain existing or planned water and sewer service) while minimizing land use conflicts and capital costs to residents. To accomplish this objective, development should be concentrated into areas designated by municipal officials to accommodate growth at densities sufficient to support the necessary facilities and services. This allows municipal officials to plan for the timely expansion of development, infrastructure, and municipal services while preserving significant vacant, agricultural, and natural resource lands. The development areas (development district, highway commercial, and industrial zoning districts) are deemed to be the most appropriate places for higher density residential and for nonresidential uses.

The size of the development district should be large enough to accommodate the anticipated growth based upon population projections and the estimated number of dwelling units. A review of the capacity of the development areas should be performed periodically to ensure growth could be accommodated for the 10-year time horizon established for this comprehensive plan update. If an analysis concludes that the population projections exceed the capacity of the development district, then the development district will be expanded, and if not, there is no need to expand.

The purpose of this section is to identify the existing development districts and determine their development potential and ability to support future development based upon the projected number of dwelling units between 2000 and 2010. The following analysis will examine the inventory of vacant and developable lands in the development districts, the location of the land, and its general suitability for development.

Assessment of Existing Development Districts

In the 1988 comprehensive plan and current zoning ordinance, there are two development districts-Pleasant Valley and Zion Hill. In the past decade, new residential development has primarily been located in the residential zoning districts throughout the township located outside these established development districts.

The western most development district is approximately 430 acres in area and located adjacent to a major arterial (Route 309) and the village of Zion Hill, which contains a concentration of residential and nonresidential development. Public sewer from the Milford-Trumbauersville Area Sewer Authority was extended into Zion Hill to address malfunctioning on-lot systems located within the southeastern portion of the village. An extension of public sewer into this development district would be logical, but is not currently stated in the township's Act 537 plan and would require a change in wastewater planning policy for this area. Based upon an inventory of the Zion Hill Development District, there is approximately 188 acres of vacant or potentially developable land.¹² Encouraging future development within this area promotes sound land use planning by

concentrating development and discouraging scattered development in the township, reducing potential impacts on the township's natural and scenic resources.

The development district located in the central portion of the township is adjacent to the village of Pleasant Valley and consists of approximately 360 acres. Currently, there is no existing or planned public water or sewer within or adjacent to this area. There is a limited concentration of residential and nonresidential uses within the actual village boundaries. Based upon an inventory of the Pleasant Valley Development District, there is approximately 254 acres of vacant or potentially developable land. The development district is located within the village's viewshed.¹³ Subsequently, incompatible development may negatively impact the Pleasant Valley's historic village character and identity.

The Pleasant Valley Development District is in the Cooks Creek watershed, which is classified as Exceptional Value (EV) by the Pennsylvania Department of Environmental Protection and in a predominantly agricultural area. Encouraging higher density development within the Cooks Creek watershed may pose negative impacts to these significant resources. One of the township's primary objectives is to preserve agricultural lands. Therefore, planning for the future build-out of the Pleasant Valley Development District could undermine this objective by eliminating several active farms and lands temporarily preserved under Act 319 and 515. These are important considerations when determining if this development district is still deemed appropriate and should be targeted for higher density residential and nonresidential growth. (See the Future Land Use and Growth Management section for more discussion on development districts.)

Development District Capacity

According to the 1988 comprehensive plan, the two development areas are sized to accommodate between 500 and 900 dwelling units. This was based upon the population projected for Springfield Township for the year 2000. Since 1988 there have been a limited number of residential building permits issued for individual lots but there were no residential subdivision proposals within either development district. In order to determine the current capacity of these development districts for accommodating future housing units, the current vacant and potentially developable land remaining in the development districts must be analyzed. The following assumptions were incorporated in the development district capacity calculations:

- The high-range figures are based upon the use that permits the highest density within the DD-development district. Specifically, Use B6-Multifamily allows a maximum density of six dwelling units per acre but requires centralized water and sewer. The minimum open space for Use B6-Multifamily is 40 percent. An additional 5 percent factor is included to allow for the provision of roadways and utilities.
- The low-range figures are based on Use B11b-Single-Family Detached Dwellings and assumes that 20 percent of the gross buildable site will be set aside for natural resource protection and the provision of roadways and utilities.

· Tracts covenanted under Act 319 or 515 were included as potentially developable land.

The total area of vacant or potentially developable land in the two development districts is about 442 acres. The individual development districts were calculated separately as follows:

A. Zion Hill Development District

High-range (Use B6-Multifamily)

188.00 Acreage of vacant or potentially developable land
x 0.55 Minimum required open space ratio (40 % plus 5 %)(45%)
= 103.40 Net buildable acreage
x 6.00 Maximum permitted density (centralized water and sewer)
= 620.40 (620) Maximum number of potential dwelling units

Low-range (Use B11b-Single-Family Detached Dwelling)

188.00 Acreage of vacant or potentially developable land
x 0.80 Infrastructure and resource protection area (20%)
= 150.40 Net buildable area
x 1.00 Maximum permitted density (min. lot size = 1 acre)
= 150.40 (150) Maximum number of potential dwelling units

B. Pleasant Valley Development District

High-range (Use B6-Multifamily)

254.00 Acreage of vacant or potentially developable land
x 0.55 Minimum required open space ratio (40 % plus 5 %) (45%)
= 139.70 Net buildable acreage
x 6.00 Maximum permitted density (on-lot water and sewer)
= 838.20 (838) Maximum number of potential dwelling units

Low-range (Use B11b-Single-Family Detached Dwelling)

254.00 Acreage of vacant or potentially developable land
x 0.80 Infrastructure and resource protection area (20%)
= 203.20 Net buildable area
x 1.00 Maximum permitted density (min. lot size = 1 acre)
=203.20 (203) Maximum number of potential dwelling units

Based upon this analysis, the total number of potential dwelling units (which are the sum of low and high ranges for both development districts) is between 354 and 1,458.

Given the fact that between 174 (low-range) and 281 (high-range) additional dwelling units are projected in the township over the next 10 years, there is more than adequate land area within the two development districts to accommodate future housing projections in the next decade and possibly beyond. Historically, most of the residential growth has occurred outside the established development districts. This is not an unusual

phenomenon, especially in a rural bedroom community with limited growth pressures. However, if and when growth pressures mount, township officials have sound growth management policies in place to encourage higher density development within those areas that are best suited for this purpose based upon its proximity to public services, community facilities, and an adequate transportation network.

Nonresidential Development

The purpose of this section is to identify the amount of undeveloped or vacant lands within the nonresidential zoning districts. The following summary does not include anticipated growth calculation of the nonresidential development areas to determine its build out capacity, since employment, sales and service needs vary significantly by locality. There are no reliable analytical models that can be used to gauge the unique nonresidential needs of a community. Therefore, this section provides a summary of the status of land available for nonresidential development.

The Existing Land Use section shows that nonresidential uses (i.e., commercial, mining and manufacturing, and institutional uses) comprise only 2.4 percent of the total acreage within the township. Many Government and Institutional uses are permitted use within various residential and nonresidential zoning districts; and therefore, was not considered as part of this analysis. A majority of the existing nonresidential development is located along the Route 309 (Bethlehem Pike) corridor that is zoned PI-Planned Industrial District and HC-Highway Commercial District. The remainder of these land uses are located predominately in the DD-Development Districts, VC Village Commercial districts or as nonconforming uses in other zoning districts scattered throughout the township.

Commercial Uses

The township's commercial development is limited to the HC district and the existing VC districts within the villages of Springtown, Pleasant Valley, and Zion Hill. (There are no nonresidential uses within the village of Passer.) Approximately 25 of the total 104 acres in the HC district are either vacant or potentially developable. There several vacant lots dispersed throughout the district but notably, there are three vacant lots located to the northeast of Route 309, and a rural residential lot on the southwest side of Route 309 that is large enough to further subdivide and be developed in the future. Since 1988, there have been two land developments totaling 40,000 square feet of floor area located on two existing lots consisting of about 11 acres.

Based upon results from the resident survey as well as responses at public meetings, a majority of residents indicated that they do not mind having to travel outside Springfield Township for goods and services. According to the survey, when asked what types of stores, businesses, and professional services are needed most in the township, 51 percent responded, "none needed." Of the respondents that did not want any nonresidential development 26, 38, and 36 percent live in the western, central, and eastern portion of the township, respectively (based upon the existing voting district boundaries). However, the remaining 49 percent of the respondents specified one or more commercial uses. Of those

respondents that desired one or more commercial development type 25, 40, and 35 percent live in the western, central, and eastern portion of the township, respectively.

Out of nearly half of the residents that expressed a need for one or more commercial establishments, 65 percent of these respondents live in the western and central portions of the township. Subsequently, there may be a need for township officials to examine additional nonresidential development opportunities such as the expansion of an existing commercial district (i.e., HC district or Zion Hill development district) or the creation of a new commercial district. The top responses for commercial uses were as follows: restaurant (19 percent), health center or clinic (18 percent), physicians and dentists (17 percent), and supermarket and convenience store (16 percent apiece). If these uses are provided as part of a Planned Commercial district, the permitted uses in this district could include a business park or shopping center use that could require a high-quality campus-like atmosphere with appropriate buffering and landscape planting. Furthermore, a new commercial district, such as the PC district, may be more appropriate than the existing HC district for larger scale retail and professional service uses, since the existing HC district functions as a strip commercial area and is limited in size.

It is also important to identify the potential demand for commercial development by residents living on the eastern side of the township. The survey found that 75 percent of the respondents, that indicated that one or more commercial development type was needed, reside in the central and eastern portions of the township. If a limited number of additional commercial establishments are necessary to serve the needs of the residents in this portion of the township, the possibility of a limited VC-Village Commercial expansion of an existing village (such as Springtown or Pleasant Valley) could be examined in more detail. This should be considered in conjunction with a village planning study that provides a comprehensive analysis of the community vision, existing physical limitations, and potential impacts on the historic resources. The Springtown Village Study (2000) considered the option of a limited residential and nonresidential expansion for the village. At the time the study was completed, village expansion was considered not appropriate, but expansion may be deemed appropriate in the future. Additional nonresidential opportunities can be provided through the expansion of an existing zoning district or the creation of a new zoning district that provides for the senior housing uses. (For more detail, see Future Land Use and Growth Management section.)

Home Occupation

Throughout the country, the number of people working at home has increased dramatically in the past decade. Home occupation allows self-employed professionals or "telecommuters," to take advantage of technological advances such as computers, internet access, and fax machines that allow them to work as effectively at home as they do in the office. Changes in the types and number of home-based businesses have resulted in a changing view of regulations for home occupation. Today's home-based businesses can operate without external effects on neighborhoods. Many have no employees, no signs, no clients coming and going, and no changes to the appearance of the house of operation. Home occupation (Use H-3) is permitted by-right in all zoning districts in Springfield Township but must be incidental to the primary residential use by its occupants and must

comply with strict operation standards. A review of the zoning ordinance may be necessary to determine if additional use regulations (e.g., minimum lot size, equipment stored on premises, employees of the business restrictions) are needed to address the different types of home occupational uses that vary in the nature of the respective business. The township's support of home occupations will provide residents with limited employment opportunities within the comfort of their own home while posing minimal impacts upon neighboring properties. Allowing people to work at home can also reduce traffic congestion by reducing commuter trips.

Mining and Manufacturing Uses

Approximately 113 of the total 227 acres of land in the PI district are either vacant or potentially developable and are located northeast of Route 309 and southeast of Springfield Street with access to the latter. This includes a large vacant tract and two rural residential lots that contain dwelling units and are large enough to further subdivide and be developed in the future. Since 1988, there have been only two land development proposals within the PI district consisting of two land developments totaling 17,000 square feet of floor area located on two existing lots consisting of about 12 acres. Based upon the amount of vacant and potentially developable land as well as recent trends in industrial development, there does not appear to be a need to expand the PI district at this time.

Community Facilities

Police Services

The Springfield Township Police Department is located in the municipal building on Township Road and employs a police chief and four officers. While the police department provides coverage for the entire township, it does not provide 24-hour police protection. The state police stationed in Dublin Borough respond to emergency calls when the township is without an on-duty police officer.

The office of research and development of the state police does not provide guidelines for evaluating the adequacy of municipal police services. Typically, evaluation is based upon factors such as crime rates, requests for police services, settlement patterns, and the rate of development. The current level of police service appears to satisfy the basic needs of the township. Township officials periodically review the level of service to determine if additional staffing or equipment is necessary to meet the needs of a growing resident population as well as the budget and should continue to do so.

Fire Protection

According to the second township code, local governments are responsible for providing fire protection to its residents. In Springfield Township, five volunteer companies service the township. The Springtown Fire Company is located on Main Street within the village and serves much of the central and eastern portions of the township. Coopersburg, Shelly, Richlandtown, and Haycock fire companies serve the remainder of the township. According to the Bucks County Community Facilities Plan (1990), a majority of the township is located within the recommended 2.5-mile radius from a fire company. However, there are two separate areas located in the eastern and northern portion of the

township that are beyond the recommended radius. At this time, the affected areas are located in rural areas, but if development increases, township officials may need to determine if fire coverage needs are adequate based on expected future growth and current service deficits (such as emergency vehicles and equipment). Managing Fire Services published by the International City Management Association (ICMA) provides guidelines for locating future fire stations. These guidelines should be consulted when discussing the location or expansion of fire service with local companies.

Emergency Services

Three emergency management services providing basic life support (BSL) and/or advanced life support respond to emergency calls in Springfield Township. The township supervisors allocate a sum of money as donations to these ambulance squads each year. Basic life support services include first aid and basic pre-hospital patient care and transport. Advanced life support (ASL) includes enhanced pre-hospital care consisting of adjunctive equipment, administration of medication and fluids, and condition stabilizing treatment. The Riegelsville-Palisades EMS consists of two paid personnel located in the township building complex providing basic and advanced life support service a majority of the township. There are two paid personnel on call 24 hours a day. Coopersburg EMS is a totally volunteer ambulance service located in Coopersburg Borough (Lehigh County) that provides basic service to the western portion of the township. Lifestar is a combined paid and volunteer squad stationed in Quakertown providing basic and advanced life support service to the western portion of the township. At the date of this publication, the township EMS response time is below the county average for basic life support and is slightly over the standard eight-minute response time for advanced life support. Continued support and cooperation with the Bucks County Department of Emergency Health Services may improve the accessibility of emergency services. In order to support the current facilities and level of service provided, increased volunteer staffing, community support, and additional revenue sources should be explored.

Emergency Management Agency

This group of citizens appointed by the Board of Supervisors is responsible for the complete and efficient utilization of all township facilities to safeguard and protect life and property during a state of war, a local emergency, or disaster. Their responsibility is to maintain and implement a basic emergency management operations plan if necessary. The plan establishes procedures to alert the public and provide information and appropriate protective instructions, and provide for the coordination and use of municipal resources during an emergency. The plan defines the role and responsibilities of municipal officials and the emergency management coordinator and assures coordination and cooperation with county efforts in accordance with the Bucks County Emergency Operations Plan. The township's plan (adopted in January 1997) should be reviewed and revised periodically to incorporate new safeguards or strategies that will enhance the safety and welfare of the public.

Health Care

There are no hospitals and only one long-term care facility in Springfield Township. St. Lukes Quakertown Hospital in Quakertown Borough is the closest to the Township. The

nearest trauma center is located in the St. Lukes Bethlehem Hospital in the city of Bethlehem.

Valley Manor Nursing and Rehabilitation Center is a long-term care facility located in the township off Route 309 near Hilltop Road. Long-term care facilities provide services on two levels of care-skilled nursing and intermediate care. A nurse provides skilled nursing care to patients who do not need hospitalization but have a serious disease, illness, or injury that requires daily medical attention. Intermediate care is provided to patients who require minimal medical attention but are unable to function independently in their home. There are 150 intermediate care beds and 30 skilled nursing beds for a total of 180 licensed beds at Valley Manor.

Due to the aging population in Bucks County, there is an anticipated need for the development of a wide range of senior housing opportunities including independent living, assisted living, nursing homes, and continuing care retirement communities (CCRC), which package independent living with assisting living, nursing care, or both.¹⁴

Schools

Springfield Township is located in the Palisades School District. Only one school from the district is located in Springfield Township, Springfield Elementary. Springfield Elementary is located on the northeast side of Old Bethlehem Road (Rt. 212) near the township building.

