



**Pequea Township
Lancaster County**

Comprehensive Plan

Adopted March 16, 2005

Prepared by Gannett Fleming, Inc.

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PEQUEA TOWNSHIP, LANCASTER COUNTY
COMPREHENSIVE PLAN
2005

Adopted
March 16, 2005

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EXECUTIVE SUMMARY

The Pequea Township Comprehensive Plan was prepared in 1990 and updated in 2005 in cooperation with the Township Supervisors, Planning Commission, Environmental Advisory Council and other interested Township residents. Much of policy established in the 1990 Plan remains relevant for the 21st century. The background studies and Community Goals and Objectives sections of the Plan were updated to include statistics from the 2000 Census and other current sources and to emphasize continued stewardship of Township resources—land and water resources, economic and financial resources.

The Future Land Use Plan continues to place special emphasis on preserving the important natural features of the Township, namely prime agricultural lands and the Conestoga and Pequea Creek corridors. It accommodates adequate space for housing the anticipated population increases during the planning period. The amount and distribution of the various land use types is based on the amount of development projected to take place in Pequea Township in the next twenty years. Therefore, the Plan meets the primary objective of preserving the rural character of the Township, while providing for its fair share of future development.

Any reference in the Comprehensive Plan to agricultural lands as “undeveloped” is solely for the purpose of comparison to other land uses. It is the position of the Township that land devoted to active agricultural uses is considered developed in keeping with the Township’s goal to preserve and protect agricultural land and activities.

The Transportation Plan identifies roadway deficiencies and recommends study by PENNDOT for road improvements. Coordination with regional partners on large-scale projects, such as the Route 272 corridor, is recommended. The remaining recommendations are centered on upgrading the existing transportation system to meet the needs of all modes of travelers.

The Community Facilities and Services Plan includes recommendations for continuing to enhance and improve Silver Mine Park and for sustaining police and fire protection. The recommendations in these areas are once again based on the anticipated amount of growth in Pequea Township. The standards included in the Plan should be reviewed regularly and compared to actual growth rates to identify deficiencies. Many of the recommendations for community facilities and services are tied closely to the Future Land Use and Transportation Plans. For instance, municipal parks and fire stations are evaluated in terms of their proximity to current village locations and projected growth centers.

The Community Utilities Plan addresses the provision of adequate public utilities to promote the general health and welfare of existing and future Township residents. The extent of future utility extensions is limited to the urban growth boundary in order to protect prime agricultural lands from undue development pressure. Groundwater quality and soil suitability for septic systems are addressed to ensure that areas of existing and proposed development do not impact water quality for the entire community.

These four plans are all components of the Pequea Township Comprehensive Plan. The Future Land Use Plan is based on the Township's natural features, population projections and community goals and objectives. The Transportation, Community Facilities and Services, and Community Utilities Plans were developed in support of the Future Land Use Plan, as well as sustained levels of service to the residents of Pequea Township. Finally, the Natural Resources Plan was developed to protect the features and resources on which residents rely from unnecessary impacts from the process and anticipated operations of future community development. Therefore, all Plan components are highly interrelated and the effectiveness of the overall Plan is dependent on the implementation of each component.

The Comprehensive Plan was prepared with oversight from the Lancaster County Planning Commission, surrounding municipalities and Penn Manor School District to ensure that all planning programs are compatible. Therefore, the Comprehensive Plan addresses both municipal and regional planning issues and is compatible with all known existing plans.

CHAPTER 1 HISTORY

1.1 History of Pequea Township

On October 16, 1710, the original order to survey 10,000 acres of land on the Pequea Creek was given to Rudolph Bundely and others. Present Pequea Township was included in this area, which was organized in 1712 as Conestoga Township. In the years following 1712, there was a steady flow of Mennonite immigrants into the area. The leaders of the colony took a keen interest in their brethren and did all they could to make it easy and appealing for them to come to the new land.¹ By 1717, the population was outgrowing the Township bounds, and consequently new tracts were surveyed. It seems the work of surveying and apportioning these lots commenced in 1719. Among the first settlers were John Lines, Hans Boyer, and the Widow (Jacob) Hoover. They bought hundreds of acres at approximately 50 cents an acre. During the early settlement of the region, the language in all probability was German because the early tombstones, the signatures of deeds, and early wills were almost all written in German.²

Farming was the prevailing occupation by the beginning of the nineteenth century. The area's soils were well suited to farming and, at that time, were described as some of the best for agriculture in the County. In addition to farming, there were several mills located on Conestoga Creek and Pequea Creek. Groff's Mill on the Conestoga Creek opened in the early 1800's. The most important mills on the Pequea Creek were Baumgardner's Mill and Burnt Mill. Both opened between 1800 and 1814.³ Pequea Township was also known for an iron mine and the best quality all-purpose limestone in Lancaster County. The iron mine opened in 1816 and ore was taken to Conewingo Furnace for smelting. The mine was operated for a short time and then shut down again five years later. Final abandonment came in 1882.⁴

The history of silver mining in Pequea Township dates back to 1709, when an undetermined amount was mined on Silver Mine Run, near Pequea Creek. The 1709 date was determined from correspondence of William Penn, who wrote to mine owners to demand royalty payments. This is the earliest apparent date that silver or any other ore was extracted, since there is no indication that the Native Americans had any metallurgical techniques. All that is known of this early operation is that a large amount of rock was removed, as evidenced by two water-filled inclines 75 to 90 feet deep, and a 100-yard tunnel in the side of the hill. Some ore was apparently removed during the Civil War and the late 1930's, possibly the efforts of a fraudulent stock promoter.

Studies have fostered renewed interest in the Pequea Silver Mine. In 1966, Dr. Jacob Freeman, professor of geology at Franklin and Marshall College, was granted a 15-month sabbatical leave to research local mineral deposits. Through geochemical investigations, Dr. Freedman discovered highly concentrated areas of lead and zinc, which indicate a potential for mineralization.

¹ Rhoda H. Campbell, *Out of the Silent Past* (Lancaster, PA: Feldser Printing, 1950), p. 19. Ibid, p. 19.

² Ibid, p.19.

³ Franklin Ellis and Samuel Evans, *History of Lancaster County, Pennsylvania*, Vol, II, (Philadelphia: Everts & Peck, 1883), p. 1011.

⁴ Ibid.

The Conestoga Wagon was commonly used before the advent of railroads when the only way to transport goods was by horse-drawn vehicles. The Old Conestoga Trail traversed the Township from East to West and initially influenced development throughout the area. Later, the stage coach from Lancaster to Port Deposit skirted the eastern border of the Township. In addition to providing transportation for the people, the coach carried mail for the various communities through which it passed. The stage coach always took two days to make the complete round trip between Lancaster and Port Deposit. The Quarryville Railroad, built in 1875, ushered in a new era of transportation.

By the mid 1800's, most of the prime land in the northern portion of Lancaster County was occupied so that the southern part of the County, including Conestoga Township, grew rapidly from 1850 to 1880. In 1852 Conestoga Township was divided and the eastern half became Pequea Township.

The early communities of Pequea Township included the villages of West Willow and New Danville. West Willow was started in the 1700's with the establishment of Christian Snavely's Tavern. By the late 1820's there were about twelve dwellings. The population grew slowly but it was not until the coming of the railroad in 1875 that significant gains were made. In 1880 the population was approximately 150; in 1920 it was said West Willow possessed about 400 inhabitants.⁵ Before the establishment of the post office, the village of New Danville was known as Stumptown. In 1830 there were eleven dwellings, two smitheries, a tavern, a store, two wagon and blacksmith shops, a shoe shop and a physician.⁶

In 2004, agriculture continues to dominate the Township landscape. Subdivision development in the 1960's, 1970's and 1980's prompted stronger Township and County policies on land development, specifically the conservation or protection of valuable farmland soils. Lancaster County implemented urban growth boundaries to guide growth to established communities, where public utilities and services are readily available, and to protect farmland and open space countywide. Pequea Township adopted effective agricultural zoning in 1994. As a result of these policy changes, West Willow has grown over the past 10-20 years in a pattern consistent with its historic village character.

For further reading on the rich and diverse history of the Pequea Township area, the following sources and materials are suggested:

Publications: History of Lancaster County, Ellis & Evans, 1883.
Millersville - Penn Manor Community History, 1976.
Village of West Willow 1710-1974, Wilma Musser, 1974.
Journal of the Lancaster County Historical Society, 1896-present

Research Centers: Lancaster Mennonite Historical Society. Archives of the Lancaster County Courthouse. Lancaster County Historical Society.

⁵ H.M.J. Klein, Lancaster County, Pennsylvania, A History, Vol I. (New York: Lewis Historical Publishing Company, Inc., 1924), p. 237.

⁶ Ellis and Evans, loc. cit., p.1009.

CHAPTER 2 NATURAL RESOURCES INVENTORY

2.1 Geology

The geology⁷ of Pequea Township consists primarily of two types of rock: sedimentary and metamorphic. The majority of the Township is underlain by two distinct sedimentary rock formations: the Conestoga Formation and the Vintage Formation. Portions of the Township are underlain by metamorphic rock formations: the Antietam and Harpers Formations. The spatial pattern of geologic formations in Pequea Township is shown in Map 1.

The Conestoga Formation underlies 6,046.7 acres (or 69.3 percent) of the Township's total land area. This formation is described as a medium-gray, impure limestone having black, graphitic shale partings. The rocks are moderately resistant to weathering, forming a topography typified by rolling valleys and hills of low relief. The Conestoga Limestone has a secondary porosity of low magnitude and a moderate to low permeability, and good surface drainage. The average groundwater yield is 25 gallons per minute (gpm), unless solution cavities significantly increase yields. The water is usually very hard. Areas underlain by the Conestoga Formation are prone to sinkholes and solution channels which transport pollutants at a relatively rapid pace. Several sinkholes and depressions are illustrated in Maps 1 and 2. Annual testing of groundwater from wells in these areas is recommended to detect possible pollution and to monitor rates of dispersion. Excavation of this rock is difficult due to the occurrence of bedrock pinnacles and quartz veins. Cut slopes are stable as are the natural slopes. Foundation stability is usually good, but investigations should be performed for possible cavities.

The Vintage Formation underlies 884.6 acres (or 10.1 percent) of the Township's total land area. This formation is a dark gray dolomite found in portions of the southern half of Pequea Township. This form of dolomite is moderately well bedded, resistant to weathering and forms undulating valleys of low and medium relief, often with gentle to moderately steep and stable slopes. The surface drainage is good with little subsurface drainage. The rock has a moderate rating for secondary porosity and low permeability. Groundwater is generally hard, with a median yield of 30 gpm. The Vintage Formation is also prone to sinkholes and solution cavities, which could affect its good rating as a stable foundation. Excavation of this rock formation is difficult, especially where bedrock pinnacles are found. Due to the resistance of this rock to weathering, cut-slope stability is good.

The Antietam and Harpers Formation is a composite formation of two formations for general mapping purposes. This formation underlies 1788.4 acres (or 20.5 percent) of the Township's total land area. The Harpers Formation is a dark, bluish-gray shale that weathers to light-greenish-gray and the Antietam Formation is a light-gray quartzite.

The Antietam Formation is moderately well to well bedded, highly resistant to weathering and underlies hills, often with steep and stable natural slopes. Permeability and

⁷ Geologic data was provided by the Lancaster County Planning Commission and PA DEP. Descriptions of geologic formations are referenced from *Engineering Characteristics of the Rocks of Pennsylvania* by Alan R. Geyer and J. Peter Wilshusen, 1982.

secondary porosity are also found to have a low rating. Groundwater is generally soft with a median yield of 20 gallons per minute. Good surface drainage is characteristic of this rock type. The weathered rocks are moderately easy to excavate and unweathered rocks are difficult. Depending upon the degree of weathering, this rock usually provides stable cut slopes, and when excavated to sound material, a solid foundation.

The Harpers Formation is moderately well bedded, moderately resistant to weathering and the resulting topography is that of undulating hills of low relief, with moderately steep and stable slopes. Surface drainage is good. The rocks are slowly permeable with low secondary porosity and have a median groundwater yield of 24 gpm. The water is generally soft and of good quality, although high iron content may be a problem. Excavation is difficult in the unweathered rock layer, but easy in the weathered zone. When excavated to sound material, the Harpers Formation provides a stable foundation. Cut slopes exposed to moisture for short periods become unstable.

In sum, groundwater yields range from 20-30 gallons per minute. Water hardness and quality vary by formation. The Conestoga Formation, located across the northern half of the Township and interspersed in the southern region, is prone to sinkholes and solution channels, due to its karst composition. Excavation is generally difficult, though this corresponds with strong foundation and cut slope stability.

2.2 Soils

The only soil association found in Pequea Township is the Letort-Pequea-Conestoga Association. A soil association is a grouping that has a distinctive pattern of soils, relief and drainage. Soil associations can be used to compare the suitability of large areas for general land uses. Since there is only one association in Pequea Township and no comparison between associations, the analyses performed in this report are based on the individual soil series mapped in the Soil Survey of Lancaster County. Map 2 illustrates the approximate location of select soil attributes (prime farmland soils, soils of statewide importance, and hydric soils) in the Township.