The need for additional school facilities is dependent on demographic trends related to birth rates and migration of families with school age children. While the Springfield Township Elementary School is undergoing renovation to add a multipurpose room, no new construction is planned. The district feels that the stable enrollment exhibited in the past few years will continue into the foreseeable future. As of 2001, the school had an enrollment of 262 children, down from the previous year's total of 283 children.

Recent demographics support this argument. There were 458 births during the 1990s. Since only a little more than half of these children would be attending elementary school at the same time, the demands placed on the school system will not likely increase over the next few years. Moreover, the projection model (medium-projection) used in Chapter 1 predicts that, as of the year 2010, women of childbearing age will only modestly increase from 948 to 955. (Women of childbearing age encompass women age 15 to 44.) Clearly, there is no current need for new schools.

Libraries

There are no public libraries in the township, but the James A. Michener Branch of the Bucks County Free Library is located nearby on California Road in Richland Township. In 2003, the construction of a new county library in Quakertown Borough is to begin. The new library will replace the existing James A. Michener Branch and is to be located at the former site of the Krupp Foundry. This facility will be located within the proposed service area of Springfield Township.

Transportation and Circulation

A transportation system is made up of a network of roads, highways, rail lines, airports, bikeways, and pedestrian ways. The purpose of the network is to move goods and people from one place to another. The types and intensity of land use will affect the stability of the transportation network. Likewise, the type and size of the network will affect the rate, pattern, and intensity of growth in a community.

Springfield Township is a rural area and is thus dependent on its system of roads and streets for its transportation needs. There are about 100 miles of roads in Springfield Township. The main roads are Routes 309, 412, 212, Old Bethlehem Pike, Old Bethlehem Road and Richlandtown Pike. The major traffic carriers through the township run in a north-south direction. The road that carries the most traffic is Route 309, a four-lane divided highway, carrying high-speed traffic through Bucks and Montgomery counties. Route 412 connects Springtown with Nockamixon Township to the south and with Hellertown to the north, where it links with I-78.

East-west travel is limited to a few roads that cross only a portion of the township. These include Slifer Valley/Peppermint Road, State Road, and Bursonville Road. Traffic movement is affected by curves, numerous grade changes and driveways, limited sight distances, and narrow travel lanes. Slifer Valley/Peppermint Road and Bursonville Road are also primary access roads for many residential properties in the township, thus serving the dual functions of carrying through traffic and acting as neighborhood streets.

The township has no public transportation. Population densities are too low in the township to justify public transportation service, and there are too few common origins or destinations to make bus or van service feasible. The nearest bus service occurs in Coopersburg and Quakertown. A Carl Bieber Tourways bus makes a stop at the Coopersburg Diner and Meyer's Family Restaurant on its way from Allentown to Atlantic City, New Jersey. The township also has no airports, but the Lehigh Valley International Airport in Allentown is a reasonable drive away and is home to several major airlines.

The only rail line runs adjacent to Route 309 in the western portion of the township. This stretch of Reading Company railroad line is generally known as the "Bethlehem Branch." It extends from Lansdale in Montgomery County to South Bethlehem in Northampton County and is about 32 ½ miles long. The line is used for freight service (not passenger service), only as far as Quakertown. The township has no rail stations along this line, but a defunct station does exist adjacent to Route 309 in Shelly, Richland Township. Recent proposals have been developed for opening the line to passenger service with the Shelly Station serving as the northernmost rail station. (See below: "Shelly Rail Station.")

Street Classification [View Street Classification Map](#)

Springfield Township's transportation system is made up primarily of roads. The township's subdivision and land development ordinance classifies township roads into four categories: arterial, collector, primary, and secondary. (See Figure 8 for the Springfield Township Street Classification.)

Arterials-Arterial highways are those roads that are designed to carry large volumes of traffic and to connect major business and employment centers. They serve interregional traffic movement. Route 309 is the township's sole arterial highway. It stretches for about 1 mile in the western portion of the township.

Access onto arterial highways should be strictly controlled because the proliferation of turning movement at individual driveways to properties will degrade the function of an arterial to move people and goods through the region. Access management techniques should be considered by the township to protect the function of arterial highways. Techniques such as reverse-frontage access roads, marginal access roads, or shared access driveways should be provided for properties fronting on arterial roads. New access points should be well-spaced so that speeds on the arterial can be maintained.

The need for roadway improvements, such as turning lanes, acceleration and deceleration lanes, shoulder improvements, and intersection improvements should be evaluated for all major developments. Major development in the Zion Hill Development District (adjacent to the west side of Route 309) may require roadway and intersection improvements, especially at the Hilltop Road intersections.

Collector-The function of collector roads is to carry traffic from arterial roads to local primary and secondary roads. They function as inter-neighborhood and inter-township roadways. Traffic should move at moderate speeds in an uninterrupted flow. The collector roads in Springfield are Passer Road, Route 212, Old Bethlehem Road, State Road, Richlandtown Pike, Old Bethlehem Pike, and Route 412. Each of these roads are owned and maintained by the state.

The collector streets in the township have rural qualities that should be considered when improvements are proposed. Cartway paving should be limited to only those improvements necessary to maintain the safety of the road and lanes for turning, acceleration, and deceleration.

Many of the collector (as well as primary and secondary) roads in the township are used by recreational bicyclists and the occasional pedestrian. Future improvements should also be designed to take into account the needs of these users and ensure that their safety is not compromised by vehicular traffic. (See below: Pedestrian and Bikeway system.)

Primary-Local primary roads connect collector roads with rural roads and residential streets. They serve functions similar to collector roads in that they provide connections to arterial roadways, but they generally carry smaller traffic volumes and allow for access from abutting properties. Local primary roads include Bursonville Road, Township Road, Pleasant View Road, Springtown Hill Road, Cherry Road, Trolley Bridge Road, Peppermint Road, Drifting Drive, and Springfield Street (township roads), and Lehnenberg Road, Slifer Valley Road, and Gallows Hill Road (state roads).

Secondary-Local secondary streets provide access to abutting properties and connect with primary or collector streets. These include streets within residential subdivisions and

small streets within the villages of Springtown and Pleasant Valley. The subdivision and land development ordinance classifies all streets not in the above classifications as secondary. Secondary roads are owned and maintained by the township.

Through-traffic on local secondary roads should be discouraged. New local streets should be designed so that only a limited amount of traffic would be generated by uses along the street, such as cul-de-sacs or short loop roads. Secondary roadways should be designed to discourage fast-moving traffic.

Regional Road Network

The main regional roads in the township include Route 309, Old Bethlehem Road, Route 212, and Route 412. Traffic traveling into, through, or out of the township will likely use one of these four roads, as these are the main roads that connect with adjacent municipalities and the larger transportation network. Future land use and development will depend on the land use and transportation decisions of adjacent municipalities and the ability of its regional roads to carry future traffic volumes at a reasonable level of service.

Also influential on the growth and development of the township are regional roads in relatively close proximity. These include the Northeast Extension of the Pennsylvania Turnpike to the west, Route 611 to the east, and Interstate 78 and Route 33 to the north. An efficient and accessible transportation network is one of the main factors people consider when relocating to a new area. Each of these regional roads allow Springfield residents to access jobs and services that might otherwise take too long to get to.

Route 611 is one of the oldest roads in the region and once served as the main transportation corridor between Bucks County and Philadelphia, allowing Bucks County farmers to sell their products at a major regional market. The Northeast Extension was a new stretch of the limited access toll road first constructed in the late 1930s. The Northeast Extension of the Pennsylvania Turnpike connects northeastern Pennsylvania with southeastern Pennsylvania. This highway effectively allowed the Pocono region to become the resort area that it is today.

When the new section of I-78 was opened in the late 1980s, it was thought that this highway would bring extensive residential growth to the township. Essentially, it was predicted that Springfield would become a bedroom community to residents who used the new interstate to commute to New York City, Harrisburg, or points between. This prediction has not exactly born out. As this plan has detailed in previous chapters, during the 1990s the U.S. Census estimates that 34 units of housing were built and population declined by 214 people. Thus, the influence of I-78 on growth and development in Springfield has been minimal. Other growth factors, such as the availability of public infrastructure, the proximity of jobs, goods, and services; and the local housing market were likely more influential during this period.

Route 33, a limited access highway running from East Stroudsburg in Monroe County down to Route 22 in Bethlehem Township, has been recently extended to I-78. According

to transportation planners at the Lehigh Valley Planning Commission, this connection will provide motorists with greater regional access and mobility in the Lehigh Valley, but should have little effect on the growth and development of the upper Bucks region.

Transportation Improvement Program Projects

The Bucks County Transportation Improvement Program (TIP) is an inventory of transportation-related improvements requested by municipalities, concerned citizens, transportation studies, and other sources. Each request for federal or state funding is reviewed by the staff of the Bucks County Planning Commission and added to the catalog of projects. This list is submitted to the Delaware Valley Regional Planning Commission (DVRPC) to be included as candidate projects for the regional TIP. The regional TIP is updated every two years, in coordination with PennDOT's Twelve Year Plan. The regional TIP lists all projects that intend to use federal or state funds for engineering, right-of-way costs, or construction costs.

DVRPC, in conjunction with member government agencies, rank and select potential projects from candidate projects lists (i.e., county TIPs) submitted by member governments. Once approved by the Regional Transportation Committee and DVRPC Board, the TIP is then submitted to PennDOT to be included in the state TIP.

Springfield Township has no listed projects on the regional TIP list. The following table includes the following projects in adjacent municipalities.

Table 14. 2001 TIP List, Springfield Township Area

Municipality	Project
Haycock Township	Sawmill Road/Old Bethlehem Road Bridge Replacement Location: Saw Mill Road and Old Bethlehem Pike Proposed Work: Bridge replacements over Kimples Creek
Richland Township	Old Bethlehem Pike/Tollgate Road Intersection Improvement; Location: Old Bethlehem Pike/ Tollgate Road Intersection. Proposed Work: Signalize intersection and add left turn lane on Old Bethlehem Pike.
Richland Township	Route 309/ Pumping Station Road; Location: Route 309 & Pumping Station Road. Proposed Work: Add eastbound left-turn lane on Pumping Station Road.
Richland Township	East & West Pumping Station Road; Location: California Road and Pumping Station Road. Proposed Work: Realign Pumping Station Road so Pumping Station Road intersects with California Road in a four-leg intersection.
Richland Township / Haycock Township	Northeast Connector Roadway; Location: East Pumping Station Road & Route 212, intersection of Route 313 & Thatcher Road. Proposed Work: Extension of East Pumping Station Road, improve Union Road, improve Thatcher Road, and connect to Route 313.
Quakertown	Quakertown Joint Closed Loop; Location: Route 309,

Borough /Richland Township	California Road, and Main Street. Proposed Work: Installation of closed loop system.
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Each of these proposed improvements will have little, if any, effect on the transportation network of Springfield Township. No municipality is proposing improvements that could increase traffic or growth pressures in Springfield (e.g., road widening or major road construction). When constructed, most of the proposed improvements should improve circulation in Richland Township, Quakertown Borough, and Haycock Township.

Pedestrian and Bikeway System

The township has no pedestrian or bikeway facilities. Biking is limited to the existing road network. The only walkable areas of the township are individual properties and private park and recreation facilities. Although the villages are technically walkable, many residents feel unsafe walking along main roads because of traffic speeds and the lack of sidewalks in some areas.

One way to increase the level of safety for pedestrians and bicyclists in the villages of Springfield Township is through a technique known as traffic calming. Traffic calming uses physical and psychological changes to the roadway to reduce speeding and cut-through volumes, enhancing the safety of both pedestrians and bicyclists. Traffic calming measures include curb extensions, speed tables, raised or textured crosswalks, on-street parking, forced turns, and raised median islands to accomplish its goals (among other techniques). In Pennsylvania, traffic calming measures can be constructed on local residential streets, collector streets with primarily residential uses, and arterials that serve as downtown or commercial areas (with posted speeds of 40 mph or less). For traffic calming measures along a state road or if state, federal, or liquid fuels funds are to be used to fund such measures, the township must follow PennDOT's recommended study and approval process.

Future Linkages [View Linkage Map](#)

As noted in the Recreational Resources section of Chapter 1, 60 percent of surveyed township residents felt that the township should provide a walking or biking trail to connect various points in the township. Hiking, walking, and biking were identified as some of the most popular activities. These activities are clearly a source of unmet demand.

One program the township can use to provide for hiking, walking, and biking is the township's open space program. The Springfield Township Open Space and Farmland Preservation Plan (1999) identifies the acquisition of open space linkages for biking, hiking, and walking as a goal for its open space and farmland preservation program. The plan explores strategies for developing linkages and identifies potential areas for acquisition or development. Figure 9 highlights the Linkage Map from the Springfield Township Open Space and Farmland Preservation Plan. Proposed linkages shown include Route 212, Old Bethlehem Pike, Quarry Road to Richlandtown Pike, Funks Mill Road to Durham Township, and from the PP&L property in Zion to Hilltop Road and Springfield

Street. The plan also identifies utility corridors, stream valleys, and undeveloped areas as potential linkages that could be acquired through the township's program. In addition to these linkages, the Delaware Valley Regional Planning Commission (DVRPC) has identified Route 212, Route 412, and Cooks Creek as future corridors in its proposed regional bicycle network. DVRPC's proposed bicycle network would encompass the entire five-county southeastern Pennsylvania region.

Most of the linkages listed above make use of the existing road network. Locating trails and bike paths parallel to an existing road network have several advantages. These links tend to be cost-effective because they can often be constructed within the existing road right-of-way. Construction costs are also decreased because construction vehicles and crews can access the trail via the existing road. Also, the right-of-way is often already cleared and graded, making it possible to convert the right-of-way to a trail with minimal effort. Additionally, neighbors may view on-road linkages as less of an intrusion to their property because the trail or bike path is viewed as an extension of the existing road network. Maintenance of the trail can also be accomplished fairly easily because maintenance crews can conduct trail repairs and inspections in conjunction with roadway repairs.

Due to the township's low housing density and rural nature, a bikeway may be the most appropriate choice for on-road linkages. Bikeways are classified into three types, bike paths, bike lanes, and bike routes. Bike paths are completely separated from an existing road and are contained within their own right-of-way. A bike lane is an established lane on the roadway for use by bicycles only. Bike lanes are designated with signage and striping. Bicycle routes, which are the least expensive option for creating on-road linkages, make use of the existing road surface. Along bicycle routes, bicyclists and pedestrians must share the road with vehicles. No matter what the system employed, adequate route signing should always be provided to supply directional information to users of the system.

On collector and arterial roadways, where speeds and volume of vehicles are increased, bike paths that parallel, but are separated from, the roadway should be the preferred method of providing linkages. A separated bike path along a roadway can offer a buffer between the road and adjacent residential areas that could simultaneously reduce roadway noise and increase property values. Designated bike lanes are also an option for some collectors and most primary roads, as long as the road width is adequate.

But emphasis should be placed on using secondary roads with low traffic volumes. On low volume, secondary roads, safety is less of a concern and a separated bike path is usually unnecessary. Bike routes and the trail network may share the roadway with vehicles without requiring any additional striping or road widening.

The Bucks County Planning Commission has been successful in working with municipalities and PennDOT in improving safety along bicycle routes. Wherever possible, PennDOT will reduce cartway widths to 11 feet by restriping the fog line inward after road repaving or maintenance projects. This allows for an increase in

shoulder width without the need to acquire additional right-of-way, thereby, improving safety for bicyclists on designated bike routes. However, all requests for cartway reduction must be submitted to the Bucks County Planning Commission, who will then make the request to PennDOT, before the resurfacing project is to be completed. Additionally, the use of "Share the Road" signs has been very successful in alerting motorists of the presence of bicyclists within the traffic stream, thus, increasing safety conditions for bicyclists using a bike route.

Shelly Rail Station

As previously noted, Springfield Township has no public transportation. However, in 2000 the Bucks County Planning Commission commissioned a study of reopening the Quakertown-Stony Creek rail line to passenger service. The Quakertown/Stony Creek Rail Restoration Study was initiated to determine the viability of reactivation of passenger service for the Quakertown Branch, which runs from Lansdale Borough in Montgomery County to the village of Shelly in Richland Township (just south of Springfield Township). In terms of operating ratio and performance measures, the restoration of passenger rail service over the Bethlehem Line appears to be both feasible and viable. There are significant capital costs, however, associated with these options, which SEPTA, the counties, and the Commonwealth must consider and prioritize relative to the other competing financial needs in the region.

One of the capital costs associated with restoration of commuter service that could impact Springfield Township is the development of a train storage/maintenance yard at the end of the rail line near Shelly. Depending upon the type of train equipment used to restore commuter service, it may be necessary to construct and maintain storage facilities beyond the village of Shelly. Additional engineering studies would be necessary to determine the exact location and size of these facilities.

The next step in the project development is the performance of a Transportation Investment Study (TIS). This study is required by federal law since the project would use federal funds for construction and would be performed in far more engineering detail than what was afforded to the Quakertown/Stony Creek Rail Restoration Study. The TIS would be initiated and managed by SEPTA. The decision to proceed with preparing a TIS for the Bethlehem Branch is pending; however, SEPTA is investigating two other major new service initiatives and is not likely to undertake yet another study at this point. Once decisions are made on the other service initiatives, the Bethlehem Branch may be further investigated as a possible restoration of service. It may be quite some time before this occurs.

The restoration of rail service to the Bethlehem Branch would provide public transportation to the upper Bucks County area. Furthermore, the Bethlehem Branch provides a critical link between the Lehigh Valley and Philadelphia and should be protected as a valuable resource to Springfield Township and the upper Bucks County area. It would be an important resource related to the transportation needs of the Development District in the Zion Hill area. The restoration of service at the station could

potentially require a shuttle bus between the Zion Hill area and the proposed station, opening even more public transportation opportunities to the residents of Springfield.

Township officials should coordinate with SEPTA to continue to monitor the status of the project so that the Township may take appropriate steps (e.g., rezoning, amending use provisions) in assuring that needed associated facilities (e.g., train storage/maintenance yard, park and ride facilities) could be provided.

Wastewater and Water Issues

The coordination of wastewater and water facilities planning, stormwater management planning, and land use planning is an important component of the comprehensive plan. Wastewater and water facilities are key factors in determining the location, nature, and density of future development. Periodic assessment of water resources, wastewater disposal methods, and service areas is necessary to ensure that adequate facilities can be provided to satisfy future growth and development needs. Effective stormwater management practices can protect water quality, control peak stormwater flows, and enhance groundwater recharge. This comprehensive plan acknowledges that wastewater facilities, water resources, and stormwater management are all part of the interrelated water system.

Wastewater Facilities

The proper planning for wastewater collection, treatment, and disposal are important considerations in the comprehensive planning process for a community. Section 301(4) of the Pennsylvania Municipalities Planning Code (Act of 1968, P.L. 805, No. 247 as enacted and amended in 2001) requires that a plan for sewage facilities be included in a comprehensive plan. The Pennsylvania Sewage Facilities Act requires each municipality to have an official wastewater facilities plan, and unless proposed facilities are consistent with the plan, the Department of Environmental Protection (DEP) cannot issue permits for the facilities. However, the applicants may request plan revisions to the municipal sewage facilities plan and may appeal a municipal refusal to revise the plan.

The Springfield Township Sewage Facilities Plan (1994) is the official Act 537 plan for the township. The plan identifies suitable areas for wastewater disposal, develops policies concerning preferred methods of wastewater disposal, and identifies solutions for existing malfunctioning wastewater systems in the township. An important objective of this plan is the protection of water resources of the township from degradation due to excessive use or contamination.

The township's sewage facilities plan recommends the following:

- Implement a collection and conveyance system and connection to the Milford/Trumbauersville Authority system to serve the Zion Hill area;
- Pursue long-term implementation of a lagoon treatment/spray irrigation system to serve the village of Springtown. Further evaluate selected sites around the village as potential lagoon and/or spray sites;
- Pursue long-term goal of providing sewer service to the Hilltop Road area via the Upper

Saucon Township Sewer Authority;

- Implement an on-lot management program to require the pumping of on-lot systems in the villages of Passer and Pleasant Valley;
- Increase the level of municipal involvement in wastewater facility planning through the implementation of the comprehensive management programs outlined in this plan;
- Utilize the Wastewater System Selection Strategy to all new sewage proposals to ensure the most cost effective and environmentally responsible wastewater technology is proposed.

Key planning implications of the township's wastewater facilities plan include:

- The continued reliance on individual on-site systems may no longer apply in the more densely developed areas of the township.
- There is a need to evaluate various alternatives to determine the feasibility of providing wastewater facilities for areas with concentrated on-lot malfunctions.
- There is a need to ensure the proper operation and maintenance of on-site systems in the township.
- The township has environmental characteristics that require special attention. These include limestone geology and the Cooks Creek Watershed.

The majority of the township continues to rely on on-lot disposal systems (OLDS). An extension of public sewer from the Milford-Trumbauersville Area Sewer Authority into Zion Hill, however, was implemented in 1999. This extension addressed the problem of malfunctioning systems in the village, providing 65 existing connections with a potential for 5 additional connections in the future. The Milford-Trumbauersville Area Sewer Authority owns and operates the sewer system and Springfield Township Authority is responsible for collecting tapping fees (i.e., cost of connecting to the existing sewer system).

The planning and implementation of the selected alternatives for the remaining four study areas (as identified in the Act 537 plan) have not been addressed. According to the plan, future public sewer connections serving the designated Development Areas (including the Development Districts and the commercial and industrial zoning districts) will not be provided. However, an objective of this comprehensive plan update is to pursue public sewer within the designated Development Area. (For more information, see Future Land Use and Growth Management section.) Therefore, township officials should update the township's sewage facilities plan to provide consistency with this comprehensive plan update. The Act 537 plan update should evaluate all feasible options for obtaining public sewer (possibly in conjunction with public water) from the various sources such as Coopersburg Borough, Richland Township, or the Milford-Trumbauersville Area Sewer Authority.

Several municipalities in Bucks County have adopted an OLDS management program, providing residents with maintenance and education of these systems. Township officials should consider developing their own OLDS program, in conjunction with the update of the Act 537 plan. Typically, key program elements range from explaining the need for

property owners to periodically pump out their sewage disposal systems to the inspection and monitoring of nonmunicipal, industrial, and individual alternative disposal systems (e.g., package treatment plants with stream discharge or spray irrigation systems serving individual lots). An OLDS program is a preventative method used to reduce the potential malfunction of a system that can assist in maintaining the quality of water resources in the township.

Water Resources

Water resources can be broken into two primary factors-water supply and water quality. The following discussion addresses the specific concerns and considerations of both factors.

Water Supply

Many communities are faced with the challenge of addressing potential water supply problems resulting from over withdrawal and diminishing groundwater recharge. Groundwater management is closely related to land use and wastewater facilities planning. The Pennsylvania Municipalities Planning Code directs municipalities to consider water facilities in municipal comprehensive planning, zoning, and development review functions. Section 301(b), a recent revision to the Code, which became effective on January 2001, states that the comprehensive plan shall include a plan for the reliable supply of water, considering current and future water resource availability, uses and limitations, including provisions adequate to protect water supply sources. Any such plan shall be generally consistent with the State Water Plan and any applicable water resources plan adopted by a river basin commission.

As discussed in the Natural Resources chapter, rock types and geologic formations determine groundwater supplies. Springfield Township is underlain with red shales and sandstones associated with the Brunswick Formation, Lockatong lithofacies, Diabase, and Limestone areas. The Brunswick Formation is considered to be a reliable source of water with an average yield of 60 gallons per minute. The Lockatong lithofacies are generally poor sources of water with an average yield of 7 gallons per minute, while the Diabase is among the poorest water supplies in the county with an average yield of 5 gallons per minute. The Limestone area associated with the Durham Carbonate Valley varies greatly in its supply of water and is also susceptible to groundwater contamination, sinkholes, and solution channels.

Private on-lot wells function as the primary source of drinking water for over 90 percent of the township's population. Recent reports to the township indicate that there been only a few private on-lot wells that have dried up, predominately located on older properties. This is probably due to the shallow wells that were drilled to reach the aquifer. At this time, there appears to be an adequate supply of water from private wells to satisfy the demands for immediate future.

There are two public community wells located in the township.¹⁵ A public well is operated by Scenic View Apartment (located in Lower Saucon and Springfield townships) and serves a total of 49 connections. There are about 24 connections in Springfield Township. The other public well is operated by the Springfield Township Authority (STA) and serves Springtown residents.

The water supply for the STA system comes from two sources. The primary source consists of springs located on a 2-acre tract owned by Springfield Township but located in Lower Saucon Township, Northampton County. Water from the springs flow into two separate reservoirs-one located off New Hill Way and a buried tank located off Lower Saucon Road. The secondary water source is a well located adjacent to the Springtown Firehouse and is only used when the reservoirs are running low. The STA water supply system provides 171 domestic and 15 commercial connections. The total average daily water use was 33.3 thousand gallons per day (TGD). The safe yield is 1,920 TGD. Based upon future water quantity projections, the projected daily withdrawals are not expected to exceed the permitted safe yield by 2005.¹⁶

Primarily, water for fire fighting purposes is obtained from private ponds or outside municipal water sources such as hydrants from Coopersburg and Richlandtown boroughs, and the City of Hellertown. Water from these sources is pumped into water tanker trucks, and then transported to the site of the fire. There is a dry hydrant located at a pond in Springtown (near the intersection of Drifting Drive and Greenwood Road). A second pond located off Winding Road near Woodcock Lane has a stone access drive that allows tanker trucks to withdraw water through the use of hoses. An agreement between the township and the respective property owners allows the township to obtain water from these two ponds on an as needed basis. Currently, the total storage capacity of STA, which is about 28,000 gallons, is inadequate to satisfy both the supply of water for domestic use and firefighting purposes. To address this issue, the STA is considering the construction of a back-up reservoir off Lower Saucon Road. This additional reservoir will not only provide an additional source of public drinking water but also enhance the fire fighting capacity in the future.

One of the objectives of this comprehensive plan update is to provide public water to serve the designated Development Area (for more information, see Future Land Use and Growth Management section). Therefore, the township should evaluate the feasibility of options, such as a connection into adjacent sources of public water located in Coopersburg Borough, Upper Saucon Township, or Richland Township.

By evaluating the environmental effects of groundwater removal, water resources planning can provide a proactive approach to ensuring that adequate water supplies will be available for residents into the future. The Delaware River Basin Commission (DRBC) monitors groundwater withdrawals in excess of 100,000 gallons per day (gpd) for municipalities in the Delaware River Basin located outside the designated groundwater protection area, including Springfield Township.¹⁷ These withdrawals must not interfere with the performance of existing supply wells, or exceed the safe yield of the source aquifer. DRBC encourages municipalities to monitor public and private water use

to determine the community's sustainable groundwater yields. To satisfy future water demands, there may be a need to supplement groundwater supplies with public water supply options, especially in communities with poor underlying aquifers.

The subdivision and land development ordinance requires a water impact study for major subdivisions (5 lots or more) and for all land developments in Springfield Township. The study is to be prepared by a qualified hydrogeologist and professional engineer registered in Pennsylvania. The purpose of the study is to determine if there is adequate water supply to serve the proposed use and to estimate the impact of the additional water use on the existing nearby wells, underlying aquifers, and surface water bodies. Any proposed water system or on-lot water supply for a major subdivision or land development that does not provide adequate supply for use, or which adversely affects nearby wells or streams shall not be approved by the township and shall be cause for denial.

Over concerns of increasing water demands for public supply, individual residential use, industrial, and commercial uses, residents in several upper and central Bucks municipalities formed the Groundwater Management Committee (GWMC). In May 1994, GWMC prepared the Municipal Groundwater Resources Management, Northern Bucks Co.-Position Paper based upon the results of a U.S. Geological Survey titled, Hydrogeology and Groundwater Quality of Northern Bucks County, Pennsylvania (1994). The committee disbanded in the mid-90s and the each municipality has pursued implementation of the individual plan recommendations as deemed appropriate. Many of the recommendations of this study have been incorporated into subsequent studies.

Water Quality

The Bucks County Department of Health (BCDH) monitors the water quality of public supplies and enforces the water quality standards set by federal and state agencies. However, private water supplies are owned and operated by individual property owners, and the quality of the private water supply is the responsibility of the respective property owner. State laws do not require testing of private domestic water supplies, and regulatory agencies do not regularly monitor the quality of private supplies. Therefore, information on water quality problems of private wells is not readily available.

Amendments to the Safe Drinking Water Act of 1986 requires that states create a wellhead protection program to protect the quality of groundwater used as sources of public drinking water supplies through local land use planning and other management means. Open space and low-density land uses are appropriate uses near high-protection well fields. Wellhead protection programs have become both pollution prevention and a water supply planning tool.¹⁸ Therefore, developing a wellhead protection program will help to increase public awareness about the location of the well, provide an inventory of water supply wells, and an inventory of pollutant threats throughout the area. The following table identifies potential source contaminants that can degrade water quality.

Table 15. Common Sources of Groundwater Contamination

Category Contaminant Source

Agricultural Animal burial areas Irrigation sites Animal feedlots Manure spreading

areas/pits Fertilizer storage/use Pesticide storage/use
Commercial Auto repair shops Laundromats Construction areas Paint shops Car washes
Photography establishments Cemeteries Railroad tracks and yards Dry cleaners Research
laboratories Gas stations Scrap and junkyards Golf courses Storage tanks
Industrial Asphalt plants Petroleum production/Chemical manufacture/ storage storage
Pipelines Electronics manufacture Septage lagoons and sludge Foundries/metal fabricators
Toxic and hazardous spills Machine/metal working shops Wells
(operating/abandoned) Mining and mine drainage Wood preserving facilities
Residential Fuel oil Septic systems, cesspools Furniture stripping/ Sewer lines refinishing
Swimming pools (chemicals) Household hazardous products Household lawn chemicals
Other Hazardous waste landfills Recycling/reduction facilities Highway spills Road
deicing operations Municipal incinerators Road maintenance depots Municipal landfills
Stormwater drains/basins Municipal sewer lines Transfer stations Open burning sites
(Adapted from US EPA. 1991. Protecting Local Groundwater Supplies Through
Wellhead Protection: Publication #570/9-91-007. 18 p.)

Future development and/or contamination pose a potential threat to the public drinking water supply for the township. To address this issue, the Springfield Township Authority has applied for and received a Watershed Protection Grant from Pennsylvania Growing Greener program of the Department of Environmental Protection. The purpose of the management plan is to provide for the protection of the source water for their springs located in Lower Saucon Township and the well at the Springtown Firehouse. It is anticipated that this project may function as a springboard for expanding these issues on a townshipwide level.

Protection of the springs and the wellhead will safeguard the protection of this drinking water source, but will require the cooperation of Springfield Township and Lower Saucon Township officials to provide its successful implementation and regulations. The Bucks County Water Supply Plan and Wellhead Protection Study-Technical Reference (1997) can provide municipal officials with a step-by-step approach to completing a wellhead protection program.

The Borough of Coopersburg has public wells within the Saucon Creek watershed, adjacent to its border with Springfield Township. In order to protect this water supply, the borough gained ownership of several parcels within Springfield Township. Cooperation between Springfield Township and Coopersburg can aid in the establishment of a wellhead protection program for these adjacent wells.

Stormwater Management

Stormwater runoff is the rainwater that moves over the ground during and immediately following a rainfall event. Stormwater runoff will move or drain through a specific area referred to as a watershed. In a watershed undergoing land development and urban expansion, the amount of stormwater runoff from a rainfall event can increase dramatically. This is due to the reduction of natural grassy or wooded areas resulting from increasing the impervious land (i.e., natural landscape being covered by pavement, rooftops, or buildings), which cannot penetrate (or infiltrate) and rapidly flows over.

It is this increased amount (volume) and speed (rate) of runoff that is responsible for some of the localized flooding and drainage problems associated with stormwater runoff. As development increases in the watershed, so does the problem of dealing with greater quantities of stormwater runoff. Failure to properly manage this runoff can result in more flooding; greater stream channel erosion; siltation and sedimentation; and a reduction in groundwater recharge. It is important to recognize the watershed scope of stormwater management problems and potential solutions.