The Soil Survey characterizes this association as “nearly level to very steep, well-drained soils on side slopes of ridges; formed in residuum from graphitic and micaceous limestone and schist.”

2.2.1 Soil Suitability for On-Lot Treatment Systems

According to the Lancaster County soil survey mapping [*Soil Survey Geographic (SSURGO)*] prepared by the Natural Resources Conservation Service and made available by Lancaster County Planning Commission, approximately 18 percent of the Township's soils are not suitable for on-lot systems; 44 percent are potentially suitable for alternative systems; and 38 percent are potentially suitable for conventional systems. These measurements should be used only for planning purposes. On-site soil analysis is necessary to determine the actual suitability of a site for on-lot systems.

Soils that are potentially unsuitable for conventional on-lot systems include low permeability soils, floodplain soils and soils on slopes greater than 25 percent. Low permeability is defined by current regulations, established by Title 25, Chapter 73.16 of the Pennsylvania Code, as an average percolation rate greater than 90 minutes per inch. Percolation rates between 90 and 180 minutes per inch are generally suitable for elevated sand mounds and subsurface sand filters. Average percolation rates greater than 181 minutes per inch are considered unsuitable for subsurface sand filters and elevated sand mounds. Baile silt loam is the only soil type in the Township which does not meet the 90 minutes per inch percolation rate maximum for on-lot systems.

Soils which PA DEP determined have a high flooding hazard in Pequea Township, and are therefore unsuitable for on-lot systems, include Comus silt loam, Newark silt loam, Nolin silt loam and Linden silt loam. These soils are located along the tributary and main stem waterways of the Conestoga and Pequea Creeks. Soils which can be found on slopes exceeding 25 percent include portions of Manor very stony silt loam and Pequea silt loam. These potentially unsuitable soil types are scattered south of Penn Grant Road and along the Conestoga and Pequea Creeks.

Soil types that are potentially suitable for alternative type systems such as trench systems and elevated sand mounds include soils with a high seasonal water table, shallow bedrock and slopes between eight and 25 percent. Soil types with a shallow water table or bedrock include areas of Clarksburg silt loam, Glenville silt loam, Pequea silt loam and Penlaw silt loam. Soils which are found on eight to 25 percent slopes include Chester silt loam, Conestoga silt loam, Glenelg silt loam, Hollinger silt loam, Letort silt loam, Manor silt loam, Pequea silt loam and Manor very stony silt loam. These soil types are fairly well distributed throughout the Township.

The remaining soils found in Pequea Township are potentially suitable for conventional on-lot treatment systems. These include areas of Conestoga silt loam, Elk silt loam, Glenelg silt loam, Hollinger silt loam, Letort silt loam and Manor silt loam. These soils are also scattered throughout the Township, however larger areas of potentially suitable soils lie north of Penn Grant Road. While these areas are suitable for on-lot systems, they are more importantly valuable farmlands.

2.2.2 Important Farmland Soils

Prime farmland, as defined by the U.S. Department of Agriculture, is the land that is best suited to producing food, feed, forage, fiber and oilseed crops. It has the soil quality, growing season and water supply needed to economically produce a sustained high yield of crops when it is managed using acceptable farming methods. Prime farmland produces the highest yields with minimal inputs of energy and economic resources, and farming it results in the least damage to the environment. Prime farmland may be in crops, pasture, woodland, or other land, but not in urban and built-up land or water areas. It must either be used for producing food or fiber, or be available for these uses. Prime farmland soils are usually classified as capability Class I or II on a scale of I to VIII.

Farmland soils of statewide importance are soils that are predominately used for agricultural purposes within a given state but have some limitation(s) that reduce their

productivity or increase the amount of energy and economic resources necessary to obtain productivity levels similar to prime farmland soils. Farmland soils of statewide importance are usually classified as capability Class II or III.

There are 4,017.0 acres of prime farmland soils in Pequea Township. This acreage represents 46.1 percent of the Township’s total land area. There are 2,242.0 acres of soils of statewide importance in Pequea Township. This acreage represents 25.7 percent of the Township’s total land area.

Together, these soils total 6259.0 acres or 71.8 percent of the Township’s total land area. The largest concentration of prime farmland is between Long Lane and West Penn Grant Road. Areas of farmland soils of statewide importance are typically small in size and found adjacent to prime farmland soils. The largest concentration of these soils is between West Penn Grant and Marticville Roads.

Pequea Township soils that fall under these two categories are listed in Table 2-1.

Table 2-1 Prime Farmland Soils and Soils of Statewide Importance, Pequea Township

Prime Farmland Soils and Soils of Statewide Importance, Pequea Township			
Prime Farmland Soils		Soils of Statewide Importance	
Soil Series	Capability Class	Soil Series	Capability Class
Clarksburg Silt Loam	IIw	Chester Silt Loam	IIIe
Comus Silt Loam	I	Conestoga Silt Loam	IIIe
Conestoga Silt Loam	I, IIe	Elk Silt Loam	IIIe
Elk Silt Loam	IIe	Glenelg Silt Loam	IIIe
Glenelg Silt Loam	IIe	Hollinger Silt Loam	IIIe
Glenville Silt Loam	IIe	Letort Silt Loam	IIIe
Hollinger Silt Loam	I, IIe	Manor Silt Loam	IIIe
Letort Silt Loam	I, IIe	Newark Silt Loam	IIIe
Linden Silt Loam	I	Penlaw Silt Loam	IIIw
Manor Silt Loam	IIe	Pequea Silt Loam	IIIe
Nolin Silt Loam	I		

Source: SSURGO (to be confirmed), 1990 Pequea Township Comprehensive Plan

2.2.3 Hydric Soils

Hydric soils are soils that retain water during a portion of the year. Hydric soils are commonly but not exclusively found in floodplain areas and are an indicator of wetland conditions. As a natural resource, hydric soils provide water storage and infiltration that naturally regulate water sources and flows. These soils are susceptible to compaction and uneven settling when developed and are therefore sensitive features. These factors impact land use decisions.

There are 208.1 acres of hydric soils in Pequea Township, as shown in Map 1. This acreage represents 2.4 percent of the Township’s total land area and is located in small concentrated areas along the Township’s major and minor waterways.

2.3 Drainageways and Floodplains

Pequea Township is bordered by Conestoga Creek to the north and Pequea Creek to the south. As a result, the Township can be easily divided into two major drainage basins and several smaller ones. The boundary between the two major basins is roughly the geologic contact between the limestone and metamorphic rock formations. The Conestoga Creek basin covers 40.8 percent of the Township, and the Pequea Creek basin covers the remaining 59.2 percent.

The Conestoga Creek basin has six named subbasins and several unnamed tributaries. Portions of the Stehman Run and Mill Creek subbasins are located in the Township. The Pequea Creek basin has seven subbasins, including Silver Mine Run and Goods Run in the Township and several other unnamed tributaries. Map 3 shows the boundaries of the two major basins and the six subbasins, among other features.

The surface water network of these two basins includes 241,573.0 feet (or 45.8 miles) of stream channel. Of this total length, 111,706.8 feet or 46.2 percent is classified as impaired by DEP.

The Federal Emergency Management Agency (FEMA) has mapped the floodplains of Conestoga and Pequea Creeks under the federal flood insurance program. This mapping was last prepared in 1980. This mapping identifies 451.8 acres of 100-year floodplain in Pequea Township. This represents 5.2 percent of the Township's total land area, as shown in Maps 3 and 4.

However, this mapping does not include the smaller streams in the Township. The Township's zoning ordinance includes a list of floodplain soils and areas flooded by a storm of record as part of the floodplain district. This zoning district is subject to change as more accurate information becomes available or as development changes the boundaries of the floodplain.

2.4 Topography

The topography in Pequea Township's southern region can be classified as undulating hills and valleys of low to high relief with natural slopes which are moderate to steep and stable. In the northern portion, rolling valleys and hills of low relief with gentle and stable natural slopes are characteristic. Slopes vary in relief; those which are 15 percent or greater are considered environmentally sensitive, and are shown in Map 4, the Environmentally Sensitive Areas map.

2.5 Groundwater Resources

2.5.1 Groundwater Recharge

According to information presented in the 1996 Lancaster County Water Resources Plan, groundwater availability has changed significantly over the past 15-20 years. The 1996 Plan cites the 1987 "Lancaster County Sewer and Water Resources Study", which estimated available water at about 1.4 million gallons a day per square mile (mgd/mi²).

The 1987 Study estimated that areas underlain by carbonate rocks (Conestoga and Vintage Formations) in Pequea Township have an average annual recharge rate of 0.70 mgd/mi². The areas underlain by the metamorphic rocks of the Antietam and Harpers Formation have an average annual recharge rate of 0.47 mgd/mi². Table 2-2 gives a summary of the estimated annual groundwater recharge in Pequea Township and for each geologic formation.

Table 2-2 Estimated Groundwater Recharge for Select Geologic Formations

Estimated Groundwater Recharge for Select Geologic Formations			
Geologic formation	Average Annual Recharge Rate (mgd/sq mi)	Area	Average Annual Recharge (mgd)
Conestoga	0.7	9.4	6.58
Vintage	0.7	1.4	0.98
Harpers/Antietam	0.47	3	1.41
Total		13.8	8.97

Source: PA DER, 1986 (Cited in 1990 Comprehensive Plan)

The Plan further states that a community’s susceptibility to drought is related to the location of its wells; communities deriving their water from wells in carbonate regions, such as portions of Pequea Township, are less likely to be adversely affected by drought than those drawing from sandstone regions.

2.5.2 Groundwater Quality

Act 537 requires that a portion of the wells in a municipality be tested for nitrates and total coliform bacteria as part of the sewage facilities planning process. Pequea Township’s current Act 537 Plan was prepared concurrent with the 1990 Comprehensive Plan. Data from the Act 537 planning process, specifically nitrate and coliform bacteria levels, were reported in the 1990 plan through text, tables and a map (Figure 2-6 in the 1990 Comprehensive Plan). At that time, “nearly 20 percent of the wells [in the Township] has been tested. ... Only 11.5 percent of the wells tested has nitrate levels less than five [parts per million] ppm and only 20.8 percent had levels between five and ten ppm. Therefore only about one third of the wells tested has nitrate levels that were below the EPA drinking water standard of ten ppm. ... Only 9 (4.9 percent) of the 183 wells tested positive for coliform bacteria. The majority of these wells were located in and around the Tuckahoe Village area. However, none of these tests came out positive for fecal coliform bacteria when retested.” The 1990 Plan reported that that coliform bacteria problem was not believed to be severe.

The map is included in Appendix of this Comprehensive Plan Update for its geographic depiction of the nitrate and coliform test results. This map and the tabular data that accompanied it should be updated with the Township’s next sewage facilities plan.

2.6 Woodlands

Map 4 shows the woodland areas in Pequea Township. Woodlands are the feeding, nesting and breeding grounds for many species of flora and fauna. The preservation of woodland

areas is considered a necessity to maintain the rural lifestyle that residents of Pequea Township enjoy. There are 1,133 acres of woodlands in Pequea Township. This acreage represents 13.0 percent of the Township's total land area.

In addition to stands of woodland, individual trees of particular age and size hold nostalgic value for residents of any community. Pennsylvania has identified and named a number significant tree categories, including state Champion, bicentennial, and William Penn trees. A state Champion Tree is a tree which is the largest known tree of its species. Pequea Township has previously been home to trees of significant age and stature. Although there are no State Champion trees in Pequea Township today, there are several large trees that are considered valuable assets to the heritage of the community.

2.7 Wildlife Habitat and Endangered Species

Due to the woodland and waterway features of Pequea Township, it is home to many wildlife species. The Conestoga River and Pequea Creek are the living and feeding grounds for many bird and mammal species. Also, larger wooded lots tend to harbor many species of flora and fauna. Uncontrolled development of these areas may cause wildlife populations to decline in Pequea Township. According to the Pennsylvania Natural Diversity Inventory (PNDI), there are two existing species on the endangered species list that have been sited in Pequea Township; the Yellow Crowned Night-Heron and the Pizzizzi's Amphipod or Scud.

The Yellow-Crowned Night-Heron is a slate gray bird with yellowish crown and plumes, a black head and bill, and orange legs. It was last seen in 1989 along the Conestoga River which forms the northern border of Pequea Township. It feeds mostly on crustaceans, some frogs, mollusks, and aquatic insects. They are vulnerable to construction around wetlands and the use of pesticides and insecticides. (Pennsylvania Game Commission, Bureau of Game Management, Harrisburg, Pennsylvania).

The Pizzizzi's Amphipod or Scud is an insect which lives in underground caves and mines. It looks much like a pill or sow bug except it is longer, thinner, and colorless. The Amphipod feeds primarily on dead animals and algae material inside caves. The presence of the amphipod was field verified in 1989 in the southwestern corner of Pequea Township in the Burnt Mills area. (Pennsylvania Fish Commission, Bureau of Fisheries and Engineering, Bellefonte, Pennsylvania).