Recognizing the need to address this serious and growing problem, the Pennsylvania General Assembly enacted the Pennsylvania Stormwater Management Act (P.L. 864, No.167, October 4, 1978). Act 167 requires DEP to designate watersheds and establish guidelines for the preparation of stormwater management plans for these watersheds. Counties are responsible for preparing the plans and developing ordinance language that municipalities must adopt to manage the volume and rate of stormwater runoff and the impact on water quality.

Springfield Township is located within four separate designated watersheds. The majority of the township falls within the Tohickon and Delaware River (North) watersheds. But a small portion of the township lies within the Saucon Creek Watershed (Northampton County) and Perkiomen Creek Watershed (which includes the Unami Creek secondary watershed). At this time, the stormwater management plans for all but the Perkiomen Creek has been completed. The major program objectives of the Tohickon Creek Stormwater Management Plan, Delaware River (North) Stormwater Management Plan, and Saucon Creek Watershed Stormwater Management Plan can be summarized as follows:

- Manage stormwater runoff created by new development activities taking into account the cumulative basinwide stormwater impacts from peak runoff rates and runoff volume;
- Preserve existing natural drainageways and watercourses and provide for proper maintenance of all stormwater management facilities;
- Maintain and/or improve existing water quality, especially in those areas which drain to existing lakes and reservoirs, by preventing additional loading of various stormwater runoff pollutants into the stream system;
- Maximize groundwater recharge where feasible and attainable throughout the watershed in an attempt to maintain the existing hydrologic regime; and
- Provide sound guidelines and methods for stormwater management for communities in the watershed.

In May of 2000, municipal officials adopted the Springfield Township Stormwater Management Ordinance, incorporating the regulatory provisions of the Tohickon Creek Watershed Stormwater Management Plan and the Delaware River (North) Watershed Stormwater Management Plan. In September of 2002, municipal officials revised the stormwater management ordinance to provide consistency with, and reference the Saucon Creek Watershed Stormwater Management Plan. The ordinance also provides design criteria standards for the limited portion of the Perkiomen Creek watersheds that is located within Springfield Township. The ordinance will also need to be revised to

address these same issues when the Perkiomen Creek Watershed Stormwater Management Plan is completed in the future.

The stormwater management ordinance applies to various temporary and permanent stormwater management facilities constructed as part of any regulated activity (as specified). The ordinance contains the stormwater management performance standards and design criteria that are necessary or desirable from a watershedwide perspective. Future development will have to satisfy these stringent requirements and best management practices. Water quality protection should be enhanced throughout the township.

In October 1999, a municipal challenge was issued to the stormwater management standards of Pennsylvania to include an element of water quality standards in the plans. As a result, the Department of Environmental Protection increased the infiltration standards for water quality. Municipalities are now required to revise their stormwater management ordinances to incorporate revised discharge districts and infiltration rates from the model ordinance found in the updated stormwater management plans.

Solid Waste Management

Solid waste management is the economically and environmentally sound storage, collection, transportation, processing, and disposal of municipal solid waste and recyclable material. In Pennsylvania, municipalities are responsible for ensuring the proper storage, collection, and transportation of municipal waste and for implementing recycling programs. The Pennsylvania Municipal Waste Planning Recycling and Waste Reduction Act of 1988 (Act 101) empowers municipalities to adopt resolutions, ordinances, regulations, and standards to carry out these responsibilities.

Springfield Township licenses waste haulers to operate in the township. Homeowners must contract with a waste hauler to pick up household garbage and recyclables. Recycling is strictly voluntary and dependent on the contract with the individual waste hauler.¹⁹ The township did have a drop-off facility for recyclables but had to close it in November of 2000 due to staffing and facility management difficulties. In 2000 the drop-off facility collected 28.5 tons of glass, 2.4 tons of aluminum, and 34.5 tons of newsprint. The township has no yard waste or leaf collection programs.

As older landfills approach capacity, it will be increasingly difficult to open new facilities, due to permitting and community opposition. In addition, certain solid waste materials can have a detrimental impact on the environment, if they are allowed to leach into the groundwater supply. Reducing solid waste streams is a way of helping ensure future landfill space and reducing environmental impacts. Source reduction and recycling are the primary methods of reducing solid waste streams. Source reduction is a front-end approach where products are designed and packaged with a minimum volume and toxic content. Citizens and government can practice source reduction through selective buying and reuse of products and materials. Recycling, of course, is the collecting and reprocessing or remanufacturing of materials. Both source reduction and recycling are

viable methods available to the township to reduce environmental impacts and save valuable landfill space.

Future Land Use and Growth Management [View Future Land Use Maps](#)

An important component of the comprehensive plan is to provide for future land uses while protecting the natural and scenic environment and providing services and facilities to satisfy the needs of its residents. Providing a well-balanced mix of agricultural, residential, commercial, and industrial uses enhances the vitality of a community. Factors that affect future land uses include population growth, transportation network, infrastructure (water and sewer), natural resources, and compatibility with adjacent municipal comprehensive plans.

Historically, the majority of growth has been dispersed throughout the township in the form of subdivisions of single-family detached dwellings. Much of this development has occurred in areas that are identified as areas containing significant resources. This chapter examines future land use in the township and identifies planning measures that will promote the concentration of future development within appropriate areas of the township, while enhancing the preservation of its valuable resources. This chapter will also review various planning tools and techniques that will enhance the overall protection of the township's resources. A review of adjacent municipal comprehensive plans and the county comprehensive plan will identify the relationship and potential impacts upon the township from adjacent municipalities.

Development District Concept

A planning tool widely used in Bucks County to guide growth is the development district concept. The fundamental objective of this concept is to concentrate future development in areas best equipped to handle growth (e.g., areas which contain existing or planned water and sewer service), while minimizing land use conflicts and capital costs to residents. To do this, the concept calls for concentration of development into areas designated by municipal officials to accommodate future growth, at densities sufficient to support necessary facilities and services. The development district concept also allows municipal officials to plan for the timely expansion of development, infrastructure and municipal services, while preserving significant vacant, agricultural, and natural resource lands as open space.

The Future Land Use map forms the basis of the township's community vision and highlights the future land use categories for Springfield Township. (See Figure 10.) The purpose and overview of the four future land use categories are described below.

Development Area (DA)

The Development Area contains a variety of residential and nonresidential land uses and is intended to accommodate the bulk of future development. This area is also designed and sized to accommodate projected future growth and development, including infill and adaptive reuse opportunities. Its location adjacent to the Route 309 corridor provides

good access and is a prime area for future development. To provide more concentrated development while maximizing the protection of Springfield Township's numerous resources located in other areas of the township, this plan recommends pursuing the provision of public water and sewer within the designated Development Area. This area is generally conducive to development, although there are areas of steep slopes, wetlands, and streams (tributaries of Tohickon Creek), that should be avoided during the development process. The DD-Development District, HC-Highway Commercial, PI-Planned Industrial, and CBD-Central Business District corresponds to the DA.

Rural Holding Area (RHA)

These are provisional areas intended for the extension of the Development Area based upon the build out of the Development Area. This is a reserve area where higher density development should be postponed until it can be economically served with the planned extension of public water and sewer service. There are two separate areas designated as RHA. One area is located between Zion Hill and the HC-Highway Commercial District located along Route 309. The other is located between Salem Road/Mine Road and the HC-Highway Commercial District, CBD-Central Business District, and PI-Planned Industrial District. When time comes to expand the Development Area, municipal officials should decide which area is most appropriate for expansion. Typically, the Rural Holding Area does not contain concentrated areas requiring special resource protection; however, the woodlands, wetlands, and headwaters of the Tohickon Creek should be preserved. The RR-Rural Residential district corresponds to the RHA.

Special Attention Area (SAA)

The SAA comprises the majority of the township and contains lands that require special resource protection including: the Cooks Creek Watershed, significant agricultural lands (including prime agricultural soils, soils of statewide importance, active farmland, and agricultural security district properties), carbonate areas, Natural Areas Inventory sites,²⁰ and significant concentrations of woodlands and steep slopes. The purpose is to provide maximum protection of these resources through a variety of regulatory measures at the disposal of the township. (See Potential Tools and Techniques below.) The AD-Agricultural District and the RP-Resource Protection District corresponds to the SAA.

Village Area (VA)

The existing villages are an invaluable resource, providing residents and nonresidents alike with a historic snapshot of Springfield Township's early beginnings. Village areas consist of the historic villages of Springtown, Zion Hill, Pleasant Valley, and Passer. Preservation of the historic character is paramount. Potential infill and/or expansion should be based upon the completion of a village study (e.g., Springtown Village Study). Since each village is unique in character and composition, individual village planning studies should be conducted to ensure their future protection. The VR-Village Residential and/or VC-Village Commercial corresponds to the VA.

Purpose and Intent of Zoning Districts

The township's zoning districts correspond to the future land use categories. (See Figure 10.) The purpose and intent of these zoning districts are summarized as follows:

Development District (DD)-The Development District is established to accommodate the anticipated residential growth of the township for the target year of 2010. In order to provide a variety of different uses including higher density housing types, public water and sewer is to be pursued within the DD. The purpose of this area is to concentrate residential and nonresidential growth and to coordinate this growth with the provisions of public services.

The previous comprehensive plan contained two Development Districts, one located adjacent to Pleasant Valley and the other adjacent to Zion Hill. However, this plan recommends eliminating the Pleasant Valley DD and concentrating growth in the Zion Hill DD. The reason for the elimination is three-fold: (1) intense development in the Pleasant Valley DD could jeopardize the numerous sensitive resources located in the area (e.g., historic village, Cooks Creek Watershed, prime agricultural soils, active farmland), (2) the cost of providing public water and sewer to this area would be high given the location of the existing utility providers, and (3) the Zion Hill Development District alone is adequate in size to accommodate future growth demands given the comprehensive plan's objective to pursue public water and sewer to the Development Area (as discussed in the Zion Hill Development District Analysis above). Several potential sources of existing public water and sewer located adjacent to the Zion Hill DD are the borough of Coopersburg to the northwest, the Milford-Trumbauersville Area Sewer Authority to the southwest (which already provides public sewer to a portion of Zion Hill), and Richland Township to the southeast. Furthermore, the zoning ordinance allows for a reduction of the minimum lot size in the DD, VC district, and VR district for various uses (e.g., Single-Family Detached, Village House, Twin House, and Duplex House) based upon the provision of centralized water and/or sewer. This will result in more efficient, compact development within the Zion Hill Development District; and therefore, eliminate the need for a second DD.

The only disadvantage to further development in the Zion Hill DD is the distance to public school facilities. The Palisades High School is located in Nockamixon Township, approximately 15 miles from Zion Hill. This may be a concern in terms of travel time; however, if development can be channeled into this portion of the township, it is possible that a larger concentration of school children can be bussed directly to the high school without having to make numerous stops along the way.

Highway Commercial District (HC)-The purpose of this district is to provide highway commercial uses along the Route 309 corridor, to be served by adequate service roads and traffic controls.

The HC district boundaries have not changed since the previous comprehensive plan. While there is limited land remaining in the HC district, there are still opportunities for infill development. There are several vacant lots dispersed throughout the district but three vacant lots located to the northeast of Route 309, and a rural residential lot on the southwest side of Route 309 that is large enough to further subdivide and be developed in the future.

Planned Industrial District (PI)-The purpose of this district is to encourage planned industrial and heavy commercial uses in an appropriate area. Such development shall be planned as a whole with all uses fronting on an internal street. This intent is to encourage high quality industrial and commercial development, which enhances the employment opportunities in the township and is designed with adequate road access and public utilities to minimize adverse impacts on the natural systems and residential uses in the surrounding area.

The PI district has been reduced in size as compared to the previous comprehensive plan. As a result there is about 58 acres of vacant or potentially developable land. The reason was twofold-there was more than ample vacant land that has not been proposed for development, and a portion of the PI district is to be used for the creation of the new CBD-Central Business District (described below).

Central Business District (CBD)-The purpose of this new district is to provide a high quality, mixed-use district consisting of commercial office/retail, business park, light industrial, and senior housing uses. Development in this area should emphasize pedestrian-oriented design principles, adequate road access and public utilities, and protection of inherent natural systems. Future development in this district should also consider the potential future activation of the Quakertown/Stony Creek Rail for passenger service and possible multimodal transportation opportunities (e.g., pedestrian accessible, park and ride option).

Rural Residential District (RR)-The purpose of this district is to preserve the rural character of the township and to provide a reserve area for future development. It is intended that this district provide a place for residential growth and minimize health risks from on-site sewage failure. Residential uses are permitted on large lots or where they are clustered with large areas of open space and provisions for off-site sewage disposal. This residential development will relate to the natural physical characteristics such as waterways, woodlands, topography, and soils so as to protect and preserve these natural features and the open character of the countryside.

The RR district has been changed since the previous comprehensive plan in order to eliminate those areas that are not located adjacent to the Development Area. Since this zoning district corresponds to the Rural Holding Area, it functions as a reserve area for the future expansion of the Development Area when deemed appropriate.

Agricultural District (AD)-The purpose of this district is to recognize and protect the area designated as a significant agricultural area by Bucks County in its Natural Resources Plan and the areas of the township where farming predominates. Within the district, areas with Class I and II agricultural soils, as defined by the Natural Resources and Conservation Service (NRCS) shall be protected in accordance with the protection standards herein established. This district recognizes that farmland must be considered to be developed land being used to produce a product. It is not a holding zone but an area having a positive purpose in utilizing the prime agricultural soils for benefit of the entire community. It is therefore the intent of the district to protect the area from interference by

incompatible uses. Agricultural activities within this district may have associated with them noise, odors, and other disturbances that are considered part of normal farming operations. Residents of the AD district are advised that there may be noise, odors, dust, fumes, or other disturbances associated with agricultural practices considered to be acceptable effects of farming and shall not be regulated by township nuisance laws. Development on large lots or in clusters where open space is preserved shall be permitted.

The AD district was altered in various areas of the township in order to more accurately reflect those areas that are being actively farmed. There have been changes in the status of agricultural land since the adoption of the previous comprehensive plan in 1988, and the proposed AD district boundary line reflect those changes. Additional AD district boundary changes may be warranted as a result of water supply study associated with the WS district (see WS district description below).

Resource Protection District (RP)-The purpose of this district is to protect areas consisting largely of natural resources such as forests, steep slopes, scenic areas, wetlands, streams, floodplains, and ponds including those identified in the Bucks County Natural Resources Plan (1999), Natural Areas Inventory (1999), and Cooks Creek Watershed Conservation Plan (2002). Intensities are such as to ensure that these resources are preserved, while providing for residential development with suitable sewage disposal.

Many of the areas that were designated RR district in the previous comprehensive plan that are not located adjacent to the present Development Area were changed to either RP or AD district, depending on the context and nature of the area.

Water Supply District (WS)-This district contains natural resources such as forests, steep slopes, scenic areas, wetlands, streams, floodplains, and springs including those identified in the Bucks County Natural Resources Plan (1999), Natural Areas Inventory (1999), and Cooks Creek Watershed Conservation Plan (2002). However, this district contains a higher concentration of steep slopes and underground springs. The purpose of this district is to protect these extraordinary natural and scenic resources while protecting the aquifer that supplies the public wells in Springtown.

Formerly the Watershed District (WS), the name has been changed to more accurately reflect the district's purpose, since the WS district encompasses only a fraction of the overall Cooks Creek Watershed. Currently, the Cooks Creek Watershed Conservation Plan is in production. The plan is intended to formulate a management program that truly sustains water resource through utilization of Best Management Practices (BMPs) and to highlight those characteristics or critical issues in the watershed that require further study. The plan may provide the empirical data necessary to quantify the potential impacts of development on the aquifer and the water supply of Cooks Creek watershed. The study may provide support for establishing the area and dimensional requirements of the WS district and additional regulations intended to enhance the protection of the water supply to Springtown. Additionally, the boundaries of the WS and the adjacent AD district may

need to be adjusted increase or decrease the area of the respective districts based upon the results of the study.

Village Commercial District (VC)-This district is established and specifically structured to accommodate retail sales and services and municipal and institutional uses that are considered necessary to the functions of the Village Residential neighborhoods. Commercial facilities permitted in this district are generally required by a family at intervals of a week or less. This district recognizes existing commercial development within the existing villages of the township.

Based upon the need to reflect a more focused district purpose, the Springtown Village Study (2000) recommended the following revision to the VC district purpose as follows:

This district is established and specifically structured to accommodate retail sales and services as well as municipal and institutional uses that are considered necessary to the function of the Village Residential neighborhoods. This district is intended to function as the commercial core or focal point for the adjacent residential districts. Commercial facilities in this district are intended to service the immediate residents within the village as well as residents of the immediate region.

There is a minor VC district boundary change since the previous comprehensive plan as described in the VR district below.

Village Residential District (VR)-This district is established and specifically structured to accommodate higher density residential uses, recognizing existing areas of development of greater intensity in the township. The zoning standards are designed to preserve the village character.

Based upon the established goals and objectives, the Springtown Village Study (2000) recommends revising the district purpose as follows:

This district is established and specifically structured around the original residential uses within the village. The purpose of this district is to provide zoning standards that are responsive to the existing conditions within the village while maintaining the village character. A limited number of nonresidential uses are permitted, but this district is intended to be primarily residential in character.

In the Springtown Village Study, several lots that are currently located in the former WS-Watershed District and the AD-Agricultural District are recommended for inclusion into the VR-Village Residential District. This recommendation has been incorporated into the VR/VC district boundary for Springtown as shown on Figure 10.

Floodplain Protection Overlay District-This district recognizes that streams represent a significant natural resource to the citizens of Springfield Township. These areas are important to the protection of the water supply, indigenous wildlife, and scenic beauty of the township and therefore must be protected from all development. FP is an overlay

district and, as such, it adds to the existing regulations in the district affected. It does not replace those regulations.

This overlay district has not changed since the previous comprehensive plan.

Scenic Overlay District-The purpose of this district is to protect the unique visual character of the township by setting standards for the visual impact of development on views from the roads. The district does not affect the overall permitted density within the underlying zoning district, but it does require that proposed development go through special site plan review procedures as defined herein, designed to minimize adverse impacts on the scenic character of the township.

This overlay district has not changed since the previous comprehensive plan.

Cooks Creek Watershed Overlay District-The purpose of this new district is to provide additional preservation measures for this significant resource that covers a majority of the township. The overlay district regulations apply only to those properties located within the Cooks Creek Watershed, and activities and uses are limited to those which will not degrade or pose a negative impact to the water quality and inherent natural and scenic resources of this area. (See Watershed Overlay District description below.)

Zion Hill Development District Analysis

Given the objective to pursue public water and sewer within the Development Area, the following analysis has been conducted to determine if there is adequate capacity (i.e., vacant and potentially developable land remaining in the development district) to accommodate housing projections to the year 2010. The following assumptions were incorporated in the development district capacity calculations:

- High-range A is based upon the use that permits the highest density within the DD-Development district. Specifically, Use B6-Multifamily allows a maximum density of six dwelling units per acre but requires centralized water and sewer. The minimum open space for Use B6-Multifamily is 40 percent. An additional 5 percent factor is included to allow for the provision of roadways and utilities.
- High-range B is based on Use B11b-Single-Family Detached Dwellings and assumes that 20 percent of the gross buildable site will be set aside for natural resource protection and the provision of roadways and utilities. It assumes that centralized water and sewer will service the site.
- Mid-range A and B is based upon on Use B11b-Single-Family Detached Dwellings and assumes that 20 percent of the gross buildable site will be set aside for natural resource protection and the provision of roadways and utilities. The permitted density (or minimum lot size) is based on the potential combinations of centralized and/or on-lot water and sewer.
- Low-range is based upon Use B11b-Single-Family Detached Dwellings and assumes that 20 percent of the gross buildable site will be set aside for natural resource protection

and the provision of roadways and utilities. The permitted density (or minimum lot size) is based on the provision of on-lot water and on-lot sewer.

· Tracts covenanted under Act 319 or 515 were included as potentially developable land.

High-range A (Use B6-Multifamily)(centralized water and sewer)

188.00 Acreage of vacant or potentially developable land
x 0.55 Minimum required open space ratio (40 % plus 5 %)(45%)
= 103.40 Net buildable acreage
x 6.00 Maximum permitted density (centralized water and sewer)
= 620.40 (620) Maximum number of potential dwelling units

High-range B (Use B11b-SF Detached Dwelling)(centralized water and sewer)

188.00 Acreage of vacant or potentially developable land
x 0.80 Infrastructure and resource protection area (20 %)
= 150.40 Net buildable area
x 4.00 Maximum permitted density (min. lot size = 0.25 acres)
= 601.60 (602) Maximum number of potential dwelling units

Mid-range A (Use B11b-SF Detached Dwelling)(on-lot water and centralized sewer)

188.00 Acreage of vacant or potentially developable land
x 0.80 Infrastructure and resource protection area (20 %)
= 150.40 Net buildable area
x 2.00 Maximum permitted density (min. lot size = 0.5 acres)
=300.80 (301) Maximum number of potential dwelling units

Mid-range B (Use B11b-SF Detached Dwelling)(centralized water and on-lot sewer)

188.00 Acreage of vacant or potentially developable land
x 0.80 Infrastructure and resource protection area (20 %)
= 150.40 Net buildable area
x 1.33 Maximum permitted density (min. lot size = 0.75 acres)
= 200.03 (200) Maximum number of potential dwelling units

Low-range (Use B11b-SF Detached Dwelling (on-lot water and on-lot sewer)

188.00 Acreage of vacant or potentially developable land
x 0.80 Infrastructure and resource protection area (20 %)
= 150.40 Net buildable area
x 1.00 Maximum permitted density (min. lot size = 1 acre)
= 150.40 (150) Maximum number of potential dwelling units

Based upon the Bucks County Planning Commission projections, the projected number of housing units in Springfield Township through 2010 is as follows: high-range: 281 and low-range: 174. For all scenarios but one, this analysis reveals that there is more than adequate capacity within the Zion Hill Development District to satisfy the projected number of housing units through 2010. Based upon the low-range housing projection,

there is a 24-unit deficit in the capacity if the entire development district is built out with as the low-range scenario (Use B11a with on-lot water and on-lot sewer). Since the an objective of the comprehensive plan is to pursue public water and sewer service in this area, this is unlikely.

But just in case, to ensure that the development capacity will not be exceeded, a development district analysis should be performed every 5 years to determine if the Development Area is still adequate in area to accommodate future growth. This analysis will also determine if the housing projections are representative of the degree of residential development that has occurred since the adoption of this comprehensive plan. If development occurs at a lower rate, there would be no reason to expand the Development District. If development occurs at a higher rate than expected resulting in limited remaining vacant land within the Development District, there may be a need to expand the Development District. The appropriate area for expansion is within the designated Rural Holding Area. Additional analysis to determine the location and extent of this expansion should be examined at this time.

Potential Tools and Techniques

Determining what Springfield Township would like itself to look like over the coming years is an important comprehensive planning activity. Just as important is determining what tools will be used to accomplish this vision. This section describes a number of innovative tools and strategies that can be used to shape the future land use and design of the township.

Density Factor Calculation-Similar to site capacity calculations for cluster and performance subdivisions, the density factor calculation reduces the impacts of single-family detached housing on sites with natural resource restrictions. Density factor calculations are a means of identifying the carrying capacity of the site by establishing the maximum number of permissible lots that can be accommodated without posing a threat to the natural resources. The minimum lot size for the underlying district still applies. However, this minimum lot size may be increased (for all or a portion of the proposed lots) based upon the extent and value of natural resources existing on the site. The density factor calculations are designed to establish a reasonable development density while recognizing the unique character of each development site. Essentially, the technique subtracts out all land with resource restrictions to create a net buildable site area. Then a density factor for each zoning district is applied to arrive at the total number of units permitted by the site.

Lot Averaging-Lot averaging adds flexibility to subdivision design by allowing lot sizes to vary while the overall density of a site is kept constant. Lot averaging can be used to assist in the preservation of natural features, such as wetlands or wooded areas. Another instance where this method is beneficial is on oddly shaped sites. Allowing variation in lot sizes can make it easier to create a well-designed subdivision on an awkwardly shaped parcel.

The number of dwelling units permitted in subdivisions using lot averaging is determined by density limits in the zoning ordinance. However, to avoid disturbing natural features on a site, the size of the lots varies. Some homes are sited on large lots so that the house may be placed on the lot without encroaching into wetlands, wood areas, or other natural features. Since some lots on the site are made larger, the size of other lots is reduced on areas of the site without resource limitations to allow the number of units permitted by density limits of the ordinance.

Area-Based Allocation, Sliding Scale Zoning-Area-based allocation is a method of regulating the subdivision of house lots from larger parcels. It has primarily been used to encourage farmland preservation but has been applied to open space preservation by a few municipalities.

Area-based allocation methods rarely permit an entire parcel to be carved into home sites. They instead allow some development of large parcels, but require that most of the parcel remains intact. This is accomplished by setting maximum lot sizes for the subdivided lots. A variation on area-based zoning is the sliding scale, where the number of homes permitted increases at a slower rate as the tract size increases. Again, there would be a maximum lot size and performance standards would be set to guide the location of houses to nonagricultural areas.

Accessory Farm Business-In addition to retail sales of commercially grown agricultural products, an accessory farm business ordinance would permit the use of a farm for entertainment purposes. Permitted entertainment uses would include educational tours, seasonal festivals related to products grown on the site, craft fairs, hayrides, and horse shows. The purpose of this use is to provide farmers with additional sources of revenue so that they do not have to resort to selling their property to developers. The nature of permitted accessory uses and the respective use regulations should safeguard against potential negative impacts (e.g., noise and lights) upon neighboring properties.

Design Guidelines for Village and Development District Areas-One concern of the development district concept is the quality of development that would be directed toward higher-density areas. Design guidelines would be very helpful in carrying out a vision of what the development district and village areas should look like in the future. Design guidelines describe and illustrate preferred design approaches to developers a better sense of what the community is looking for.

Typically, design guidelines consist of statements that describe a preferential treatment of a specific aspect of the design of a building or site. For instance, a design guideline might specifically address entryways: "Solid or residential-type doors with small areas of glass should be avoided. Openings containing double entry doors should be retained." Another might address street character: "Entrances, porches, balconies, decks, and seating should be located along the street edge to promote pedestrian use of the street edge." Such guidelines, especially when illustrated, can be helpful in maintaining the character of the community and encourage pedestrian traffic.

Traditional Neighborhood Development-Authorized by the MPC, a Traditional Neighborhood Development (TND) zoning district attempts to establish a pedestrian-

oriented, mixed-use development similar to that of older boroughs and villages. A TND features include a mix of house types on smaller lots, narrow streets on a grid, features such as porches and garages placed in rear of the house, and the creation of usable public space. In conjunction with the district regulations, carefully constructed design guidelines would guide the look and the pattern of the district.

Site Analysis and Resource Conservation Plan-Site analysis and the resource conservation plan are tools used by Buckingham Township to ensure that the developer has a solid understanding of the natural conditions of the site. The site analysis requires an existing resources inventory that shows, among other things, wetlands, vegetative cover (including native and nonnative vegetation), soils, historic buildings, easements, PNDI sites, photographic views of the site, properties identified in the township's open space plan, and analysis of how the resources will be protected.

The resource conservation plan shows the limits of grading and soil disturbance on the site, a description of how natural contours and vegetation are respected (including a tree protection plan as required by the township's zoning ordinance), a description of how the development fits into the site's topography, and a description of how historic resources are respected and preserved. In addition, a resource conservation plan could require developers to consider low impact grading techniques that would preserve existing features, reduce site grading, and maintain the township's rural feel. (See below.)

Low-Impact Grading-Among the most harmful development practices is site grading. Grading is the process of clearing a site of vegetation and smoothing sloping areas to create an even topography. Mass grading is harmful because it destroys valuable species habitat and reduces water quality by introducing sediment into local streams and lakes. Grading will also destroy an area's rural nature; it effectively replaces native vegetation and topography with a flat expanse of lawn.

Two development techniques can greatly reduce the impacts of grading: site fingerprinting and minimum disturbance. Site fingerprinting reduces the total amount of disturbance of a site by limiting grading and clearing for a subdivision to areas where structures, roads, and rights-of-ways are required. Grading and clearing can be further reduced by using shared driveways, designing roads to follow open paths in vegetation, and avoiding additional disturbance for material storage areas.

Minimum disturbance techniques further reduce impacts by using alternative construction techniques. Heavy equipment will typically compact soil (increasing imperviousness) and damage root systems. Minimum disturbance techniques use a carefully delineated disturbance area and through low impact construction practices attempt to preserve unstable soils and maintain a site's hydrologic function. Minimum disturbance techniques have the added benefit of reducing construction costs due to the decreased need for site grading.

Historic Preservation Zoning-A local historic district ordinance designates an area containing historic structures and protects by: limiting the type of alterations that may be made to existing buildings, reviewing proposed demolitions, and ensuring compatible

design of new construction. Historic districts created under the authority of the enabling legislation, Act 167, are not zoning districts; the review process is a procedure separate from zoning concerns. The Pennsylvania Historical and Museum Commission must certify all areas proposed for a historic district as having historic character. Act 167 also requires the appointment of a historical architecture review board (HARB), which reviews and advises the governing body about any alterations within the district. The governing body then decides whether to approve or deny the proposal.

A historic preservation overlay district provides local designation and regulations of historic properties through local zoning. Historic resources may be further divided into classes depending upon their significance, with National Register properties receiving greater protection than locally identified buildings. Historic overlay zoning can include one or more of the following provisions:

- Permitting additional uses within historic structures, with a condition of use being that alterations meet design guidelines (which Springfield's ordinance already does);
- Review of demolition proposals by a local historic commission;
- Review by a local historic commission of proposed subdivisions and land developments;
- Preparation of impact statements for proposed subdivisions and land developments;
- Buffering adjacent to historic properties;
- Review by the historical commission of the design of proposed alterations to historic properties.

Joint Municipal Planning and Zoning-Joint planning and zoning occur when municipalities agree to work together to develop a single planning document or zoning regulations for use in all the municipalities involved. The purpose of joint municipal planning and zoning is to address regional concerns and development that has impacts across municipal borders. Pennsylvania courts have interpreted the MPC to require that all uses and housing types be provided for within a municipality. However, with joint planning and zoning in place, all uses may be provided for within the joint area, rather than each municipality. This can allow more development to concentrate where public services are available. In turn, the most valuable farmland and natural resources can be preserved.

Watershed Overlay District-A watershed overlay district would apply an overlay zoning district to the boundaries of the Cooks Creek watershed. Within this overlay, certain uses would be prohibited, such as underground injection wells, underground storage facilities, and hazardous materials disposal facilities. Other uses, such as aboveground storage tanks, would be subject to regulation.

In addition to use requirements, a watershed overlay district could require other standards, such as cluster development for all parcels larger than 20 acres, larger open space requirements, expanded riparian buffer zones, standards designed to maximize stormwater infiltration and maintain water quality, and permitting land application of wastewater (to minimize stream discharge).

Wellhead Protection-In Spring of 2002, the Springfield Township authority was awarded a grant from the state to undertake a wellhead protection program. Wellhead protection

programs are intended to limit adjacent future land uses that would be incompatible with a water supply area. There are five basic steps to a wellhead protection program:

1. Form a team- Include representatives of water suppliers, municipal officials, developers, and hydrogeologists.
2. Define land area- Delineate the wellhead protection area.
3. Identify sources- Identify potential pollutants such as storage tanks, feedlots, road salt storage, and septic systems in the zone of contribution to the well.
4. Manage land area- Implement regulatory and nonregulatory management techniques, such as zoning and education.
5. Plan for the future- Identify future growth and water needs and their relationship to the well(s). Review comprehensive plans and regulations and make necessary adjustments.

A community relying on existing groundwater wells as its principal water supply should also create a wellhead protection program and adopt a wellhead protection ordinance. A wellhead protection ordinance defines three wellhead protection areas or zones that increase in protection the closer the land use is to the wellhead. A wellhead protection ordinance is designed to protect the present and future water quality of the individual community well(s). The Bucks County Water Supply Plan and Wellhead Protection Study-Technical Reference (1997) can provide municipal officials with a step-by-step approach to completing a wellhead protection program.