The PNDI also identified a mesic central forest southeast of the intersection of Marticville Road and Long Lane. This wooded area is classified as imperiled in the state because of rarity or because of factors making it very vulnerable to extirpation from the state. Geographic areas identified by the PNDI as sensitive habitat areas are shown on Map 4.

2.8 Wetlands

Pequea Township has a number of small wetlands located throughout the Township. National Wetlands Inventory (NWI) mapping shows 25 wetlands of approximately one acre in size in various drainageways and depressions. The largest wetlands in the Township are found

along Silver Mine Run, in the southwest corner of the Township. There are a total of 102.6 acres of NWI identified wetlands in Pequea Township. This acreage represents 1.2 percent of the Township's total land area. The wetlands identified in the NWI mapping are shown on Maps 3 and 4.

Development in and around wetlands is regulated by the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers. Construction in these areas should be preceded by a site delineation of the wetlands by an EPA approved technique and evaluation of the wetlands value for wildlife habitat, flood protection, and water quality improvement.

2.9 Scenic Vistas

Pequea Township is a rural township with rolling hills, woods, farms, and other distinctively rural features. Within these rural areas, there are many older farms and farmhouses. However, there are also newer homes peppered throughout the landscape, which, in some cases, disrupt the large-scale pattern of the rural landscape.

This setting of panoramic landscapes, wooded hillsides and streambeds, and quiet rural roads is what creates the atmosphere of the Township. The Township aims to retain this atmosphere.

In order to develop a procedure for the preservation of the rural atmosphere, the areas within the Township that possess the rural characteristics that residents have favored over time were identified in the 1990 comprehensive plan. The criteria for identification of these characteristics were as follows:

Character - Those areas of the Township that represent the scenic beauty and rural character, such as panoramic views, wooded hillsides, wooded streams, streams through pastures, farmlands, orchards, rolling hills, vineyards, the Pequea Creek, and the Conestoga River.

Features - Landscape units which provide visual interest and passive relaxation.

Encroachments - Those areas of the Township that detract from the rural character of the Township, such as junk and trash locations, transmission lines, unkempt buildings, misplaced industrial complexes, and urban type developments.

There are several roads through the Township which are used by persons either passing through the Township, or traveling for recreation purposes. The primary roads used for this purpose is PA Route 324, Long Lane, New Danville Pike, Rawlinsville Road, PA Route 272, Millersville Road, and a portion of Baumgardner Road.

The observance of the areas adjacent to these roads should be of concern to the citizens of the Township since they represent the Township to the traveler.

The Village of New Danville is a typical rural village, constructed historically at the crossroads of two rural roads. The village has none of the monotony of suburban residential developments. It is further unique in that it has no commercial establishments, other than the mini market.

There are a number of visual features in Pequea Township that are unique to Lancaster County. Pequea Township is divided between gently rolling hills and farmland in the north and steeper slopes with valley or ridge farms in the south. Boundaries of two winding creeks give Pequea Township precious features along the Conestoga and Pequea Creeks. There are also unusual rock outcroppings in the southern end of the Township. The productive farmland and wooded hillsides provide a refreshing reprieve from nearby urbanized areas.

A number of scenic vistas—those lands within the Township of particular scenic interest and natural resource value to the members of the community—were identified in the 1990 comprehensive plan. These vistas have remained relatively unchanged and continue to be appreciated by those who live in and travel through the Township. Map 5 shows the most prominent scenic vistas in Pequea Township, as identified in 1990. Table 2-5 presents the location and classification of each vista. Photographs of these and other scenic vistas are on file in the municipal building. The impact of future development on these scenic vistas should be closely evaluated in order to maintain the scenic integrity of the Township.

Table 2-3 Scenic Vistas of Pequea Township

Scenic Vistas of Pequea Township		
Vista Number	Location	Description
1	Millwood Road	Agriculture
2	Krissy Drive	Agriculture
3	Shultz Road	Agriculture
4	Shultz Road	Agriculture
5	Long Lane	Agriculture
6	Long Lane	Orchard
7	Long Lane	Orchard
8	Marticville Road	Orchard
9	Marticville Road	Agriculture
10	Marticville Road	Open Space
11	New Danville Pike	Agriculture
12	New Danville Pike	Agriculture
13	Lark Lane	Open Space
14	Deerfield Road	Orchard
15	Leaman Road	Stream
16	Leaman Road	Orchard
17	Lynn Dale Road	Orchard
18	Lynn Dale Road	Agriculture
19	Marticville Road	Open Space
20	Marticville Road	Open Space/Trees
21	Marticville Road	Agriculture
22	Marticville Road	Open Space
23	Good's Road	Agriculture
24	Run Valley Road	Open Space/Agriculture
25	Baumgardner Road	Agriculture
26	Baumgardner Road	Agriculture
27	Radcliff Road	Agriculture
28	Radcliff Road	Open Space
29	Hill Road	Agriculture
30	Radcliff Road	Agriculture
31	Linestown Road	Agriculture
32	Rawlinsville Road	Agriculture
33	Rawlinsville Road	Agriculture/Trees
34	Millwood Road	Agriculture
35	Clearview Road	Agriculture
36	Mt. Hope School Road	Agriculture
37	Sprecher Road	Agriculture
38	Millwood Road	Agriculture
39	Millwood Road	Agriculture
40	Silver Mine Road	Trees
41	Church Road	Agriculture
42	Second Lock Road	Agriculture
43	Bean Road	Agriculture
44	New Danville Pike	Open Space
45	New Danville Pike	Stream
46	Long Lane	Agriculture
47	Stoney Lane	Agriculture
48	Stoney Lane	Agriculture
49	West Penn Grant Road	Agriculture

(continued)		
Scenic Vistas of Pequea Township		
50	West Penn Grant Road	Agriculture
51	Tanyard Road	Agriculture
52	Run Valley Road	Open Space
53	Marticville Road	Open Space/Trees
54	Rawlinsville Road	Stream
55	Radcliff Road	Historic Cemetery
56	Radcliff Road	Stream
57	Pequea Creek	Open Space
58	Byerland Church Road	Stream/Agriculture
59	Byerland Church Road	Agriculture
60	Byerland Church Road	Agriculture
61	Byerland Church Road	Vineyard
62	Rawlinsville Road	Stream
63	No Picture	No Picture
64	Mt. Hope School Road	Historic/Agriculture
65	Creek Road	Rock Outcrop
66	Creek Road	Stream
67	Byerland Church Road	Covered Bridge
68	Byerland Church Road	Stream
69	No Picture	No Picture
70	Byerland Church Road	Covered Bridge
71	Run Valley Road	Agriculture
72	Willow Street Pike	Agriculture
73	Herrville Road	Agriculture
74	Herrville Road	Agriculture
75	Good's Road	Open Space
76	Run Valley Road	Agriculture
A-1	Rawlinsville Road	Agriculture
A-2	Stoney Lane	Agriculture
A-3	Bean Road	Agriculture/Stream
A-4	Second Lock Road	Agriculture
A-5	Second Lock Road	Stream
A-6	New Danville Pike	Open Space
A-7	Locust Lane	Trees
A-8	Indian Hill Road	Agriculture
A-9	Indian Hill Road	Trees/Stream
A-10	Indian Hill Road	Trees
A-11	Indian Hill Road	Streams
A-12	Millersville Road	Agriculture
A-13	Brenneman Road	Agriculture
A-14	Brenneman Road	Agriculture/Trees
A-15	West Penn Grant Road	Agriculture
A-16	Byerland Church Road	Vineyard
A-17	Mt. Hope School Road	Dairy
A-18	Indian Hill Road	Stream/Historic
A-19	Indian Hill Road	Trees
A-20	Indian Hill Road	Rock outcrop
A-21	Indian Hill Road	Rock outcrop
A-22	Creek Road	Agriculture
A-23	Indian Hill Road	Trees

(continued)		
Scenic Vistas of Pequea Township		
A-24	Indian Hill Road	Agriculture
A-25	Indian Hill Road	Agriculture/Trees
A-26	Indian Hill Road	Agriculture/Trees
A-27	Indian Hill Road	Agriculture/Trees
B-1	Conestoga Creek	Stream
B-2	Second Lock Road	Historic
B-3	Millersville Road	Agriculture
B-4	New Danville Pike	Agriculture
B-5	New Danville Pike	Agriculture
B-6	Long Lane	Orchard
B-7	Whipporwill Drive	Open Space
B-8	New Danville Pike	Agriculture
B-9	Millwood Road	Agriculture
B-10	Church Road	Agriculture
B-11	Rawlinsville Road	Agriculture
B-12	Herrville Road	Stream
B-13	Herrville Road	Stream
B-14	Herrville Road	Agriculture
B-15	Kendig Road	Agriculture
B-16	Millwood Road	Agriculture
B-17	Millwood Road	Agriculture
B-18	Millwood Road	Agriculture

2.10 Summary

Pequea Township is characterized as a rolling upland landscape. Steep slopes of greater than 15 percent are very limited. Soils in Pequea Township are generally well-drained and well-suited to farmland. Together prime farmland soils and soils of statewide importance total 6259.0 acres or 71.8 percent of the Township's total land area. They are also generally suitable for conventional or alternative on-lot systems. Geologic formations are structurally stable under excavation and construction conditions and provide an adequate supply of groundwater, though karst areas are prone to sinkholes. Groundwater hardness and quality are variable. The Township is evenly divided between the Conestoga and Pequea Creek watersheds. Nearly half of the stream channel miles in the Township are classified as impaired by DEP. The Township's woodlands and waterway corridors are home to potentially two endangered species and a general abundance of wildlife. The Township contains numerous scenic vistas, inventoried in 1989 and still considered scenic in 2004.

CHAPTER 3 POPULATION

Population data are crucial in making planning decisions involving the physical, economic and social development of the Township. A quantitative analysis of population and a qualitative analysis of population composition assist in the formulation of reasonable projections of future population levels and needs.

Population data can be used to project both the amount of land needed to house the projected population levels and types of development which should take place in Pequea Township. Future population demands will also dictate the amount and scope of future schools, recreation facilities, transportation facilities and other public facilities and utilities. All these elements must be matched to future population levels to maintain or improve the quality of the life in the Township.

3.1 Population Growth Trends

Population growth can be linear but in many cases occurs in an irregular pattern. Various social, economic, and policy conditions can influence growth. Pequea Township is one examples of a community that has had multiple phases of expansion and contraction. As reported by the Census in 2000, Pequea Township is currently in a phase of stability or mild contraction.

3.1.1 Historic Township Growth, 1860-2000

Pequea Township is a rural community under some growth pressure due to its proximity to the City of Lancaster and growing suburban areas of the county. The largest growth periods in the Township have been the post war "baby booms" from the Civil War, and World Wars I and II. Table 3-1 shows the population counts from 1860 to 1986.

Table 3-1 Historic Population Trends, Pequea Township

Historic Population Trends, Pequea Township			
Year	Population	Numeric Increase	Percent Change
1860	1,168	-	-
1870	1,276	108	9.2
1880	1,351	75	5.9
1890	1,299	-52	-3.8
1900	1,261	-38	-2.9
1910	1,246	-15	-1.2
1920	1,196	-50	-4.0
1930	1,434	238	19.9
1940	1,524	90	6.3
1950	1,704	180	11.8
1960	2,435	731	42.9
1970	3,002	567	23.3
1980	3,557	555	18.5
1990	4,423	866	24.3
2000	4,358	-65	-1.5

Source: 1990 Comprehensive Plan (1969 Comprehensive Plan, LCPC)

The most rapid growth in the Township took place during the 1950's, when the population increased by 731 persons or 43 percent. This rate of growth remained strong in numbers but declined to 23 percent during the 1960's. The 1970's saw an even slower 18 percent growth rate though again the increase in number of new residents was nearly the same as the previous decade. The Township flourished in the 1980's by over 850 residents—a growth rate of 24 percent. During the 1990's, the Township's population and growth rate declined by 65 persons and 1.5 percent, respectively, as reported by the US Census Bureau.

The reported decline in population came as a surprise to the Township. Land development plan submission and building permit activity both suggested positive growth during the 1990's. When asked to review the 2000 census counts, the Census Bureau stood by its reported count of 4,358 residents in Pequea Township. The Census statistics are presented and discussed within this chapter as the official count. However, this issue was given careful consideration in the development of the population projections for future policy making, as shown in Section 3.3.

3.2 Recent Township Growth, 1970-2000

Table 3-2 presents census counts for Pequea Township, surrounding municipalities, Lancaster County and the state of Pennsylvania. A comparison of growth rates with Lancaster County and Pequea Township's surrounding municipalities indicates that suburban Lancaster is expanding further from Lancaster City over time. Pequea Township's growth over the 1970-2000 period has been slightly less than the County's growth rate and below the average growth rate of 71.8 percent for surrounding municipalities.