Riparian Corridor Conservation District and Management Plan- A riparian corridor conservation district is an overlay zoning district that regulates the uses and activities within a designated margin along riparian corridors and wetlands. The district is generally divided into two zones. Zone 1 consists of a 25-foot margin that extends from the edge of the stream or wetland. In Zone 1 typical permitted uses include wildlife sanctuaries, nature preserves, fishing areas, passive park and recreation areas, and streambank stabilization. Uses permitted by conditional use approval include corridor crossings by farm vehicles and livestock, recreational trails, roads, railroads, and utility lines. Zone 2 consists of a 50-foot margin that extends from the edge of Zone 1. In Zone 2 permitted uses include wildlife sanctuaries, nature preserves, passive park and recreation areas, recreational trails, front, side, and rear yards of private lots, and agricultural uses existing at the time of the adoption of the ordinance. Uses permitted by conditional use approval in Zone 2 include corridor crossings by farm vehicles and livestock, recreational trails, roads, railroads, and utility lines; camps, campgrounds, picnic areas, golf courses, and playgrounds; and naturalized stormwater basins. Uses such as clear-cutting, hazardous material storage, permanent structures, subsurface sewage disposal areas, chemical application of farmland, and motor vehicle traffic are specifically prohibited within the corridor. Permitted activities within the corridor must be accompanied by the implementation of an approved Corridor Management Plan that identifies management techniques that will be used to offset disturbances to the corridor.

Relationship to Adjacent Municipal Comprehensive Plans and County Comprehensive Plan

Nine municipalities border Springfield Township, including five in Bucks County (i.e., Milford, Richland, Haycock, Nockamixon, and Durham townships), two in Lehigh

County (i.e., Upper Saucon Township and Coopersburg Borough), and two in Northampton County (i.e., Lower Saucon and Williams townships).

The Pennsylvania Municipalities Planning Code requires that comprehensive plans take into account the planning in surrounding areas, the county, and the region. The purpose of the following discussion is to ensure that policies developed for Springfield Township do not create conflicts with adjoining lands and to encourage a regional approach to planning problems and issues. Based upon this review, the surrounding municipalities seem to have compatible planning and zoning policies. The following provides a summary of these policies.

Milford Township

Milford and Springfield townships share a limited municipal border. Milford Township is part of the Quakertown Area Planning Committee (QAPC). The committee has prepared a joint comprehensive plan and zoning ordinance. According to the Quakertown Area Comprehensive Plan (1992), the area along the municipal border is designated as Reserve Areas that is intended for expansion of the Development Areas when deemed appropriate in the future. This area is zoned RA-Rural Agriculture District that requires a minimum lot size for single-family detached dwellings of 2 acres. Along this common boundary, Milford Township's RA district is compatible with this plan's recommendation that includes the Development District, Village Residential (associated with the village of Zion Hill), and Rural Residential district for this portion of Springfield Township.

Richland Township

Richland Township is also a member of the QAPC. According to the Quakertown Area Comprehensive Plan for Richland Township, the municipal border along Springfield Township is designated as Developed Lands along portions of the Route 309 corridor and Shelly area. Natural Resource Protection Areas and Agricultural and Other Reserve Areas are designated along the remaining areas adjacent to the township border. There are three zoning district designations located along this municipal border. RA-Rural Agricultural district requires a minimum lot size of 2 acres for single-family detached dwellings and is located east and west of Route 309 corridor up to the RP-Resource Protection district. PC-Planned commercial is located along on both sides of Route 309. RP district requires a 5-acre minimum lot size for single-family detached dwellings and is located in the northeast corner of the township's border with Springfield. Shelly and surrounding areas are located adjacent to, but not bordering Springfield Township, and are the northern limit of the Year 2010 Primary Development Area Boundary. These districts are compatible with this plan's recommendation of Highway Commercial and Development District designation along Route 309 and areas to the west. The lands to the east of Shelly and Route 309, is designated RA-Rural Agricultural and RP-Resource Protection in Richland Township which is consistent with this plan which recommends RP-Resource Protection and AD-Agricultural District designation.

There has been dialogue between Springfield and Richland township officials to conduct a joint watershed plan that may lead to enhanced protection of the Tohickon Creek and its headwaters.

Haycock Township

As a member of the QAPC, the Quakertown Area Comprehensive Plan for Haycock Township designates the area along the municipal border as Resource Protection Areas and Reserve Areas. The corresponding areas are zoned RP-Resource Protection and RA-Rural Agricultural districts, both of which require a minimum lot size of 2 acres for single-family detached dwellings. This is comparable with this plan's recommendation of RP-Resource Protection and AD-Agricultural districts for this portion of Springfield Township.

Nockamixon Township

There is a limited municipal border between Nockamixon and Springfield townships. According to Nockamixon's comprehensive plan, the area adjacent to this border is designated R-Residential. The zoning for this area is RA-Residential Agricultural which requires a minimum lot size of 2 acres for single-family detached dwellings. It provides for residential uses where agriculture exists and serves as a transition zone between higher density uses to the southeast and the state park. This is compatible with this plan's recommendation of RP-Resource Protection for Springfield Township adjacent to this border.

Durham Township

In Durham's comprehensive plan, the area adjacent to the municipal border is designated Resource Protection and Agriculture and serves as a reserve area. RP-Resource Protection is the corresponding zoning district for this area that requires a minimum lot size of 3 acres for single-family detached dwellings. This includes the carbonate area in the north-central part of the township. This is compatible with this plan's recommendation of RP-Resource Protection and AD-Agricultural districts prescribed for this area of Springfield Township adjacent to this border.

Upper Saucon Township

The Upper Saucon Township's comprehensive plan designates the area adjacent to the municipal border as Suburban Residential (1 dwelling unit per ½ acre), Recreation, Multi-family Residential (2-8 dwelling units per acre), and Light Industrial in the immediate area adjacent to Route 309 and the Borough of Coopersburg. The area to the southeast of the borough is designated Rural Residential (1 dwelling unit per acre). This is compatible with this plan's recommendation of CBD-Central Business District and PI-Planned Industrial for areas adjacent to the borough along the Route 309 corridor and DD-Development District to the northwest of Route 309. To the southeast of Route 309 the area is designated as RR-Rural Residential which is the rural holding area for the future expansion of the Development Area. Consequently, if public water and sewer are provided, township officials may wish to decrease the 2-acre minimum lot size which will make it more compatible with the Upper Saucon Township's R-2 Suburban Residential district which permits a minimum lot size of 20,000 square feet for single-

family detached dwellings (with public sewer) or 1 acre (connected to public water but not connected to public sewer). Upper Saucon Township's R-1 Rural Residential district permits single-family detached dwellings with a minimum lot size of 1 acre (without required public water or sewer connections). This is a higher density than Springfield's adjacent RP-Resource Protection District that currently requires a minimum lot size of 3 acres for single-family detached dwellings.

Coopersburg Borough

The Borough of Coopersburg and Springfield Township share a very limited municipal border but the borough's impacts are far more significant. While the borough does not have a future land use map component, the existing zoning along Route 309 adjacent to Springfield is designated I-Industrial and LI-2 Light Industrial and Office Research districts. This is compatible with this plan's recommendation of CBD-Central Business District and LI-Light Industrial District along the adjacent areas of Springfield Township.

Lower Saucon Township

In Lower Saucon Township, the area along the municipal border is designated RA-Rural Agriculture (also corresponding to the name of the underlying zoning district) which requires a minimum lot size of 2 acres for single-family detached dwellings. This is compatible with this plan's recommendation of WS-Water Supply District (area and dimensional regulations for this district is to be established in the future) and AD-Agricultural District for this portion of Springfield Township. A WP-Watershed Protection Areas overlay district is also located in this area of Lower Saucon. This plan recommends extending this overlay district into Springfield Township to correspond to the Cooks Creek Watershed boundary. To provide maximum protection of the watershed and its exceptional value designation, an overlay district with performance standards is recommended.

Williams Township

Only the corner of Springfield and William township's municipal border intersect. Williams Township comprehensive plan designates the area adjacent to Springfield as A-Agricultural, which also corresponding to the name of the underlying zoning district that requires a minimum lot size of 1 acre for single-family detached dwellings. This is compatible with this plan's recommendation of WS-Water Supply District (area and dimensional regulations for this district is to be established in the future) for this portion of Springfield Township.

Bucks County Comprehensive Plan

The Bucks County Comprehensive Plan (1993) provides policy recommendations and guidelines to assist municipalities with managing growth, developing comprehensive plans (and related documents), and evaluating development proposals. The plan also identifies various planning tools that can be used to manage growth in a manner consistent with the sound planning practices centered on the Development District Concept. It is up to local elected officials to select those planning tools that will best meet the present and future needs of their community. The township's comprehensive plan update is consistent with the county's growth management goals and objectives since the

Development District Concept is an integral part of the plan. Under this approach, higher density residential and intensive nonresidential developments are channeled into areas where public services can be efficiently and economically provided, thereby preserving the township's significant natural, historic, and scenic resources. The residential development areas are sized to accommodate future residential growth until 2010 and beyond. The designated development areas are not areas with significant or widespread environmental concerns.

In terms of natural resource protection, the township's current planning and zoning policies and standards are comparable to those recommended by the county. Environmental performance standards, performance zoning, and cluster provisions play an important role in the township's zoning ordinance. The township's interest in protecting farmland and encouraging the continuation of agriculture is reaffirmed in this comprehensive plan update. The designation of the Special Attention Area is intended to identify and protect areas with significant resources, including the Cooks Creek watershed, significant agricultural lands, carbonate areas, and unique natural areas.

The zoning ordinance includes provisions for a variety of residential housing types and arrangements. The Development District permits higher-density housing developments that encourage affordable housing opportunities in the township. The need to provide additional senior housing opportunities has been identified and was addressed in this comprehensive plan update. Therefore, the basic housing policies between the county and township are consistent.

Township Finances and Budgeting

Township finances and budgeting are an important, yet often neglected, part of the comprehensive planning process. In order to carry out the goals and objectives of the comprehensive plan, the township must be in good financial shape. Moreover, decisions about how funds are spent reflect the township's priorities, making it essential to link what the township wishes to do with the funds available to do so.

Springfield Township has experienced a small amount of growth during the past decade and the demand for services (and the township budget) has risen accordingly. How future growth occurs may determine the state of the municipal budget as well as the property tax burden.

Thus, Springfield Township should become keenly aware of how growth and development affect municipal finances and budgeting. A short analysis is provided below of the township's current budgetary and financial situation that should provide insight into how township revenue is generated and how this revenue is spent. The analysis further examines how changes to the rate of growth and development may affect revenues and expenditures.

Township Revenues

As shown in Table 16, Springfield Township takes its income from a variety of sources, including property taxes, real estate transfer taxes, earned income taxes, licenses and permits, and fines and fees.

Table 16. Sources of Revenue, Springfield Township, 2000

Revenue Source	Amount	Percentage
Earned Income Tax	\$547,623	50%
Property Tax	\$184,704	16.9%
Real Estate Transfer Tax	\$87,726	8.0%
Other Taxes	\$73,642	6.7%
Licenses and Permits	\$88,706	8.1%
Fines and Fees	\$55,964	5.1%
Miscellaneous Revenue	\$56,385	5.2%
Total Revenue	\$1,094,750	100%

The township is mainly dependent on the earned income tax, which generates about half the township's total revenue. The earned income tax is levied by the Palisades School District from which the township takes a percentage. The second-largest source of income is property tax, generating about 17 percent of the total township revenue. Property in Springfield Township is taxed at a rate of 10 mils, a rate much lower than many other municipalities. Revenues generated through the real property tax have increased in recent years because new land development has increased the overall assessed value of land in the township.

Another significant source of revenue is the real estate transfer tax. The real estate transfer tax is levied on the sale of new and existing properties. Growth and development will influence how much revenue is generated from this tax. More development will mean more revenue from this tax. Less development will likely mean less revenue, unless there is an increase in the number of existing real estate transfers. Finally, in July of 2000, the township enacted an additional earned income tax at the rate of 0.25 percent. Revenue generated from this annual tax will be used to purchase agricultural conservation easements, open space, historic property, and recreational land.

Township Expenditures

Township expenditures fall into six general categories: general administration, building maintenance, public safety, zoning and subdivision administration, public works, and miscellaneous expenditures. Expenditures from the year 2000 are as follows:

Table 17. Expenditures, Springfield Township, 2000

Expenditure Amount Percentage

Expenditure	Amount	Percentage
General Administration	\$200,179	19.1%
Building Maintenance	\$ 20,770	2.0%
Public Safety	\$468,544	44.8%
Zoning and Subdivision Administration	\$114,945	11.0%
Public Works	\$239,377	22.9%
Miscellaneous	\$2,062	0.2%
Total	\$1,045,877	100%

A majority of the budget was spent on public safety (44.8 percent) and public works (22.9 percent), which is typical of most suburban communities. These expenditures are followed by general administration (19 percent), zoning and subdivision administration (11 percent), building maintenance (2 percent), and miscellaneous expenditures (0.2 percent).

Fiscal Impacts and Future Trends

For the past few years Springfield Township has been able to keep a balanced budget. The township does not have any financial or fiscal plan, but has been able to keep expenses under control, while benefiting from stable revenues. Unforeseen events, however, could dramatically alter this rosy picture of the township's finances. Major capital projects and an increased demand for services could have a significant effect on the township's bottom line. In order to plan for anticipated as well as unanticipated expenses, the township should carefully examine future trends for municipal finances, examine the underlying land use patterns that influence revenues and expenditures, and consider the development of financial planning instruments, such as a capital improvements program.

Table 18. Revenues and Expenditures, Springfield Township, 1994-2000

	1994	1995	1996	1997	1998	1999	2000
Total Operating Receipts	\$795,333	\$833,154	\$949,298	\$953,802	\$1,362,312	\$1,071,005	\$1,904,000
Carry Over	\$397,887	\$407,325	\$465,505	\$418,838	\$418,838	\$276,898	\$413,000
Total Revenues	\$1,193,220	\$1,240,479	\$1,414,803	\$1,372,640	\$1,781,150	\$1,347,903	\$1,507,000
Total Expenditure	\$718,968	\$800,806	\$907,198	\$986,965	\$1,390,715	\$1,149,193	\$1,045,000
Surplus/(Deficit)	\$474,252	\$439,673	\$507,605	\$385,675	\$390,435	\$198,710	\$461,900

Fiscal Impacts of Alternative Land Uses

A 1994 Penn State College of Agricultural Sciences study examined the fiscal impacts of residential, commercial, industrial, and open space land uses and found that, in general, each of these land uses pays its own way when comparing municipal revenues generated to costs incurred in services.²¹ This occurs despite the increased number of services provided by a growing municipality. Thus, in terms of municipal budgeting and finance, alternative land uses do not have a significant impact. Maintaining a balanced municipal budget is more a matter of keeping expenditures under control and taking advantage of other revenue streams than it is a matter of zoning more land for nonresidential land use. However, when school district budgets are brought into the equation, alternative land uses do have a significant impact. Although residential land use provides a majority of overall revenues, it does not pay its own way, as the costs to educate schoolchildren are very high. (The one exception to this rule is age-restricted or senior citizen housing; this form of residential housing also generates no schoolchildren and generally pays for itself). Commercial, industrial, and open space land use provide more revenue to the school district and municipality than they generate in expenditures. Commercial, industrial, and open space land uses also provide a significant subsidy to both school districts and residential taxpayers in that none of these uses generate schoolchildren. Consequently, these land uses help keep residents' taxes low. Communities undergoing rapid residential growth without accompanying nonresidential growth will begin to see higher tax bills, as the revenue generated by new residential development cannot catch up with the costs generated to the school district. Thus, to help maintain a low tax burden on residents, the township should ensure that a variety of land uses are encouraged in its zoning ordinance.

Future Trends in Municipal Revenues and Expenses

As the township becomes more developed, changes can be expected in both revenues and expenditures. Below is a summary of what changes might be expected.

Revenues

Earned Income Tax-Revenues from the earned income tax will rise as new residents move into the township. There has been an unmistakable trend in larger, more expensive single-family homes in the central and upper Bucks regions. Residents living in these homes are likely wealthier than average and will produce greater revenues from this tax. **Real Property Tax-**Revenues from the real property tax will rise as the total assessed value of property rises through new construction.

Real Estate Transfer Tax-Revenue from transfer taxes will be dependent on the pace of development in the township. The greater the pace of development, the more revenue from this tax can be expected.