Table 3-2 Population Change for Pequea Township, 1970-2000

Population Change for Pequea Township, 1970-2000								
Jurisdiction	Total Population				Population Change			
	1970	1980	1990	2000	1990-2000		1970-2000	
					#	%	#	%
Pennsylvania	11,800,766	11,864,720	11,882,842	12,281,054	398,212	3.4	480,288	4.1
Lancaster County	320,079	362,346	424,718	470,658	45,940	10.8	150,579	47.0
Pequea Township	3,002	3,557	4,423	4,358	-65	-1.5	1,356	45.2
Conestoga Township	2,447	3,032	3,486	3,749	263	7.5	1,302	53.2
Lancaster Township	10,329	10,833	13,244	13,944	700	5.3	3,615	35.0
Manor Township	9,769	11,474	14,130	16,498	2,368	16.8	6,729	68.9
Martic Township	2,419	3,286	4,382	4,990	608	13.9	2,571	106.3
Millersville Borough	6,396	7,668	8,124	7,774	-350	-4.3	1,378	21.5
Providence Township	2,842	4,781	6,099	6,651	552	9.1	3,809	134.0
West Lampeter Township	6,332	6,836	9,910	13,145	3,235	32.6	6,813	107.6

Source: Pequea Township Comprehensive Plan 1990
U.S. Census Bureau

In relation to Lancaster County as a whole, Pequea Township constituted about 8 percent of the County's population in 2000 with just over 4,300 residents. Historically between 1970 and

2000, the Township increased its population by 45 percent, or 1,356 persons. This rate is similar to the County growth rate for the same 1970-2000 period. During this time, the largest population change occurred between 1980 and 1990, as Pequea gained more than 860 residents. The 1980's were also a high growth time for the County. Unlike Lancaster County, which has continued to gain population steadily in the 1990's, the Township recorded a small population decrease of 2 percent between 1990 and 2000.

Pequea Township's recent population decrease is an anomaly when compared to neighboring municipalities in Lancaster County. Millersville Borough (-4 percent) was the only other municipality to record a population decrease between 1990 and 2000. Nearby population changes ranged from a 5 percent increase in Lancaster Township to a 33 percent increase in West Lampeter Township.

3.1.3 Regional Growth Trends

Table 3-3 presents the population density increase for Pequea Township and its surrounding municipalities. In 1990, Pequea Township's population density was 0.51 persons per acre. According to the U.S. Census Bureau, the Township's population density decreased as a result of its reported population loss. However, the Township's population density, in fact, is believed to have increased in relation to its estimated population increase (based on residential building permits, as shown later in Table 3-9).

Table 3-3 Population and Population Density Increase among Pequea Township and Surrounding Municipalities, 1970-2000

Population and Population Density Increase among Pequea Township and Surrounding Municipalities, 1970-2000							
Jurisdiction	Land Area (Acres)	Distribution of Total Population					
		1990		2000		2000 with Adjusted Population for Pequea Township	
		Pop	Persons/Acre	Pop	Persons/Acre	Pop	Persons/Acre
Pequea Township	8,704.0	4,423	0.51	4,358	0.50	4,726	0.54
Conestoga Township	9,344.0	3,486	0.37	3,749	0.40	3,749	0.40
Lancaster Township	3,840.0	13,244	3.45	13,944	3.63	13,944	3.63
Manor Township	24,640.0	14,130	0.57	16,498	0.67	16,498	0.67
Martic Township	18,560.0	4,382	0.24	4,990	0.27	4,990	0.27
Millersville Borough	1,280.0	8,124	6.35	7,774	6.07	7,774	6.07
Providence Township	12,864.0	6,099	0.47	6,651	0.52	6,651	0.52
West Lampeter Township	10,496.0	9,910	0.94	13,145	1.25	13,145	1.25
Region	89,728.0	63,798	0.71	71,109	0.79	71,477	0.80

Source: Pequea Township Comprehensive Plan 1990; U.S. Census Bureau; Gannett Fleming, Inc.

Like Pequea Township, population density figures increased in all of the surrounding municipalities, except Millersville Borough. West Lampeter Township had the largest increase—0.31 persons per acre. Lancaster and Manor Townships has increases of 0.18 and 0.10 persons per acre, respectively. Conestoga and Martic Townships had density increases identical to Pequea Township (0.03 persons per acre); Providence Township had an increase of 0.04 persons per acre.

3.2 Special Population Characteristics

3.2.1 Age and Gender Distribution

The age and gender distribution of Township residents is a key factor in population growth and the type of services best suited for the community as a whole. Healthy growth will take place only if there is a balance of age groups. A high percentage of young adults in the child-bearing years may demand rapid growth of schools and child care services. Conversely, a high percentage of senior citizens can result in slower growth and increased demand for specialized housing and community services related to this age group.

Table 3-4 illustrates Pequea Township’s gender distribution in relation to Lancaster County and the state. The Township’s gender ratio is most similar to neighboring Conestoga, Martic, and Providence Townships. Figure 3-1 shows the Township’s age distribution.

In 2000, the number of males (2,212) exceeded the number of females (2,146). The populations of both genders decreased between 1990 and 2000, however, the number of males declined at about half the rate (0.8 percent) of the female decline (2.0 percent). In the event that males, particularly younger males, continue to outnumber younger females, the Township may experience a decrease in the number of family formations, and possibly a reduced birth rate.

Table 3-4 Gender Distribution, 1990-2000

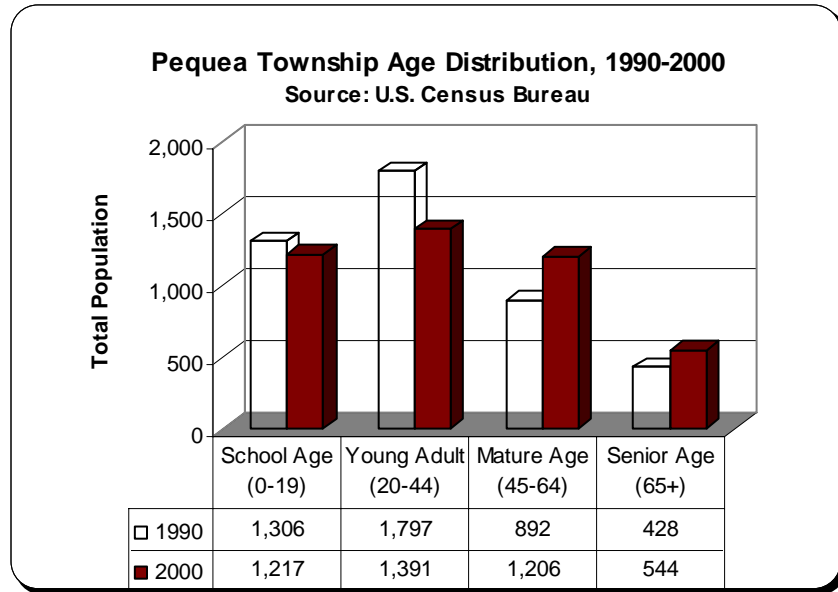
Gender Distribution, 1990-2000						
Jurisdiction	1990			2000		
	Male	Female	M/F Ratio	Male	Female	M/F Ratio
Pennsylvania	5,693,222	6,188,421	0.92	5,929,663	6,351,391	0.93
Lancaster County	205,296	217,526	0.94	229,806	240,852	0.95
Pequea Township	2,229	2,194	1.02	2,212	2,146	1.03
Conestoga Township	1,756	1,714	1.02	1,902	1,847	1.03
Lancaster Township	6,011	7,176	0.84	6,442	7,502	0.86
Martic Township	2,266	2,096	1.08	2,587	2,403	1.08
Millersville Borough	3,466	4,633	0.75	3,598	4,271	0.84
Providence Township	3,012	3,059	0.98	3,321	3,330	1.00
West Lampeter Township	4,679	5,275	0.89	6,201	6,907	0.90

Sources: U.S. Census Bureau, 1990 and 2000 STF3A, and 2001, SF1A

Pequea Township follows state and County trends with the highest percentage of its population in the Young Adult (20-44 years) age group. Despite a drastic decline of 23 percent in this group between 1990 and 2000, the Township still maintains 32 percent of its population within the ages of 20 and 44. This group is followed by the School age group (0-19 years) and

the Mature age group (45-64 years), which each represent an additional 28 percent of the population. In total, 60 percent of Pequea Township’s population is between the ages of 20 and 64.

Figure 3-1 Pequea Township Age Distribution, 1990-2000



The largest gain by any single age group was experienced by the Mature age group (45-64 years), which increased by a significant 35 percent, or 314 persons, between 1990 and 2000. This trends occurred in contrast to a 27 percent decrease in this age group experienced at the County level. The Senior age group (65+ years) also increased in the last decade, from 428 persons to 544 persons, reflecting a 27 percent increase. This group now represents about 13 percent of the Township’s population. While the rise in the senior population between 1990 and 2000 follows a County trend, the State actually recorded a slight decline of nearly 1 percent in this age group during the same time period. These trends may indicate a growing desire for the mix of rural lifestyle and urban amenities offered by many communities within Lancaster County. Pequea Township exemplifies this condition.

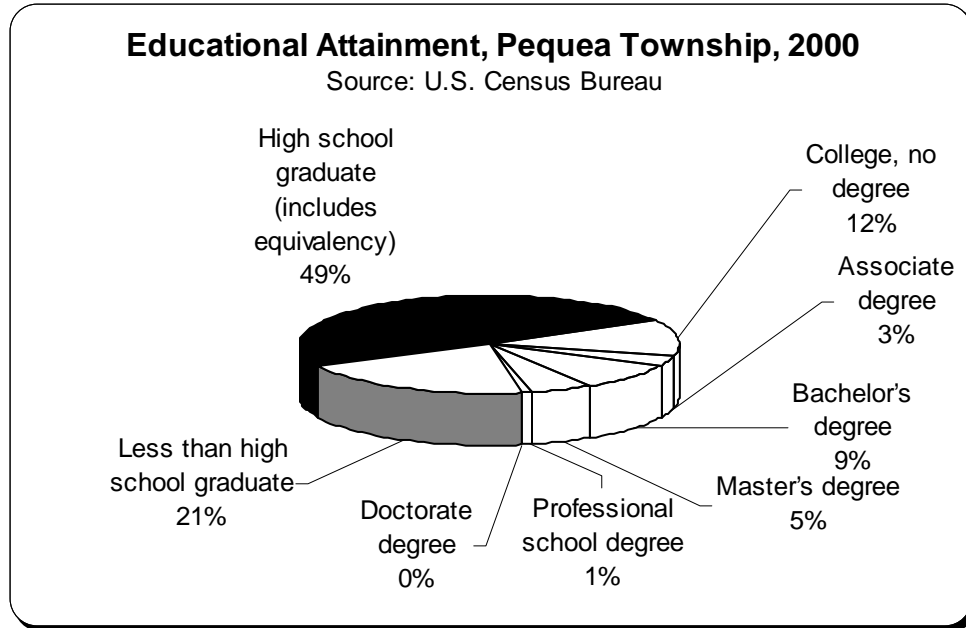
Between 1990 and 2000 Pequea Township’s median age increased by nearly 6 years from 33.4 years to 39.1 years. This trend was also experienced by Lancaster County and the State, though to a smaller degree. During the same time period, the County’s median age increased from 32.8 to 36.1, while the State median age rose 3 years to 38.0 years. The increase in median age corresponds with the population increases in the Mature and Senior age groups.

3.2.2 Education

Figures 3-2 and 3-2 demonstrate the educational attainment of local residents over the age of 25. This information reflects the level of skill available in the local labor force and the ability of the labor force to compete in the labor market. Skills provides a degree of economic

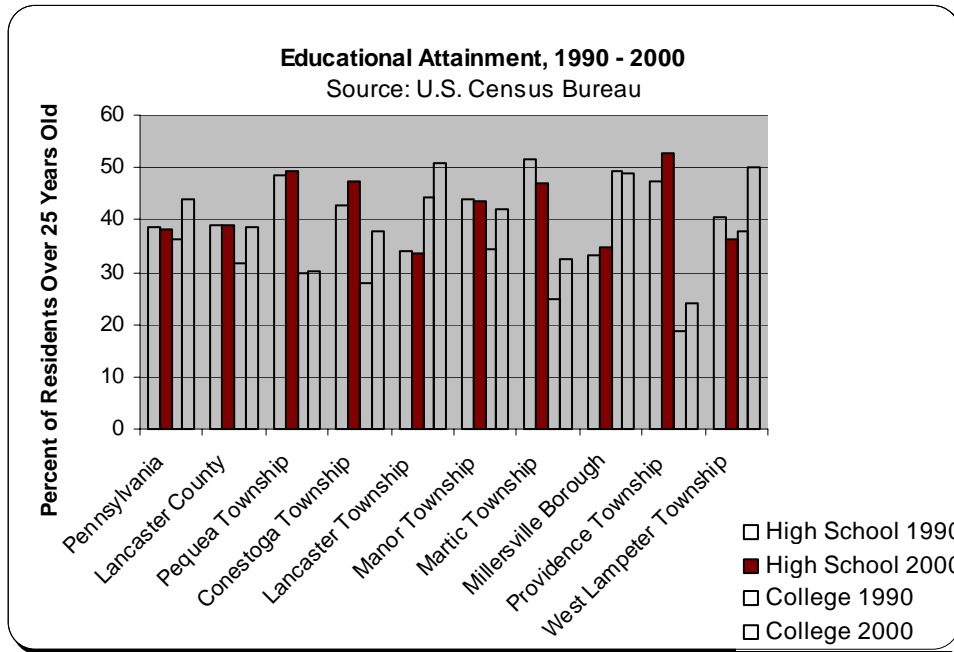
security for the individual and the community at large, as well as improving the general economic and employment conditions of the region.

Figure 3-2 Educational Attainment, Pequea Township, 2000



With 49 percent of individuals over the age of 25 attaining a high school education, Pequea Township holds the second highest high school completion rate in the area next to Providence Township (53 percent). However, the number of individuals in the Township that have attended at least one year of college (30 percent) is somewhat lower than County (39 percent) and State (44 percent) levels. Notably, this percentage has not changed since 1990. This statistic stands in contrast to notable increased percentages of college level participation for all but one of the surrounding municipalities.

Figure 3-3 Educational Attainment, 1990-2000



3.2.3 Income

The U.S. Census Bureau collects and presents income data at the household, family and per capita levels⁸. This information is presented for Pequea Township, surrounding municipalities, Lancaster County, and the state in Table 3-5 and Figure 3-4.

Pequea Township maintains the highest median household income of the enumerated municipalities. The Township recorded a slight real decrease in median household income (\$215 or 0.4 percent) between 1990 and 2000 when accounting for inflation. Compared to the state and County decreases of 4 and 5 percent respectively, Pequea Township’s shift is minor. In addition, only two neighboring municipalities posted increases in median household income during this time period, namely Martic (1.1 percent) and Conestoga (0.4 percent) Townships.

The median family income for Pequea Township showed real growth of about 4 percent between 1990 and 2000. This rise of about \$20,000 represented the largest increase in median family income in the region. During this time, neighboring municipalities recorded an average

⁸ Household income. This includes the income of the householder and all other individuals 15 years old and over in the household, whether they are related to the householder or not. Because many households consist of only one person, average household income is usually less than average family income.

Family income. In compiling statistics on family income, the incomes of all members 15 years old and over related to the householder are summed and treated as a single amount.

Per capita income. Per capita income is the mean income computed for every man, woman, and child in a particular group. It is derived by dividing the total income of a particular group by the total population in that group.

shift of about 2 percent, ranging from a 13 percent decline in Lancaster Township, to a 3 percent increase in Conestoga Township.

Table 3-5 Median and Per Capita Income Levels, 2000

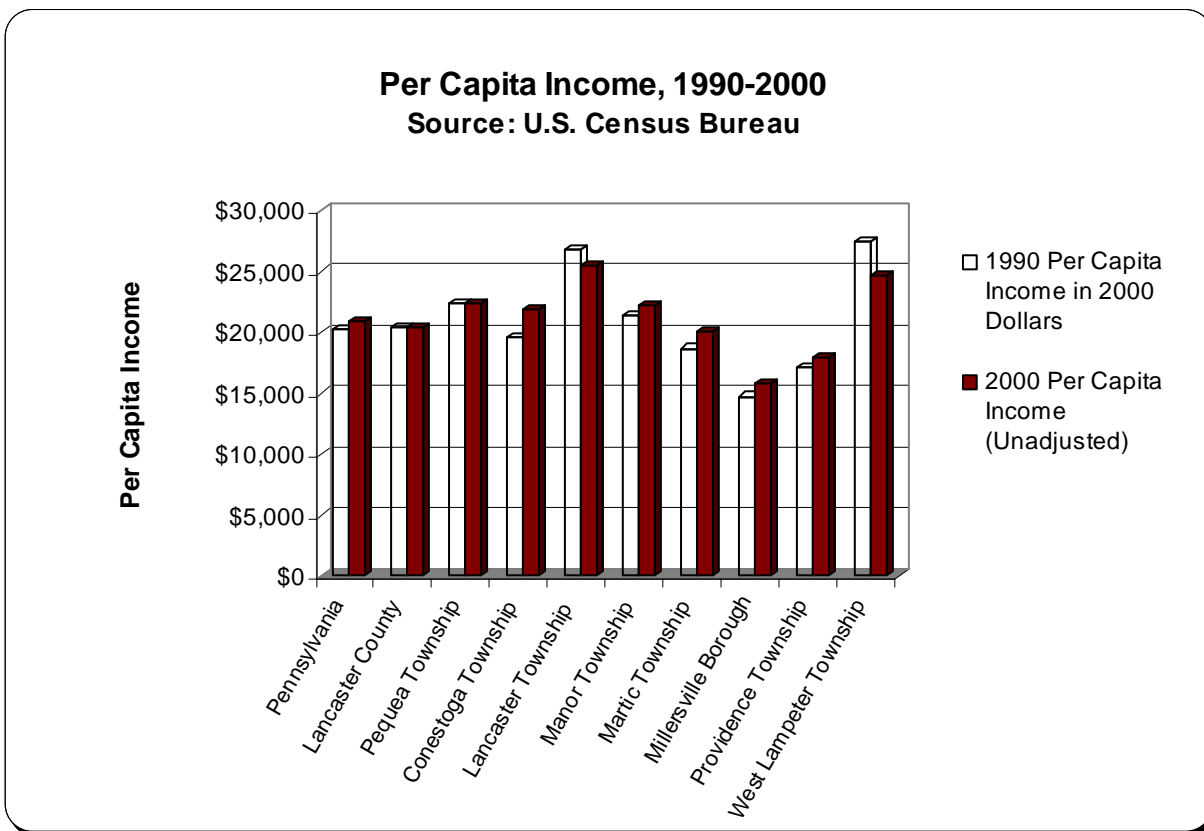
Median and Per Capita Income Levels, 2000						
Municipality	Median Household Income		Median Family Income		Per Capita Income (Unadjusted)	
	Census Reported 1999	Real Growth 1989-1999	Census Reported 1999	Real Growth 1989-1999	Census Reported 1999	Real Growth 1989-1999
Pennsylvania	\$40,106	-4.1	\$49,184	-1.9	\$20,880	3.2
Lancaster County	\$45,507	-4.8	\$52,513	-3.4	\$20,398	-0.3
Pequea Township	\$52,969	-0.4	\$59,010	4.1	\$22,323	0.0
Conestoga Township	\$51,895	0.4	\$57,768	3.2	\$21,939	11.6
Lancaster Township	\$44,459	-13.8	\$52,961	-12.8	\$25,555	-4.7
Manor Township	\$47,806	-3.3	\$54,958	1.3	\$22,243	4.0
Martic Township	\$52,106	1.1	\$56,185	-0.9	\$20,151	7.8
Millersville Borough	\$38,425	-11.1	\$53,110	-1.9	\$15,773	6.9
Providence Township	\$45,018	-0.4	\$49,738	0.2	\$17,912	4.3
West Lampeter Township	\$51,043	-2.8	\$61,053	2.8	\$24,713	-9.9

Sources: U.S. Census Bureau, 1990 and 2000 SF3A

Note: U.S. Northeast urban average inflation index from 1989 to 1999 equals 1.34

Per Capita Income for residents of Pequea Township remained steady over the last decade, while the state average increased about 3 percent, from \$20,227 to \$20,880. Even so, with a 2000 per capita income of \$22,323, Pequea Township maintains a higher than average per capita income when compared to the state (\$20,880), Lancaster County (\$20,298), and neighboring municipalities (average of \$21,007). Other area municipalities recorded per capita incomes ranging from a high of \$25,555 in Lancaster Township to a low of \$15,773 in Millersville Borough, which is influenced by the large student population at Millersville University.

Figure 3-4 Per Capita Income, 1990-2000



3.2.4 Average Household Size

Average household sizes have been steadily decreasing in Pequea Township, across Lancaster County and the state for decades. Families typically have fewer children than families of the past and older residents are increasingly maintaining independent households. Pequea Township’s average household size was 2.88 persons in 1990 and dropped to 2.75 persons in 2000, as shown in Table 3-6. This size is higher than both Lancaster County and Pennsylvania average household sizes, and second highest among surrounding municipalities, following Martic Township.

Table 3-6 Average Household Size for Pequea Township, 1990-2000

Average Household Size for Pequea Township, 1990-2000		
Municipality	Persons per Household	
	1990	2000
Pennsylvania	2.57	2.48
Lancaster County	2.80	2.64
Pequea Township	2.88	2.75
Conestoga Township	2.78	2.73
Lancaster Township	2.32	2.29
Manor Township	2.66	2.53
Martic Township	2.98	2.90
Millersville Borough	2.44	2.27
Providence Township	2.86	2.78
West Lampeter Township	2.44	2.42

Source: U.S. Census Bureau

3.3 Future Population Growth

Future population growth can be estimated by various methods: projections, forecasts, and targets, however all three are commonly referred to as projections. The following description of the various methods was prepared by the Lancaster County Planning Commission.

Projections are estimates of future populations based on statistical models that extrapolate past and present trends into the future. Projections can be created through very simple or very complex calculations. The type of calculations used is based on the available data and desired use of the projection.

Forecasts are also estimate of a future population based on statistical models. Forecasts, however, include additional adjustments made to reflect assumptions of future changes.

Targets express desirable future populations based on policies and goals.

Population projections of Pequea Township and Lancaster County were prepared in 2003 for Gannett Fleming, Inc. by Bondata of Hummelstown. These projections, shown in Table 3-7, anticipate a gradual decline in the Township's population. According to these projections, Pequea Township would maintain a population of 3,600 to 3,800 residents through 2025. While this signifies a gradual decline of about 14 percent of the population, the largest decrease is projected to occur between 2020 and 2025. During those 5 years the Township may lose over 4 percent of its population, equaling about 175 residents. These projections reflect the trend of population decline experienced by the Township between 1990 and 2000, as reported by the Census Bureau. While the Township administration does not agree with the 2000 Census figures, as previously noted, the Census figures are the basis for this projection methodology.

Table 3-7 Population Projections, 1990-2025

Population Projections, 1990-2025											
Jurisdiction	Census Counts		Population Projections					Projected Population Change			
	1990	2000	2005	2010	2015	2020	2025	2000-2010		2000-2025	
								#	%	#	%
Lancaster County	424,718	470,658	494,697	519,515	545,170	571,726	599,258	48,857	10.4	128,600	27.3
Pequea Township	4,423	4,358	4,258	4,160	4,032	3,943	3,768	-198	-4.5	-590	-13.5
Conestoga Township	3,486	3,749	3,882	4,026	4,150	4,240	4,421	277	7.4	672	17.9
Lancaster Township	13,244	13,944	14,288	14,398	14,964	15,167	15,620	454	3.3	1,676	12.0
Manor township	14,195	16,498	17,711	19,018	20,271	21,835	23,022	2,520	15.3	6,524	39.5
Martic Township	4,382	4,990	5,308	5,650	5,973	6,383	6,679	660	13.2	1,689	33.9
Millersville Borough	8,124	7,774	7,576	7,381	7,131	6,952	6,619	-393	-5.1	-1,155	-14.9
Providence Township	6,099	6,651	6,933	7,238	7,509	7,880	8,101	587	8.8	1,450	21.8
West Lampeter Township	9,910	13,145	14,915	16,845	18,813	21,174	23,274	3,700	28.1	10,129	77.1

Source: U.S. Census Bureau, BonData

Population projections were also prepared by Lancaster County in 2002, as presented in Table 3-8. These projections were developed using a more localized methodology and suggest a trend of gradual growth over the next 20 years.

Table 3-8 Population Projections, 2010-2030

Population Projections, 2010-2030														
Jurisdiction	Census Counts				Population Projections				Population Change					
	1970	1980	1990	2000	2010	2020	2030	2000-2010		2010-2020		2020-2030		
								#	%	#	%	#	%	
Lancaster County	319,654	362,346	422,822	470,658	509,726	548,980	585,487	39,068	8.3	39,254	7.7	36,507	6.6	
Pequea Township	3,002	3,557	4,512	4,358	4,668	4,967	5,230	310	7.1	299	6.4	263	5.3	
Conestoga Township	2,447	3,032	3,470	3,749	4,047	4,339	4,598	298	7.9	292	7.2	259	6.0	
Lancaster Township	10,329	10,833	13,187	13,944	16,105	18,601	n/a	2,161	15.5	2,496	15.5	n/a	n/a	
Manor Township	9,769	11,474	14,130	16,498	18,229	19,942	21,514	1,731	10.5	1,713	9.4	1,572	7.9	
Martic Township	2,419	3,286	4,362	4,990	5,671	6,373	7,054	681	13.6	702	12.4	681	10.7	
Millersville Borough	6,396	7,668	8,099	7,774	7,992	8,195	8,345	218	2.8	203	2.5	150	1.8	
Providence Township	2,842	4,781	6,071	6,651	7,657	8,740	9,851	1,006	15.1	1,083	14.1	1,111	12.7	
West Lampeter Township	6,374	6,836	9,865	13,145	15,161	17,227	19,238	2,016	15.3	2,066	13.6	2,011	11.7	

Source: LCPC (May 2002); Lancaster Township

According to the County projections, growth over the next 20 years will be moderate—approximately 300 additional residents per decade or half the rate of what the Township experienced in the 1960s and 1970s. As a percentage of the projected regional growth, these numbers suggest that Pequea Township will absorb between 5 and 6 percent of regional growth (that of Pequea Township and the surrounding municipalities). The County’s projections support the Township’s opinion that the 2000 Census reflects some type of statistical anomaly or anomalies.