Licenses and Permits-Permits used to pay for the inspection of construction will rise and fall with the level of construction and development. Some license fees, such as the waste hauler license, will generally remain the same as the township charges a flat fee for each waste hauler. Other license fees, such as the cable television franchise license, will rise as

new development comes to the township because the township charges a fee based on a percentage of the homes served in the township.

Fines and Fees-Fees used to pay for the processing of land development applications will rise and fall with the level of development.

Miscellaneous Revenue- This revenue should generally rise as the population increases.

Expenditures

Public Safety-Expenses due to public safety will only increase as the township becomes more populated, as there are more opportunities for interpersonal conflicts and traffic violations.

Public Works-Public works expenses will increase as the township develops more public facilities to serve the needs of a growing municipality. Road maintenance needs will increase because more residents will be using township roads. Roads will become worn more quickly and improvements will be needed to reduce intersection conflicts and manage congestion.

General Administration-General administration costs may rise if there is a need to hire new staff to administer the functions of the local government.

Zoning and Subdivision Administration-Zoning and subdivision administration costs will rise according to the pace of growth and development in the township.

Building Maintenance-Building maintenance expenses will increase with new facilities and as existing structures become older.

Capital Improvements Program

To properly plan for large expenses that may adversely affect the township's budget, Springfield Township should consider a capital improvements program. The development of a capital improvements program (CIP) would assist the township in defining and planning for future major expenditures. Specifically, the CIP would permit the identification of infrastructure currently needed and infrastructure required as a result of the development anticipated over the next ten years, as well as other capital improvements.

The CIP should include an evaluation system for assessing the value or merit of each capital proposal and long-term schedule for implementation of capital projects. Such an evaluation system should use both policy criteria, such as the recommendations and policies of this comprehensive plan, and performance criteria, which assess a project's worthiness, feasibility, or urgency.

Implementation

The following summarizes the comprehensive plan's recommendations by subject matter. The page numbers accompanies each topic indicates the pages in the plan in which the

discussion takes place. The entity or entities responsible for completing the task and an approximate timeframe for action are also provided. Timeframes are broken into short-term (1-2 year), Midterm (3-5 years), long-term (6-10 years), and ongoing.

Natural Resources (Pages 18 to 24)

v Enforce natural resource protection standards and evaluate the need for additional protection measures.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Ongoing

v Revise the riparian buffer regulations in the zoning ordinance to provide performance standards for the protection of the township's waterways.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Midterm

v Implement the specific recommendations from the Cooks Creek Wetlands Management Plan and the Watershed Conservation Plan listed on pages 20 through 23.

Entity responsible: Springfield Township Environmental Advisory Committee; Planning Commission; Board of Supervisors

Timeframe: Short Term, Midterm

v Amend the zoning ordinance to adopt measures (e.g., overlay zoning) for the Cooks Creek Watershed that would require new development projects to identify sensitive resources and use best management practices to protect these resources.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Short Term

v Prepare a short list of consultants (approved by the Board of Supervisors) that are permitted to conduct geological testing for the carbonate geology areas in the township.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Short Term

v Cooperate with the Cooks Creek Watershed Association to preserve land in the Cooks Creek stream valley.

Entity responsible: Board of Supervisors, Cooks Creek Conservancy

Timeframe: Ongoing

v Develop strategies to reduce invasive species (e.g., multiflora rose, jimsonweed) that threaten native plant communities.

Entity responsible: Springfield Township Environmental Advisory Committee

Timeframe: Midterm

v Utilize the volunteer citizen efforts of the Springfield Township Environmental Advisory Committee (EAC) to address issues of environmental concern.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Ongoing

v Encourage landowners in the significant resource areas (e.g., Cooks Creek Watershed, Natural Areas Inventory sites) to donate their land or provide a conservation easement as part of various programs sponsored by public and private organizations (e.g., Bucks County's Natural Areas Inventory Program, Heritage Conservancy's Lasting Landscapes Program).

Entity responsible: Board of Supervisors, EAC

Timeframe: Ongoing

v Promote the ongoing education of resource protection programs and activities sponsored by various public and private organizations/agencies.

Entity responsible: Board of Supervisors

Timeframe: Ongoing

Open Space & Farmland Preservation (Pages 24 to 32)

v Revise the zoning ordinance to provide use(s) that will allow a revenue-generating venture to farmers that is a related use to the primary business of farming the land or a nonfarm-related use that will not impact adjacent properties (e.g., Accessory Farm Business use).

Entity responsible: Board of Supervisors

Timeframe: Midterm

v Review the zoning ordinance to determine whether improved zoning techniques could improve open space and farmland preservation needs.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Short Term

v Preserve significant open space and farmland as prioritized in the township's open space plan.

Entity responsible: Board of Supervisors

Timeframe: Ongoing

v Encourage farmers within the Agricultural Security Area to enroll in the Bucks County Agricultural Land Preservation Program.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Ongoing

v Examine methods of land preservation in addition to land acquisition, such as zoning strategies and development incentives.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Ongoing

v Utilize the Springfield Township Environmental Advisory Committee (EAC) to identify properties at risk and worthy of preservation as well as educating citizens on preservation methods, grants, etc.

Entity responsible: Board of Supervisors

Timeframe: Ongoing

Historic Resources (Pages 32 to 37)

v Conduct a comprehensive historic resource inventory of the township

Entity responsible: Springfield Township Historic Commission and Springfield Township Historic Society

Timeframe: Midterm

v Implement historic preservation ordinances in appropriate areas.

Entity responsible: Board of Supervisors

Timeframe: Midterm

v Conduct individual village studies for Zion Hill, Pleasant Valley and Passer (using the Springtown Village Study as a model) to identify the opportunities and constraints for village expansion while respecting the surrounding natural resources and inherent historic character of the village.

Entity responsible: Springfield Township Historic Commission and Springfield Township Historic Society

Timeframe: Midterm

v Establish a historic district in villages that are deemed appropriate as part of a village study.

Entity responsible: Board of Supervisors

Timeframe: Long Term

v Adopt additional landscape buffer standards for developments located adjacent to significant historic resources.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Midterm

v Establish a process for granting the demolition of historic buildings, including a permit requiring a review of alternatives and historic documentation, prior to demolition.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Midterm

v Provide recognition of significance historic resources in the township.

Entity responsible: Board of Supervisors

Timeframe: Midterm

v Educate the public about the value of historic preservation and provide strategies for the management of historic structures.

Entity responsible: Springfield Township Historic Commission and Springfield Township Historic Society

Timeframe: Ongoing

Recreational Resources (Pages 37 to 39)

v Revise and adopt the township's park and recreation plan.

Entity responsible: Planning Commission; Board of Supervisors

Timeframe: Midterm

v Prepare a master plan for the new township park that identifies programs and facilities that will satisfy resident's needs.

Entity responsible: Planning Commission

Timeframe: Midterm

v Amend the zoning ordinance to include fees in lieu of recreational facilities for major subdivisions and land developments (following adoption of park and recreation plan).

Entity responsible: Board of Supervisors

Timeframe: Midterm

v Implement the recommendations from the township's open space plan including creating a greenway/trail linkage network that will connect points of interest throughout the township and the region.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Long Term

v Obtain access easements along the township's designated greenway/trail linkages network.

Entity responsible: Board of Supervisors

Timeframe: Long Term

v Adopt bike lane requirements (and fees in lieu of bike lanes) for subdivisions or land developments located along the township's designated bike routes.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Short Term

v Provide small, informal parks near villages.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Long Term

v Reestablish a Park and Recreation Board to assist in these efforts.

Entity responsible: Board of Supervisors

Timeframe: Short-Term

Scenic Resources (Page 40)

v Evaluate the effectiveness of the township's scenic overlay district and make revisions (if necessary) to provide additional protection of important scenic resource areas.

Entity responsible: Planning Commission; Board of Supervisors

Timeframe: Short Term

v Adopt ordinances designed to preserve existing vegetation, minimize grading impacts, and provide additional plantings to scenic views and vistas.

Entity responsible: Board of Supervisors

Timeframe: Midterm

v Adopt a cellular tower overlay ordinance in cooperation with surrounding municipalities that will minimize the visual impact of cell towers.

Entity responsible: Board of Supervisors

Timeframe: Midterm

Residential Development (Pages 41 to 50)

v Revise the zoning ordinance to provide appropriate senior housing opportunities (e.g., independent living facilities, assisted living facilities, continuing care retirement communities, skilled nursing facility) through the creation of a new zoning district (i.e., CBD-Central Business District).

Entity responsible: Board of Supervisors

Timeframe: Midterm

v Create incentives for innovative zoning techniques (such as cluster subdivision and traditional neighborhood developments) and incorporate provisions into the zoning ordinance.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Midterm

v Ensure strict enforcement of the building code and zoning ordinance.

Entity responsible: Board of Supervisors

Timeframe: Ongoing

Nonresidential Development (Pages 50 to 52)

v Amend the zoning ordinance to create a new zoning district (i.e., Central Business District) that provides for additional commercial and office uses within a mixed-use residential and nonresidential setting.

Entity responsible: Board of Supervisors

Timeframe: Midterm

v Review the buffer yard requirements in the zoning ordinance to ensure that land use impacts between adjacent residential and nonresidential uses are minimized.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Short Term

v Amend the zoning ordinance to provide additional regulations for Use H-4, Home

Occupation (e.g., minimum lot size, equipment stored on premises, employees of the business restrictions) to address the different types of home occupational uses that vary in the nature of the respective business.

Entity responsible: Board of Supervisors

Timeframe: Midterm

v Maintain high standards that control nuisances such as objectionable noise, odors, smoke, and hazardous materials in local ordinances.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Midterm

Community Facilities (Pages 52 to 55)

v Evaluate protective service, schools, and township facilities for adequacy on a periodic basis.

Entity responsible: Planning Commission

Timeframe: Ongoing

v Site public facilities in infill and redevelopment areas to minimize the township's contribution to sprawl.

Entity responsible: Planning Commission; Board of Supervisors

Timeframe: Long Term

v In order to support the current facilities and level of service, seek additional revenue sources, increased volunteer staffing, and community support for emergency management services.

Entity responsible: Board of Supervisors

Timeframe: Ongoing

v To determine if additional staffing or equipment is necessary to meet the needs of a growing resident population, periodically review the level of service for police services and fire protection.

Entity responsible: Planning Commission; Board of Supervisors

Timeframe: Ongoing

Transportation and Circulation (Pages 56 to 62)

v Implement traffic calming techniques in village settings where appropriate.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Midterm

v Identify traffic congestion and accident-prone areas in order to develop a capital improvements program for necessary highway improvements.

Entity responsible: Planning Commission; Township Engineer; Township Police

Timeframe: Long Term

v Implement the recommendations from the township's open space plan including creating a greenway/trail linkage network that will connect points of interest throughout the township and the region.

Entity responsible: Board of Supervisors; Planning Commission; Springfield Township Environmental Advisory Committee

Timeframe: Long Term

v Obtain access easements along the township's designated greenway/trail linkages network.

Entity responsible: Board of Supervisors; Planning Commission; Springfield Township Environmental Advisory Committee

Timeframe: Long Term

v Adopt bike lane requirements (and fees in lieu of bike lanes) for subdivisions or land developments located along the township's designated bike routes.

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Midterm

v Evaluate the impact on the road system and identify required off-site improvements necessary to avoid hazardous conditions for major land developments and land developments.

Entity responsible: Township Engineer

Timeframe: Ongoing

v Monitor progress of the Quakertown-Stony Creek Rail restoration and provide input into the planning process.

Entity responsible: Planning Commission

Timeframe: Ongoing

v Establish dialogue with adjacent communities regarding the need for coordinated improvement to the regional transportation system.

Entity responsible: Board of Supervisors

Timeframe: Ongoing

Wastewater and Water Issues (Pages 62 to 69)

v Update Act 537 plan to reflect changes in wastewater facilities policies in the comprehensive plan update (e.g., public sewer and water to service Development Areas).

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Midterm

v Adopt water conservation programs and ordinances.

Entity responsible: Springfield Township Environmental Advisory Committee; Board of Supervisors

Timeframe: Midterm

v Implement the recommendations from the Cooks Creek Wetlands Management Plan and the Cooks Creek Watershed Conservation Plan (including the development of a water management plan) in order to understand the limitations of available groundwater and to protect its quality.

Entity responsible: Board of Supervisors; Planning Commission; Springfield Township Environmental Advisory Committee

Timeframe: Ongoing

v Revise the zoning ordinance to require water impact studies for all zoning change requests that would result in significant increase in withdrawal of groundwater.

Entity responsible: Board of Supervisors

Timeframe: Midterm

v Enhance and enforce the township's OLDS management program to enhance groundwater quality.

Entity responsible: Board of Supervisors; Township Zoning Officer

Timeframe: Midterm

v Adopt a wellhead protection ordinance for the township's community well system and seek cooperation with Lower Saucon Township officials for the protection of the springs that are the source of public water in Springtown.

Entity responsible: Board of Supervisors; Springfield Township Environmental Advisory

Committee

Timeframe: Midterm

Stormwater Management (Pages 69 to 70)

v Revise the Springfield Township's stormwater management ordinance to incorporate recommended requirements of the Saucon Creek Watershed Stormwater Management Plan.

Entity responsible: Board of Supervisors

Timeframe: Midterm

v Maintain the Springfield Township Stormwater Management Ordinance so that it complies with the requirements of the Pennsylvania Department of Environmental Protection (DEP).

Entity responsible: Board of Supervisors; Planning Commission

Timeframe: Ongoing

v Identify areas experiencing flooding problems in the township and determine if remediation measures are feasible.

Entity responsible: Planning Commission; Springfield Township Environmental Advisory Committee

Timeframe: Midterm

Solid Waste Management (Pages 70 to 71)

v Revise township ordinance to mandate that waste haulers offer curbside recycling pick up.

Entity responsible: Board of Supervisors

Timeframe: Short Term

v Establish a waste hauler monitoring system.

Entity responsible: Board of Supervisors

Timeframe: Short Term

Future Land Use/Growth Management (Pages 72 to 88)

v Amend the zoning map to revise the zoning district boundary lines based on the future land use categories and corresponding zoning districts established in Figure 10 of this comprehensive plan update.

Entity responsible: Board of Supervisors

Timeframe: Short Term

v Perform a development district analysis every 5 years to ensure that there is adequate land available for future development.

Entity responsible: Board of Supervisors, Planning Commission

Timeframe: Midterm

v Evaluate and amend the zoning ordinance and/or subdivision and land development ordinance to incorporate innovative planning tools and techniques (see listing on pages 80 through 85) that are appropriate for Springfield Township.

Entity responsible: Board of Supervisors, Planning Commission

Timeframe: Ongoing

v Revise the AD-Agricultural District provisions within the zoning ordinance to ensure that land that has been set aside as an agricultural soil protection area is farmable by establishing minimum size and site location standards for a subdivision.

Entity responsible: Board of Supervisors, Planning Commission

Timeframe: Short Term

v Evaluate the existing Single-Family Detached Cluster regulations (Use B12) in the zoning ordinance and adopt provisions to make them more effective. For instance, decrease the number of cluster options, increase the minimum open space requirement, and reduce the minimum lot size requirement.

Entity responsible: Board of Supervisors, Planning Commission

Timeframe: Short Term

v Amend the zoning ordinance to provide special provisions in the existing VR and VC district to apply individual use and area and dimensional requirements in the village of Springtown (only) based upon the recommendations of the Springtown Village Study (2000). Separate village studies should be conducted for the remaining villages (i.e., Zion Hill, Pleasant Valley, and Passer) to determine if special provisions should also be provided, accordingly.

Entity responsible: Board of Supervisors

Timeframe: Short Term

v Revise the "Statements of Purposes and Intent for the Districts" in the zoning ordinance to reflect the revisions in the comprehensive plan update.

Entity responsible: Board of Supervisors

Timeframe: Short Term

Township Finances and Budgeting (Pages 89 to 93)

v Plan for a variety of land uses to maintain an equitable tax burden on township residents.

Entity responsible: Board of Supervisors

Timeframe: Ongoing

v Develop a Capital Improvements Program to assist the township in defining and planning for future major expenditures.

Entity responsible: Board of Supervisors

Timeframe: Short Term

v Purchase agricultural conservation easements, open space, historic property, and recreational land (as identified by the Springfield Township Open Space and Farmland Preservation Plan) using revenue generated from the open space tax.