After reviewing both sets of projections, the Township sought validation of the County’s projections. The Township developed a revised 2000 population estimate based upon residential building permits⁹, average household size, and housing unit occupancy to offer a conservative estimate of resident population growth—an additional 303 residents since 1990. This adjusted population estimate is shown in Table 3-9.

⁹ Recent development in Pequea Township, including an inventory of building permits issues 1990-2003, can be found in Section 5.2

Table 3-9 Adjusted Population Estimate for Pequea Township, 2000

Adjusted Population Estimate for Pequea Township, 1970-2000								
	Census Counts			Adjusted Estimate of 2000 Population	Population Change			
	1970	1980	1990		1990-2000		1970-2000	
					#	%	#	%
Pequea Township	3,002	3,557	4,423	4,726	303	6.9	1,724	57.4
New Residential Building permits 1990-1999	Persons per occupied unit (2000)	Housing Unit Occupancy Rate	Additional persons since 1990					
119	2.75	0.927	303					

Source: Gannett Fleming, Inc.

With this revised estimate of Township population, the Township applied Lancaster County’s growth rates in order to determine a reasonable population forecast. The County’s growth rates were 7.1 percent, 6.4 percent, and 5.3 percent for each of the next three decades, as shown in Figure 3-8. At these rates, Pequea Township could continue to add approximately 300 new residents each decade, as shown in Table 3-10.

Table 3-10 Population Projections for Pequea Township, 2010-2030

Population Projections for Pequea Township, 2010-2030													
	Census Counts				Population Projections*			Population Change					
	1970	1980	1990	2000	2010	2020	2030	2000-2010		2010-2020		2020-2030	
								#	%	#	%	#	%
Population	3,002	3,557	4,512	4,726	5,062	5,385	5,671	336	7.1	324	6.4	285	5.3

* based on adjusted 2000 Township population

Source: Gannett Fleming, Inc.

These population projections may be revised by the Township in the future based upon changes in socioeconomic conditions and available data.

3.4 Summary

Pequea Township’s population growth has not been linear in nature. The population has both grown and contracted over time. The 1990’s appear to have closed a period of rapid growth, and perhaps indicate a mild population recession. While the Census Bureau reports a loss of population from 1990 to 2000, the Township believes there has been some growth, based on building permit activity.

The Township’s demographic characteristics reflect a mature population in age, educational attainment, and income levels. The Township aged rapidly from 1990 to 2000, adding nearly 6 years to its median age, as a result of fewer younger residents. While various projections for the future suggest a range of moderate decline to moderate growth, the Township expects to continue to grow at a moderate rate of 5-7 percent over the next 20 years.

CHAPTER 4 HOUSING

The quality of housing is extremely important to the prosperity of Pequea Township. Attractive housing and well maintained residential neighborhoods are one of the most important assets of any community. Good housing creates a sound tax base that will continue to appreciate in value and will assure that residents are living in a safe and healthy environment.

Another important feature of the local housing market is the variety of housing types and prices. A variety of styles and prices provide housing opportunities for individuals and families interested in entering the housing market, as well as already in the market. An analysis of existing housing conditions and characteristics coupled with population projections is necessary when identifying housing needs for the future.

4.1 Housing Inventory and Growth

Pequea Township posted an increase of 24 housing units, or 1.5 percent, between 1990 and 2000. This was the lowest rise in both the number and percentage of housing units when compared to surrounding communities. In the same time period, housing unit increases in nearby municipalities ranged from 33 percent in West Lampeter Township to 8 percent in Millersville Borough, while the County posted a 15 percent increase.

Table 4-1 Housing Unit Growth, 1980-2000

Housing Unit Growth, 1980-2000									
Municipality	Total Housing Units by Decennial Census			Change					
	1980*	1990	2000	1980-1990		1990-2000		1980-2000	
				#	%	#	%	#	%
Pennsylvania	4,596,431	4,938,140	5,249,750	341,709	7.4	311,610	6.3	653,319	14.2
Lancaster County	129,368	156,462	179,990	27,094	20.9	23,528	15.0	50,622	39.1
Pequea Township	1,184	1,602	1,626	418	35.3	24	1.5	442	37.3
Conestoga Township	1,085	1,289	1,409	204	18.8	120	9.3	324	29.9
Lancaster Township	4,341	5,534	6,075	1,193	27.5	541	9.8	1,734	39.9
Manor Township									
Martic Township	1,154	1,524	1,789	370	32.1	265	17.4	635	55.0
Millersville Borough	2,027	2,324	2,501	297	14.7	177	7.6	474	23.4
Providence Township	1,667	2,181	2,486	514	30.8	305	14.0	819	49.1
West Lampeter Township	2,539	4,107	5,451	1,568	61.8	1,344	32.7	2,912	114.7

Source: U.S. Census Bureau, Pequea Township Comprehensive Plan 1990

*1980 figures include only year-round housing units. Due to the exclusion of seasonal housing, related calculations may be slightly skewed.

Owner-occupied units in Pequea Township increased by 44 units or 3 percent since 1990. This increase in comparison to surrounding municipalities reflects the Township's very moderate growth. Increases in owner-occupied units in surrounding municipalities ranged from an increase of 106 units (10 percent) in Conestoga Township to 1,019 units (39 percent) in West Lampeter Township. Since the total number of housing units grew only 24 units, the increase in owner-occupied units suggests a conversion of several previously renter-occupied units.

As a percent of the total housing units, owner-occupied units grew from 81.0 to 82.5 percent. At this increase, Pequea Township's home ownership rates experienced a moderate increase in comparison to the surrounding region. Other local municipalities recorded rate changes ranging from 3 percent in Martic and West Lampeter Townships to a slight decline (less than one percent) in home ownership rate in Providence Township.

Table 4-2 Housing Occupancy and Tenure Analysis, 1990-2000

Housing Occupancy and Tenure Analysis, 1990-2000									
Municipality	Total Housing Units								
	Occupied						Vacant		
	Owner-occupied			Renter-occupied			1990	2000	% change
	1990	2000	% change	1990	2000	% change			
Pennsylvania	3,176,121	3,406,337	7.2	1,319,845	1,370,666	3.9	442,174	472,747	6.9
Lancaster County	104,752	122,264	16.7	46,204	50,296	8.9	5,506	7,430	34.9
Pequea Township	1,298	1,342	3.4	272	239	-12.1	34	45	32.4
Conestoga Township	1,041	1,147	10.2	208	227	9.1	40	35	-12.5
Lancaster Township	3,164	3,512	11.0	2,171	2,355	8.5	199	208	4.5
Manor Township	4,017	5,203	29.5	1,243	1,261	1.4	171	246	43.9
Martic Township	1,250	1,519	21.5	210	194	-7.6	64	76	18.8
Millersville Borough	1,384	1,516	9.5	830	840	1.2	110	145	31.8
Providence Township	1,815	2,062	13.6	304	325	6.9	62	99	59.7
West Lampeter Township	2,622	3,641	38.9	1,392	1,647	18.3	91	163	79.1

Source: U.S. Census Bureau

*For seasonal, recreational or occasional use

Housing Occupancy and Tenure Analysis, 1990-2000									
Municipality	Total Housing Units								
	Occupied as % of Total						Vacant as % of Total		
	Owner-occupied			Renter-occupied			1990	2000	% change
	1990	2000	% change	1990	2000	% change			
Pennsylvania	64.3	64.9	0.6	26.7	26.1	-0.6	9.0	9.0	0.1
Lancaster County	67.0	67.9	1.0	29.5	27.9	-1.6	3.5	4.1	0.6
Pequea Township	81.0	82.5	1.5	17.0	14.7	-2.3	2.1	2.8	0.6
Conestoga Township	80.8	81.4	0.6	16.1	16.1	0.0	3.1	2.5	-0.6
Lancaster Township	57.2	57.8	0.6	39.2	38.8	-0.5	3.6	3.4	-0.2
Manor Township	76.4	80.5	4.1	23.6	19.5	-4.1	3.1	3.7	0.6
Martic Township	82.0	84.9	2.9	13.8	10.8	-2.9	4.2	4.2	0.0
Millersville Borough	59.6	60.6	1.1	35.7	33.6	-2.1	4.7	5.8	1.1
Providence Township	83.2	82.9	-0.3	13.9	13.1	-0.9	2.8	4.0	1.1
West Lampeter Township	63.8	66.8	3.0	33.9	30.2	-3.7	2.2	3.0	0.8

Source: U.S. Census Bureau

*For seasonal, recreational or occasional use

Renter-occupied units decreased by 33 units or 12 percent since 1990. A decrease in renter-occupied units was also experienced in Martic Township (16 units or 7.6 percent). Both Lancaster and West Lampeter Townships experienced strong increases in renter-occupied units, 184 units (9 percent) and 255 units (18 percent), respectively.

As a percent of the total housing units, renter-occupied units declined from 17.0 to 14.7 percent. Similar trends were noted for Martic and West Lampeter Townships and Millersville Borough, where the decline of renter-occupied units ranged from 2 to 4 percent. Conestoga Township was the only municipality to retain its renter-occupied rate 16.1 percent of total housing units.

Vacant units increased from 34 to 45 units between 1990 and 2000. Though this increase is small in number (11 units), it reflects a significant change (32.4 percent) over the 1990 to 2000 period and should be further monitored. As a percent of the total housing units, vacant units grew from 2.1 to 2.8 percent.

4.2 Value of Housing

The Township offers a variety of housing options for individuals and families of various income levels, as shown in Table 4-3. Following trends at the County level, most homes (59 percent) in Pequea Township are in the \$100,000 to \$149,999 value range, followed by those just slightly less expensive at \$70,000 to \$99,999 (19 percent). This value distribution is similar in nearly all neighboring municipalities. However, with 98 percent of homes valued at \$70,000 or more, there are relatively few options for home ownership among lower income individuals in Pequea Township.

Pequea Township's median owner-occupied housing value is \$122,000. This value is slightly higher than that of Conestoga, Lancaster, and Providence Townships, Millersville Borough and the County, but lower than Martic and West Lampeter Townships.

The value of the Township's renter-occupied units is more affordable. The Township maintains the second lowest median renter-occupied unit value at \$477.

Another measure of a community's housing affordability is the percentage of household income spent on housing and related costs. When housing costs exceed 30 percent of monthly household income, a household is defined as cost burdened. When housing costs exceed 50 percent, a household is defined as extremely cost burdened. These statistics are determined for both owner- and renter-occupied housing units.

Pequea Township residents are not particularly cost burdened when compared to surrounding municipalities and the County, as shown in Tables 4-4 and 4-5. The Township's rate of extremely cost burdened households exceeds the County rate for only one of four categories, namely extremely cost burdened, owner-occupied units. For all other categories, the Township's percentage of households is among the lowest of surrounding municipalities.