Entity responsible: Board of Supervisors

Timeframe: Ongoing

APPENDIX 1

LAND USE CLASSIFICATION DEFINITIONS

Single-Family Residential-Consists of properties with single-family detached, or attached, one- or two-unit dwellings on lots under 5 acres. This category also includes mobile home parks.

Multifamily Residential-Includes properties with 3 or more attached dwelling units. This category includes medium- to long-term housing accommodations, such as retirement complexes and nursing homes.

Rural Residential-The same as "Single-Family Residential" except dwellings are on lots which are 5 acres or more (but do not qualify as "Agricultural").

Agricultural-Land which is 20 acres or greater, was considered "Agriculture" in 1990, and at least one-third of the parcel exhibits agricultural or farm-related characteristics such as stables, orchards, and active or fallow fields. This category may also include residential dwelling units and farm related structures on the same lot.

Mining and Manufacturing-Includes heavy manufacturing industries, and painting and advertising industries, as well as building and landscaping material extraction.

Government and Institutional-Includes all Federal, State, County, and Municipal buildings and facilities, except those which are park and recreation related. All private, parochial and public schools are included as well as, churches, cemeteries, emergency service facilities, and fraternal organizations.

Commercial-Includes (but is not limited to), wholesale and retail trade establishments finance and insurance real estate, and hotels.

Parks, Recreation, and Protected Open Space-Includes Municipal, County and State parks, State game lands, golf courses, campgrounds, and deed-restricted or open space easements associated with residential developments.

Transportation and Utilities-Consists primarily of utility installations and right-of-ways, terminal facilities and automobile parking. Calculations for roadway acreage is also included.

Vacant-Includes parcels without dwelling units but may include structures such as barns, stables, sheds, etc.

Note: Vacancy status does not imply potential development status. Some areas indicated as vacant may actually be abandoned landfills, superfund sites or natural resource areas but were labeled as such for lack of a better classification.

APPENDIX 2

SPRINGFIELD TOWNSHIP HISTORIC RESOURCE SITES

The following provides a brief summary of sites from the township's Historic Registry and the township's 250th Springfield Township Anniversary commemorative plate and coverlet. This is a partial listing and additional sites may be added later based upon the completion of a township-wide historic resource survey that is currently under consideration.

Knight's House (built 1840)-Property purchased by Jere Knight. Her husband, Eric Knight is the author of the book, *Lassie Come Home*, published in 1940. The dog about which the story is told was a Scotty dog, not a collie as depicted in the book. Their dog,

"Toots is buried on the hillside across the roadway of the house. A marker and a statue of a collie dog mark the gravesite. The property is also listed on the Heritage Conservancy Register of Historic Places. Current owners: Jeffery P. and Barbara Lindtner. He is the son of Jere Knight and her second husband, Fredrick Lindtner.

Gunster Residence (built 1860)-The site consists of 16.4316 acres on Lot #2 of Brown and Gunster. The property is also listed on the Heritage Conservancy Register of Historic Places. Current owner is Diana S. Hoffman. Lot #1 on Plan of Brown and Gunster is Tax map parcel number 42-021-166-002 owned by Robert and Ruth Fox. Lot #4 is tax map number 42-021-166-004 owned by Donald and Betsy Campeau.

Buckwampum Farm (house built c. 1800 and is the second on the site)-Consisting of 64.17 acres on the northeast corner of Route 412 and Bodder Road. Buckwampum is a corruption of the Lenni Lenape word P'tuk-wamp-unk, meaning a hill with a round swamp on top. The property is also listed on the Heritage Conservancy Register of Historic Places. Current owner: Lisa L. Lang Olsson.

Opp's Tavern (built 1806)-The site of the former Opp's Tavern is on land originally indentured to John Penn Esquire and John Penn, Jr. The grant consisted of 250 acres extending north to Leithsville. In 1781, Valentine Opp operated the tavern as Opp's Tavern. His tavern was the second oldest tavern and inn established in Springfield Township. The tavern stood in the triangle of land formed by the fork in the road where Route 412 meets Old Bethlehem Road. The two-story log structure was replaced by the fieldstone stone house completed in 1806, which remains on the site today. The property is also listed on the Heritage Conservancy Register of Historic Places.

Passer Schoolhouse (built 1877)-The original schoolhouse on this property was built in 1860 and was known by the name "Fairmount." The name was changed when a post office opened in the area under the name "Passer." The first building was demolished and rebuilt in 1877; a one-room addition was added in 1902. The property is also listed on the Heritage Conservancy Register of Historic Places. Current owner: Passer Community Center.

Knecht's Covered Bridge (1873)-Located on Slifer Valley Road approximately 2 miles northeast of Pleasant Valley in Springfield Township. Build of hemlock, Knecht's Bridge spans 110 feet and crosses Cooks Creek. This bridge is identical to the style to the former Haupt's Mill Bridge, built a year earlier but was destroyed by arsonist's fire in 1985. The bridge was named for a resident of the nearby stone house. The stone in the approach-walls to the bridge and the hemlock structural timbers are original. The heavy structural side timbers of the bridge are joined with wooden pegs to form a diagonal design called crisscross or lattice. It is the only painted covered bridge in Bucks County. The bridge is on the route of the Walking Purchase. The property is listed on the National Register of Historic Places and the Heritage Conservancy Register of Historic Places. Current owner: Bucks County.

Smith-Leith House (built c. 1750)-This stone and frame house was originally owned by Joseph Smith. In the mid 1800s it was purchased by the Leith family, at which time a grist mill was erected on the property. The earliest section of the house has its walk-in fireplace and beehive oven intact. Current owners: Drew and Ginger Salisbury.

Nusbickle House (built c. 1750)-The small stone house on this property was built by Ludwig Nusbickle, one of the early German settlers in Springfield Township. A large frame addition was built c. 1800; Georgian influence is evident in its double front doors and symmetrical window placement. Cooking kitchen, beehive oven, smokehouse, and numerous barns attest to the self-sufficiency of colonial inhabitants. Current owner: Betty Marshall.

Pleasant Valley Schoolhouse (built 1896)-The first schoolhouse on this property was built in 1862 and was known as Moyer's. It was replaced by beautiful brick building of Victorian style architecture; Springfield School District used this schoolhouse until 1953. The belltower, full porch, and other original features remain. Current owners: David and Ann Snyder.

Passer Creamery (built 1887)-This structure was built as a combination dwelling (upper two floors) and creamery (basement). The large "cold room" where butter and cheese were stored is still in existence, as is the barn that was once used to house the whey-fed pigs. Reports from the 1887 editions of "Springtown Weekly Times" indicate that 3500 pounds of milk were received at the creamery daily. The creamery remained in operation until about 1920, operated successively by M.F. Archey, Levinus Frank, James Shelley, Edwin Loux, and Tilden Bleam. Current owners: Robert and Irene Heiland.

Ritter House (built c. 1800)-This property is part of a tract of land purchased by Jacob Ritter from John Penn. It was sold to Jacob Ritter, Jr., a shoemaker and Quaker preacher. The building is log and stone. The ruins of a stone chimney give evidence of an earlier structure on the same property. Current owner: Mary Creticos.

Boyer House (built c. 1870)-This simple frame farmhouse was owned by the John Boyer family. A full-width porch has been enclosed. The adjacent "summer kitchen" is a small stone structure that probably predated the main house. Current owner: Mary Creticos.

Church School (built 1892)-The original building on this site was built in 1816; a stone schoolhouse replaced it in 1860 (cornerstone from that building was imbedded in east wall of present building); a brick building was erected on the site in 1892. Used by the Palisades School District until 1981, "Church School" has the distinction of being the schoolhouse in largest use in Springfield Township. Current owner: Springtown Township Historical Society

Funk's Mill-Earliest and finest grist and sawmill in Springfield Township was built in 1738 by Stephen Twining. It was sold to Abraham Funk in 1763 and rebuilt in 1782. Present building, H.S. Funk's Excelsior Mill, was built 1863 and was last operated as a feed mill by Edgar Muth from 1918 to 1960. Known as Funk's Mill for the past 230

years, the mill is now the private residence of John and Virginia Seaman. It is located at the east end of Springtown.

Kockert's Tavern-Oldest tavern and store in Springfield Township was built in 1738 by Stephen Twining. It was purchased in 1761 by Jacob Kockert to serve as a "publick house" known as Kockert's Tavern until 1830. Now the private residence of William and Catherine Marek, it is located along Route 212 at the east end of Springtown.

Slifer's Log House-In the 1790s, it is believed that 13 children of the Schleifer/Slifer family were raised in this two-room, one and a half story log house. It is located on the Horace and Mildred Mease farm on Slifer Valley Road near Knecht's Covered Bridge in Slifer Valley.

Springfield Meeting House-Beginning in 1754, a Mennonite congregation met in homes of members until building a church. The present stone building, built in 1824 and located on Pleasant View Road near Pleasant Valley, occupies the site of an earlier wood structure.

Post Office and Henry Mill's General Store-Henry Mill's General Store sold all kinds of merchandise from 1876 to the 1920s. The storefront and some interior portions of the building remain in their original state. The small frame building operated as the village post office until postal service was relocated across the street to Stonehack's Store in 1916. Now, mostly vacant, the west end of the building is owned by R.Q. Smith, and the east end is owned by the Shaffer family. It is located on Main Street in the center of Springtown.

Springfield High School-Built in 1913, the building consisted of two floors with two rooms on each floor. In 1953, the second floor was torn down and the first floor remodeled to become the present Springfield Elementary School music instruction area. The school is located on Route 212 in Pleasant Valley.

T. Swartz, Blacksmith Shop-The 1885 blacksmith shop, first owned and operated by Titus Swartz, then Walter Cawley from 1925 to 1938, and Herman Holland until 1960, remains in working condition with original forge and is now owned by Gladys Koder. It is located on Lower Saucon Road and Blacksmith Way in the west end of Springtown.

Zion Hill Lutheran Church-In 1839, George Wolf deeded land to the 37-member congregation of a Lutheran, Reformed and Mennonite group that held alternating services. The congregation erected their church in 1840. It is located on Old Bethlehem Pike in Zion Hill.

Haupt's Bridge-Built in 1872 and named for the nearby Haupt's Mill, the bridge was constructed of hemlock timbers in a diagonal lattice design joined with wooden pegs. The overlapping triangles have no arches or upright beams. Haupt's Bridge was 107 feet in length and spanned Cook's Creek for 113 years until destroyed by arsonist's fire in 1985. It was located on Haupt's Bridge Road off Route 212 between Springtown and Durham.

APPENDIX 3

SPRINGFIELD TOWNSHIP VILLAGES AND HAMLETS

Amity

Amity is a small hamlet consisting of about five structures. Among the buildings are a stone house, a large stone barn, and what appears to be an old one-room schoolhouse, now converted to residential use. The surrounding area is quiet, rural, and quite scenic. Due to its location on a hill, the village residents enjoy a picturesque view of the countryside.

Bursonville

This small hamlet was named for Isaac Burson, an English Quaker from Abington who built a hotel early in the village's history. A post office, using the name Bursontown, was established in 1804, making it one of the earliest post offices in northern Bucks County. The Richland Monthly Meeting established a meeting in Bursonville in 1743 to accommodate the local Friends. Today, no evidence of the early commercial uses or the post office is apparent in Bursonville. The hamlet now consists of a few houses and barns situated in a quiet, shady, and picturesque setting.

Gallows Hill

One of the most interesting aspects of Gallows Hill is the historical origin of its name. Although several explanations have been offered, none of them is well documented. One story claims that during the Indian Walking Purchase of 1737, Edward Marshall broke his "gallowses" (suspenders) while jumping a stream near Gallows Hill. Supposedly, he left the gallowses" hanging in a tree near the stream. However, this explanation has been refuted because Marshall referred to the place as Gallows Hill in a survey shortly after the Walking Purchase, indicating that he knew the name of the place at the time of the walk. Another story claims that the name came from Joseph Galloway who was interested in purchasing land tracts in northern Bucks County in 1773. This explanation must also be wrong since the area was known as Gallows Hill long before 1773. A third explanation is that a dead man, who had apparently committed suicide, was found hanging from a chestnut tree next to the road on Gallows Hill. Although this is a rather morbid explanation, it has not been proven wrong.

Presently, Gallows Hill is a small village located in a scenic area surrounded by hills and woods. The village principally consists of older residential dwellings. A small store is located at the intersection of Harrow Road and Gallows Hill Road. At first glance, the store appears to be boarded up and closed; however, the store is in operation and seems to do a brisk business. A stone marker, which commemorates the passage of the Walking Purchase participants through the area, stands in front of the store.

Passer

This small hamlet was first known as Fairmount. The village name was probably changed to Passer in 1888 when a post office was established (the post office was discontinued in 1915). A hotel also once operated in Passer, but the building was converted to residential use many years ago. Near Passer is an area where the Lenape Indians once made

arrowheads. Their workplace was found at "three never-failing springs of water" and many points, chips, and complete arrowheads have been found there.

Today, all that remains of the original village of Passer is a few older homes at a crossroads. However, a lot of new houses are being built in the vicinity. Most of the area around Passer consists of wooded hills and open fields, making this a very pretty part of Bucks County.

Pleasant Valley

Pleasant Valley is a village with a rich historical background. The first settlers in the area were German and the original name of the settlement was Schuckenhausem after a place in southern Germany. The present name was chosen in 1828 by Lewis Ott, the village's first postmaster.

A small log church, built in Pleasant Valley over 200 years ago, was attended by people from all over the area, many traveling great distances to hear the services. Tradition has it that the minister and his congregation would stop at a small inn just south of the village to rest and drink schnapps before continuing on to the church. In 1872, the log church was replaced by a stone building, and this building was eventually converted to residential use in 1924.

Another part of village tradition is that, in 1777, General Lafayette stayed at the Pleasant Valley Inn on his way to rejoin Washington's Army at White Marsh. This visit occurred following Lafayette's recovery from the injuries he received at the Battle of Brandywine.

Pleasant Valley is one of the larger villages in Springfield Township, with many residential and commercial uses stretched out along Old Bethlehem Road. The road through the village is fairly busy and there seems to be quite a bit of truck traffic using the road. Most of the houses in Pleasant Valley are older frame dwellings.

Overall, Pleasant Valley is an attractive village containing many interesting features. Numerous shade trees and the stone bridge that crosses Cooks Creek are additional assets of the village. With some improvements to a few of the buildings, there is great potential to enhance the traditional village setting of Pleasant Valley.

Springtown

Springtown is one of the oldest settlements in Springfield Township. In 1738, a 500-acre tract was sold to Stephen Twining who, in 1763, sold 300 acres of this property to Abraham Funk, the founder of Springtown. Funk built a mill in 1782 on Spring Creek. This creek was fed by a spring located west of the village; the spring is probably the source of Springtown's name. The mill was operated for several generations by the Funk family. From 1886 to 1918 the Funks also published a weekly paper called the Springtown Times. Several residents of Springtown petitioned for a borough charter in 1895. The petition was approved by the jury but, for some reason, Springtown never became incorporated. The post office was established in 1806 and is one of the oldest operating post offices in Upper Bucks County.

Springtown is quite large for a village and is probably closer to a small town in size and character. The main street through Springtown is lined with several charming older homes and small businesses. Many interesting and attractive homes are also located to the north of the village. One particularly interesting structure on the main street is a very large and long stone building which appears to be partially vacant. Whatever the building was once used for, it is a good potential candidate for restoration. In addition to the commercial and residential uses, Springfield also contains a fire company, a post office, a social club, and three churches. Many new homes are presently being built around Springtown.

Zion Hill

This lovely village takes its name from the Zion Union Church (now the Zion Evangelical Lutheran Church) originally built around 1840. The first church building was replaced by a brick structure in 1890. The post office was established in Zion Hill in 1871, and is still in operation. The present village is quite large with several dozen houses located along the Old Bethlehem Pike. Most of the houses are older frame structures, although there are also a few stone houses. Many large shade trees enhance the pleasant atmosphere of Zion Hill.

Village planning studies are useful to establish a vision for villages within a municipality and set standards for public improvements and guidelines for future action. The Springtown Village Study (2000) prepared by the BCPC, provides a wide summary of information regarding village enhancement, protection, and revitalization. The plan analyzes the current zoning regulations and district boundaries for the village to determine their appropriateness based upon the existing conditions and to provide recommendations for maintaining the historic character of the village.