Table 4-3 Values of Specified Owner-Occupied and Specified Renter-Occupied Units, 2000

Values of Specified Owner-Occupied and Specified Renter-Occupied Units, 2000										
Value	Pennsylvania		Lancaster County		Pequea Township		Conestoga Township		Lancaster Township	
	Specified Owner-Occupied Units	% of Total	Specified Owner-Occupied Units	% of Total	Specified Owner-Occupied Units	% of Total	Specified Owner-Occupied Units	% of Total	Specified Owner-Occupied Units	% of Total
Less than \$15,000	36,160	1.3	132	0.1	0	0.0	0	0.0	0	0.0
\$15,000 to \$29,999	112,486	3.9	307	0.3	0	0.0	0	0.0	14	1.2
\$30,000 to \$49,999	286,547	9.9	1,480	1.4	6	0.7	23	0.7	0	0.0
\$50,000 to \$69,999	383,202	13.3	5,789	5.6	13	1.5	133	4.0	0	0.0
\$70,000 to \$99,999	696,496	24.1	24,162	23.4	166	19.2	1,165	35.4	204	17.7
\$100,000 to \$149,999	703,093	24.3	44,173	42.8	507	58.6	1,059	32.2	606	52.6
\$150,000 to \$199,999	344,172	11.9	16,265	15.8	112	12.9	342	10.4	193	16.8
\$200,000 or more	327,328	11.3	10,788	10.5	61	7.1	569	17.3	134	11.6
Total Specified Owner-Occupied Units	2,889,484	100.0	103,096	100.0	865	100.0	3,291	100.0	1,151	100.0
Specified Owner-Occupied Values										
Lower Value Quartile	\$65,300		\$94,200		\$102,600		\$102,600		\$88,500	
Median Value	\$97,000		\$119,300		\$122,000		\$120,400		\$110,800	
Upper Value Quartile	\$145,900		\$153,200		\$165,200		\$144,700		\$160,400	
Specified Renter-Occupied Values										
Lower Contract Rent Quartile	\$318		\$386		\$391		\$403.00		\$507.00	
Median Contract Rent	\$438		\$485		\$477		\$446.00		\$582.00	
Upper Contract Rent Quartile	\$593		\$603		\$560		\$531.00		\$678.00	
Value	Manor Township		Martic Township		Millersville Borough		Providence Township		West Lampeter Township	
	Specified Owner-Occupied Units	% of Total	Specified Owner-Occupied Units	% of Total	Specified Owner-Occupied Units	% of Total	Specified Owner-Occupied Units	% of Total	Specified Owner-Occupied Units	% of Total
Less than \$15,000	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
\$15,000 to \$29,999	6	0.1	6	0.4	7	0.6	0	0.0	0	0.0
\$30,000 to \$49,999	16	0.4	6	0.4	5	0.4	0	0.0	15	0.5
\$50,000 to \$69,999	70	1.6	12	0.9	11	1.0	34	2.9	54	1.7
\$70,000 to \$99,999	1,139	26.7	409	29.3	225	19.6	229	19.3	499	15.3
\$100,000 to \$149,999	1,910	44.8	711	50.9	567	49.3	646	54.4	1,489	45.8
\$150,000 to \$199,999	642	15.1	159	11.4	169	14.7	188	15.8	673	20.7
\$200,000 or more	480	11.3	93	6.7	165	14.4	90	7.6	521	16.0
Total Specified Owner-Occupied Units	4,263	100.0	1,396	100.0	1,149	100.0	1,187	100.0	3,251	100.0
Specified Owner-Occupied Values										
Lower Value Quartile	\$97,000		\$106,200		\$95,000		\$101,900		\$107,300	
Median Value	\$117,200		\$130,800		\$113,900		\$119,000		\$133,300	
Upper Value Quartile	\$153,600		\$157,600		\$139,600		\$147,800		\$176,500	
Specified Renter-Occupied Values										
Lower Contract Rent Quartile	\$412.00		\$373.00		\$395.00		\$504.00		\$616.00	
Median Contract Rent	\$491.00		\$485.00		\$561.00		\$552.00		\$1,091.00	
Upper Contract Rent Quartile	\$619.00		\$584.00		\$678.00		\$609.00		\$1,618.00	

Source: U.S. Census Bureau

Table 4-4 Selected Monthly Owner Costs, 1999

Selected Monthly Owner Costs as a Percentage of Household Income, 1999								
Housing Burden	Lancaster County	Pequea township	Conestoga township	Lancaster township	Martic township	Millersville borough	Providence township	West Lampeter township
Cost Burdened (spending 30% or more on monthly housing costs)	18.9	18.0	15.5	19.3	24.9	21.0	21.1	18.7
Extremely Cost Burdened (spending 50% or more on monthly housing costs)	5.3	6.4	4.4	6.4	7.3	8.7	8.4	6.4

Source: US Census STF3

Table 4-5 Gross Rent as a Percentage of Household Income, 1999

Gross Rent as a Percentage of Household Income, 1999								
Housing Burden	Lancaster County	Pequea township	Conestoga township	Lancaster township	Martic township	Millersville borough	Providence township	West Lampeter township
Cost Burdened (spending 30% or more on monthly housing costs)	32.6	12.5	29.0	38.8	21.2	41.0	23.1	56.7
Extremely Cost Burdened (spending 50% or more on monthly housing costs)	14.2	4.6	9.5	19.0	10.6	23.2	5.2	27.0

Source: U.S. Census Bureau, Census 2000 Summary File 4, Matrices HCT59, HCT60, and HCT63.

4.3 Housing Utility Characteristics

As shown in the Table 4-6, all of the housing units in Pequea Township maintain complete kitchen and plumbing facilities. In addition, the Township follows the County trend with a majority (84 percent) of occupied housing units using electricity or fuel oil as their primary source of heat. Unlike most of Pennsylvania residents (51 percent), very few housing units in Pequea Township are heated by utility gas (0.4 percent).

4.4 Housing Projections

The adjusted population estimate presented in Section 3.3 was used to project future housing needs in Pequea Township. This housing projection assumed a steady 2.75 average household size and a 92.7 percent occupancy rate.

As shown in Table 4-7, Pequea Township’s population forecast for 2010 implies 337 new residents and 132 new housing units. The population forecast and associated housing need for the 2010-2020 and 2020-2030 decades are slightly lower—326 new residents and 128 new housing units and 287 new residents and 113 new housing units, respectively—for a total need of 373 additional housing units. These figures are generally consistent with recent trends in residential building permits activity—approximately 13 new units each year.

Table 4-6 Housing Utility Characteristics, 2000

Housing Utility Characteristics, 2000						
Utility Characteristic	Total Housing Units					
	Pennsylvania		Lancaster County		Pequea Township	
	#	% of Total	#	% of Total	#	% of Total
Plumbing Facilities						
Complete plumbing facilities	5,171,587	98.5	178,744	99.3	1,626	100.0
Lacking complete plumbing facilities	78,163	1.5	1,246	0.7	0	0.0
Total Housing Units	5,249,750	100.0	179,990	100.0	1,626	0.0
Kitchen Facilities						
Complete kitchen facilities	5,165,606	98.4	178,571	99.2	1,626	100.0
Lacking complete kitchen facilities	84,144	1.6	1,419	0.8	0	-
Total Housing Units	5,249,750	100.0	179,990	100.0	1,626	100.0
Heating Fuel (Occupied Housing Units)						
Utility gas	2,452,941	51.3	39,430	22.9	7	0.4
Bottled, tank, or LP gas	145,254	3.0	8,568	5.0	95	6.0
Electricity	786,648	16.5	55,352	32.1	660	41.7
Fuel oil, kerosene, etc.	1,217,155	25.5	59,411	34.4	668	42.3
Coal or coke	67,986	1.4	5,253	3.0	60	3.8
Wood	76,060	1.6	3,446	2.0	78	4.9
Solar energy	663	0.0	43	0.0	0	0.0
Other fuel	20,500	0.4	629	0.4	0	0.0
No fuel used	9,796	0.2	428	0.2	13	0.8
Total Housing Units	4,777,003	100.0	172,560	100.0	1,581	100.0

Source: U.S. Census Bureau, 2000 STF3A

Table 4-7 Housing Unit Need Projection, Pequea Township, 2010-2030

Housing Unit Need Projections for Pequea Township, 2010-2030											
Jurisdiction	2000 Census	Adjusted 2000 Township Population	Projections			Projected Increase					
			2010	2020	2030	2000-2010		2010-2020		2020-2030	
						#	%	#	%	#	%
Population	4,358	4,726	5,062	5,385	5,671	336	7.1	324	6.4	285	5.3
Housing Units* @ 2.75 persons per household	1,626		1,748	1,866	1,970	122	7.5	118	6.7	104	5.6
Housing Units* with consideration for 92.7% occupancy rate	1,626		1,758	1,885	1,997	132	8.1	127	7.2	112	5.9

* Based on the Adjusted 2000 Township Population

Source: Gannett Fleming, Inc.

4.5 Summary

The Township maintains a low vacancy rate. An increase in ownership rates is due to conversion of several rental units. Most homes are valued between \$70,000 and \$199,999. Housing values reflect a median value slightly higher than most surrounding municipalities.

These values are relatively affordable for current residents, as few households are cost burdened. Based upon population forecasts established in Chapter 3, the Township may expect an additional 110-130 housing units each decade over the next 30 years. Furthermore, this analysis shows that Pequea Township provides a variety of housing types and values.

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CHAPTER 5 ECONOMIC BASE

This section of the Plan is intended to provide a profile of the economic base of Pequea Township. Knowledge of the current economic base gives a background for decisions on the amount and type of economic expansion needed to provide a balanced and diversified tax base, employment opportunities, and sales and services to residents.

5.1 Labor Force Characteristics

Tables 5-1 and 5-2 give an indication of the labor force characteristics in Pequea Township. Table 5-1 shows that 2,348 person or 53.9 percent of the persons over sixteen years of age were in the labor force in 2000. As shown, 76.7 percent of the men and 64.3 percent of the women over sixteen years of age were in the labor force in 2000—both increases since 1990. Since there were no residents reporting employment in the armed forces, this 53.9 percent is also the percentage of the population in the civilian labor force. Civilian labor force participation declined from 57.6 percent in 1990.

The Township’s unemployment rate in 2000 was only 3.1 percent—down from 3.8 percent in 1990. The Lancaster County unemployment rate in 2000 was 3.0 percent—down from 3.1 percent in 1990. These 2000 Census figures are both better than the state figure of 4.6 percent.

Table 5-1 Labor Force, Pequea Township, 1990-2000

Labor Force in Pequea Township , 1990-2000						
Persons 16 years and Older	1990			2000		
	Males in Labor Force	Females in Labor Force	Total in Labor Force	Males in Labor Force	Females in Labor Force	Total in Labor Force
Pennsylvania	3,168,227	2,629,710	5,797,937	3,181,680	2,818,832	6,000,512
Lancaster County	123,381	98,998	222,379	132,501	110,702	243,203
Pequea Township	1,461	1,085	2,546	1,299	1,049	2,348
Persons 16 years and Older	1990			2000		
	% Males in Labor Force	% Females in Labor Force	Total % in Labor Force	% Males in Labor Force	% Females in Labor Force	Total % in Labor Force
Pennsylvania	71.7	52.8	61.7	69.2	55.3	61.9
Lancaster County	60.1	45.5	52.4	77.0	59.4	51.7
Pequea Township	65.6	49.5	57.6	76.7	64.3	53.9

Source: U.S. Census Bureau

Table 5-2 Civilian Labor Force Characteristics, 1990-2000

Civilian Labor Force Characteristics (Civilian Employment = Persons 16 Years and Older)								
Municipality	Total Civilian Labor Force				Civilian Labor Force Unemployment			
	1990		2000		1990		2000	
	#	%	#	%	#	%	#	%
Pennsylvania	5,790,534	48.7	5,435,000	44.3	314,611	5.4	249,900	4.6
Lancaster County	222,213	52.3	243,203	51.7	6,921	3.1	7,329	3.0
Pequea Township	2,546	57.6	2,348	53.9	70	3.8	73	3.1

Sources: PA Department of Labor and Industry, Center for Workforce Information and Analysis

U.S. Census Bureau

5.2 Employment by Industry

The largest employment category in Pequea Township in 2000 was education, health and social services, which employed 19.8 percent of the labor force. The second largest employment industry was manufacturing which employed 17.6 percent of the labor force. The third largest employment industry was retail trade, which employed 13.6 percent of the labor force. These statistics in comparison with 1990 data indicate that Pequea Township has experienced the transition of the manufacturing economy to the services economy. Since 1990, manufacturing not only lost a 7.9 percent share of resident employment, it also lost the position of leading employment category. Other employment categories such as: construction; transportation, warehousing and utilities; and other services (except public administration) employed single-digit percentages of the work force.

Table 5-3 presents the distribution of resident employment by industry for 1990 and 2000. Figure 5-1 illustrates the 2000 distribution.

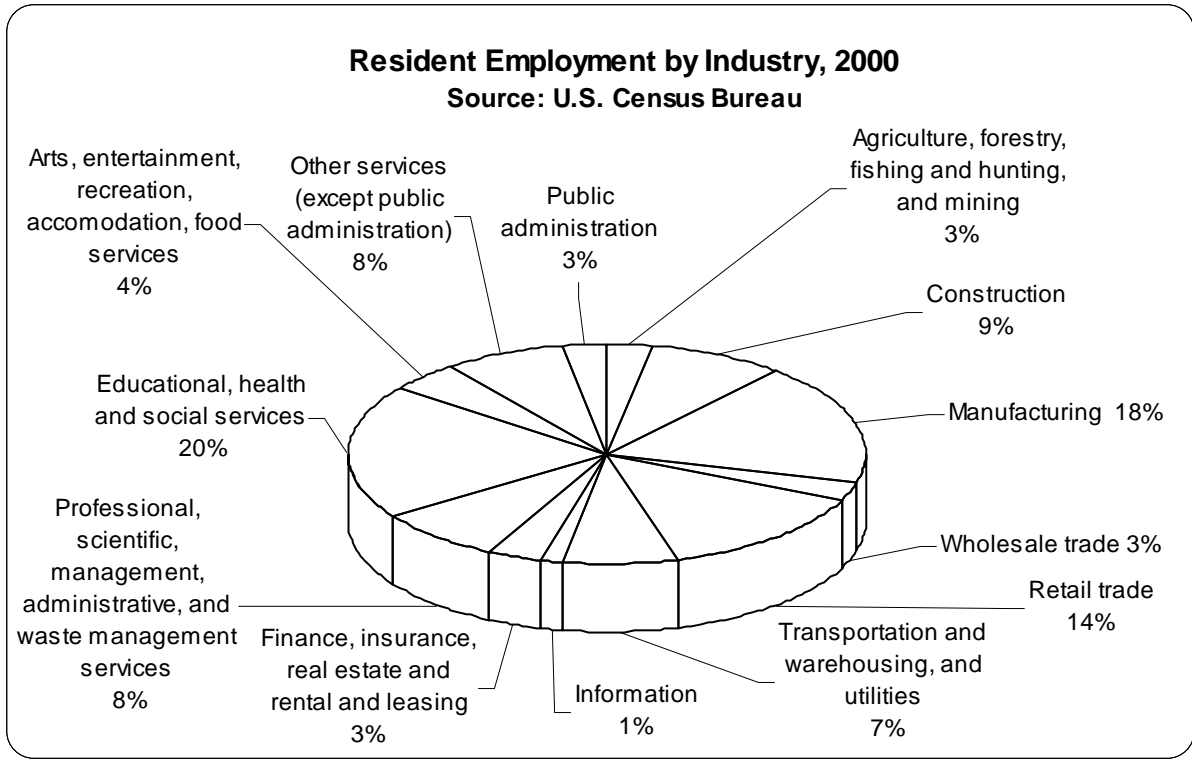
Table 5-3 Historic Comparison of Resident Employment by Industry, 1990-2000

Historic Comparison of Resident Employment by Industry Employed Persons 16 Years and Over, 1990-2000							
Industry	Pequea Township						
	1990		2000		Change		
	#	% of Total	#	% of Total	#	% of Total	
Agriculture, forestry, fishing and hunting, and mining	155	8.6	66	2.9	-89	-57.4	
Construction	166	9.3	194	8.5	28	16.9	
Manufacturing	456	25.5	401	17.6	-55	-12.1	
Wholesale trade	70	3.9	65	2.9	-5	-7.1	
Retail trade	334	18.6	310	13.6	-24	-7.2	
Transportation and warehousing, and utilities	93	5.2	167	7.3	74	79.6	
Information	N/A *	N/A*	27	1.2	N/A*	N/A*	
Finance, insurance, real estate and rental and leasing	55	3.1	78	3.4	23	41.8	
Professional, scientific, management, administrative, and waste management services	55	3.1	182	8.0	127	230.9	
Educational, health and social services	254	14.2	450	19.8	196	77.2	
Arts, entertainment, recreation, accommodation, food services	58	3.2	101	4.4	43	74.1	
Other services (except public administration)	N/A *	N/A*	172	7.6	N/A *	N/A*	
Public administration	53	3.0	62	2.7	9	17.0	
Totals	1791	100	2,275	100	484	27.0	

Source: U.S. Census Bureau, 1990 and 2000 STF3A

* Information category was not recorded in the 1990 Census

Figure 5-1 Resident Employment by Industry, 2000



These same industries lead employment with double-digit employment in Lancaster County and Pennsylvania. The greatest disparities between the Township figures and those of the County and state lie in the percentage of employees in agriculture and information industries. A greater percentage of residents are employed in agriculture in Pequea Township (2.9 percent) than in Lancaster County and Pennsylvania (each 1.3 percent). Pequea Township’s percentage of residents employed in the information industry is less than half the percentage of Lancaster County and Pennsylvania employees.

Table 5-4 presents a comparison of employment by industry with the County and state.

Table 5-4 Comparison of Employment by Industry, 2000

Comparison of Employment by Industry Employed Persons 16 Years and Over, 2000						
Industry	Pequea Township		Lancaster County		Pennsylvania	
	#	% of Total	#	% of Total	#	% of Total
Agriculture, forestry, fishing and hunting, and mining	66	2.9	6,735	2.9	73,459	1.3
Construction	194	8.5	18,242	7.7	339,363	6.0
Manufacturing	401	17.6	53,028	22.5	906,398	16.0
Wholesale trade	65	2.9	10,734	4.6	201,084	3.6
Retail trade	310	13.6	30,563	13.0	684,179	12.1
Transportation and warehousing, and utilities	167	7.3	10,157	4.3	304,335	5.4
Information	27	1.2	4,388	1.9	148,841	2.6
Finance, insurance, real estate and rental and leasing	78	3.4	10,432	4.4	372,148	6.6
Professional, scientific, management, administrative, and waste management services	182	8.0	15,674	6.7	478,937	8.5
Educational, health and social services	450	19.8	42,794	18.2	1,237,090	21.9
Arts, entertainment, recreation, accomodation, food services	101	4.4	15,856	6.7	397,871	7.0
Other services (except public administration)	172	7.6	12,332	5.2	274,028	4.8
Public administration	62	2.7	4,751	2.0	235,767	4.2
Totals	2,275	100	235,686	100.0	5,653,500	100.0

Source: U.S. Census Bureau, 2000 STF3A

Sixty-six (66) persons or 2.9 percent of the population are employed in agriculture. This group of workers is directly involved in the predominant land use in the Township.

5.3 Employment by Occupation

Table 5-5 shows employment by occupation in Pequea Township. The top three categories are management, professional, and related occupations (26.3 percent), sales and office occupations (23.3 percent), and production, transportation, and material moving occupations (21.0 percent). Approximately 65.8 percent of the labor force is employed in white collar positions. In comparison, 46.9 percent of the workforce in Lancaster County and 74.4 percent of the labor force in Pennsylvania are employed in white collar positions.

Table 5-5 Historic Resident Employment by Occupation, Pequea Township, 1990-2000

Historic Resident Employment by Occupation, Pequea Township Employed Persons 16 Years and Over, 1990-2000						
Occupation	Pequea Township					
	1990		2000		Change 1990-2000	
	#	%	#	%	#	%
Management, Professional, and Related Occupations	345	19.3	599	26.3	254	73.6
Service Occupations	178	9.9	369	16.2	191	107.3
Sales and Office Occupations	484	27.0	531	23.3	47	9.7
Farming, Fishing, and Forestry Occupations	131	7.3	48	2.1	-83	-63.4
Construction, Extraction, and Maintenance Occupations	363	20	250	11.0	-113	-31.1
Production, Transportation, and Material Moving Occupations	290	16	478	21.0	188	64.8
Total	1791	100	2,275	100.0	484	27.0

Source: U.S. Census Bureau

Table 5-6 contains information about the general location of employers, how residents travel to work, and how long residents travel to work. The vast majority of persons of the Township work in Lancaster County (92.0 percent). The majority also drive alone to work (85.9 percent). The mean travel time to work is 20.8 minutes, which reveals that the majority of the residents work outside of the Township. More than two-thirds of Township residents (68.0 percent) travel 29 minutes or less to work and 42.9 percent travel between 15 to 29 minutes. This indicates that a large number of the residents work in the proximity of the northern suburbs of Lancaster City. In relation to the 1990 data, notable increases were experienced in the 30-34 minutes, 45-59 minute, and 90+ minutes categories.

Table 5-6 Place of Work and Journey to Work, Pequea Township, 1990-2000

Place of Work and Journey to Work, Pequea Township, 2000			
Category	Percent of Total Persons (15 yrs + and employed)		
	1990	2000	Change
Place of Work			
Worked in state of residence:	98.2	99.7	1.5
Worked in county of residence	90.4	92.0	1.6
Worked outside county of residence	3.2	8.0	4.8
Worked in minor civil division of residence	7.7	12.1	4.4
Worked outside minor civil division of residence	92.3	87.9	-4.4
Worked outside state of residence	1.8	0.3	-1.5
Journey to Work (Mode)			
Car, truck, or van:			
Drove alone	70.9	85.9	15.0
Carpooled	12.6	7.4	-5.2
Public transportation	0.0	0.9	0.9
Walked	8.4	2.5	-5.9
Other means	0.0	0.3	0.3
Worked at home	5.9	2.6	-3.3
Journey to Work (Travel Time)			
Less than 5 minutes	2.9	4.1	1.2
5 to 9 minutes	11.6	10.8	-0.8
10 to 14 minutes	12.4	10.2	-2.2
15 to 19 minutes	20.3	19.9	-0.3
20 to 24 minutes	20.0	17.6	-2.4
25 to 29 minutes	7.9	5.4	-2.5
30 to 34 minutes	9.2	13.5	4.3
35 to 39 minutes	2.1	1.6	-0.5
40 to 44 minutes	1.7	0.9	-0.8
45 to 59 minutes	2.4	6.6	4.2
60 to 89 minutes	3.9	3.0	-0.9
90 or more minutes	1.1	3.8	2.7
Worked at home	4.6	2.6	-2.0

Source: U.S. Census Bureau

5.3 Summary

Pequea Township can be classified as a bedroom community. Agriculture continues to dominate the landscape of the Township and has a significant role in the local economy, though it does not employ large numbers of residents. Most residents are employed in services, manufacturing, or retail trade of which there are very few establishments in the Township. Travel to work statistics indicate that many of these residents are likely employed by businesses and industries located along the fringe of Lancaster City.

CHAPTER 6 EXISTING LAND USE

A guide for future land use patterns cannot be prepared without a comprehensive study and mapping of existing land use. A land use study provides a picture of current development patterns in the Township and, together with other factors, outlines restrictions and opportunities for future community development.

Pequea Township is located in central Lancaster County, approximately four miles south of the City of Lancaster. The majority of the Township is farmland, woodland, and other open space. Residential development is scattered throughout the Township in the form of farmsteads, rural homesteads and a few subdivision neighborhoods. A small amount of the land is used for commercial and industrial activities. Based upon current zoning and land use, the largest expansion could be residential land uses.

6.1 Existing Land Development

Table 6-1 shows the number of acres dedicated to each of the eleven major land use categories in 1967, 1988, and 2003. The data for 1967 and 1988 were obtained from the 1990 Pequea Township Comprehensive Plan. There are variations in land use categories between 1967 and 1988. Therefore, comparisons have only been drawn for major land use categories. Discussion of these comparisons is intended to provide the reader with an idea of land use change. Discrepancies in the total acreage for the Township are due to changes in mapping technology and analytical definitions.

Land use in Pequea Township is classified into eight land use types. Approximately two thirds of the land in Pequea Township (60.6 percent) is agricultural land. The second largest land use category is residential (16.9 percent). The third largest land use category is woodland (13.2 percent). Agricultural, woodland and other open space uses, totaling 78.5 percent of the Township's land area, are indicative of the prominent rural character of the Township. The industrial, utilities, commercial, institutional and recreational categories each occupy less than two percent of the total land area. The individual land use categories are further defined and discussed in the following sections. Map 6 is the Pequea Township Existing Land Use Map, showing the land occupied by these land use types. Figures 6-2 illustrates the change in the Township's land uses over the past twenty years.

6.1.1 Agricultural

Agricultural lands include farmlands (crop and pasture lands), farm buildings, orchard land and land used for concentrated animal feeding operations. As mentioned earlier, nearly two thirds or 60.5 percent of the land is classified as agricultural. There is no precise concentration of this land use type.

Rural communities, including Pequea Township, are becoming more concerned about preserving their agricultural land. Between 1967 and 1988, a total of 1,179.8 acres of farmland were lost to other land use categories. More recently between 1988 and 2003, the Township lost an additional 558 acres to other land uses. According to Table 6-1, most of the land has been

converted to residential, woodland and open land uses. A total of 5,216.3 acres are classified as agricultural land, where 7,026.6 acres were under this category in 1967.

Table 6-1 Land Use/Land Cover, Pequea Township, 2003

Land Use/Land Cover, Pequea Township, 2003		
Land Use Classification	Land Area (Acres)	Percent of Total Land Area
Developed		
Residential	1457.3	16.9
<i>Low Density</i>	772.6	9.0
<i>Medium Density</i>	671.0	7.8
<i>High Density</i>	13.7	0.2
Commercial	69.0	0.8
Industrial	45.5	0.5
Institutional	37.7	0.4
Transportation, Communication, & Utilities	48.2	0.6
Recreational	188.5	2.2
Total Developed	1,846.2	21.5
Undeveloped		
Agricultural	5,216.3	60.6
<i>Crop and Pasture</i>	4804.1	
<i>Orchards</i>	311.1	
<i>Concentrated Agricultural Operations</i>	101.1	
Grassland/Open Space	409.9	4.8
<i>Grass and shrub</i>	350.2	
<i>Wetlands</i>	10.5	
<i>Mines and Barren Areas</i>	49.2	
Woodland	1133.0	13.2
Total Undeveloped	6,759.2	78.5
Total (Developed+Undeveloped)	8,605.4	100.0
Open Water	114.4	
Total Township Area	8719.8	

Source: Lancaster County Planning Commission; Pequea Township

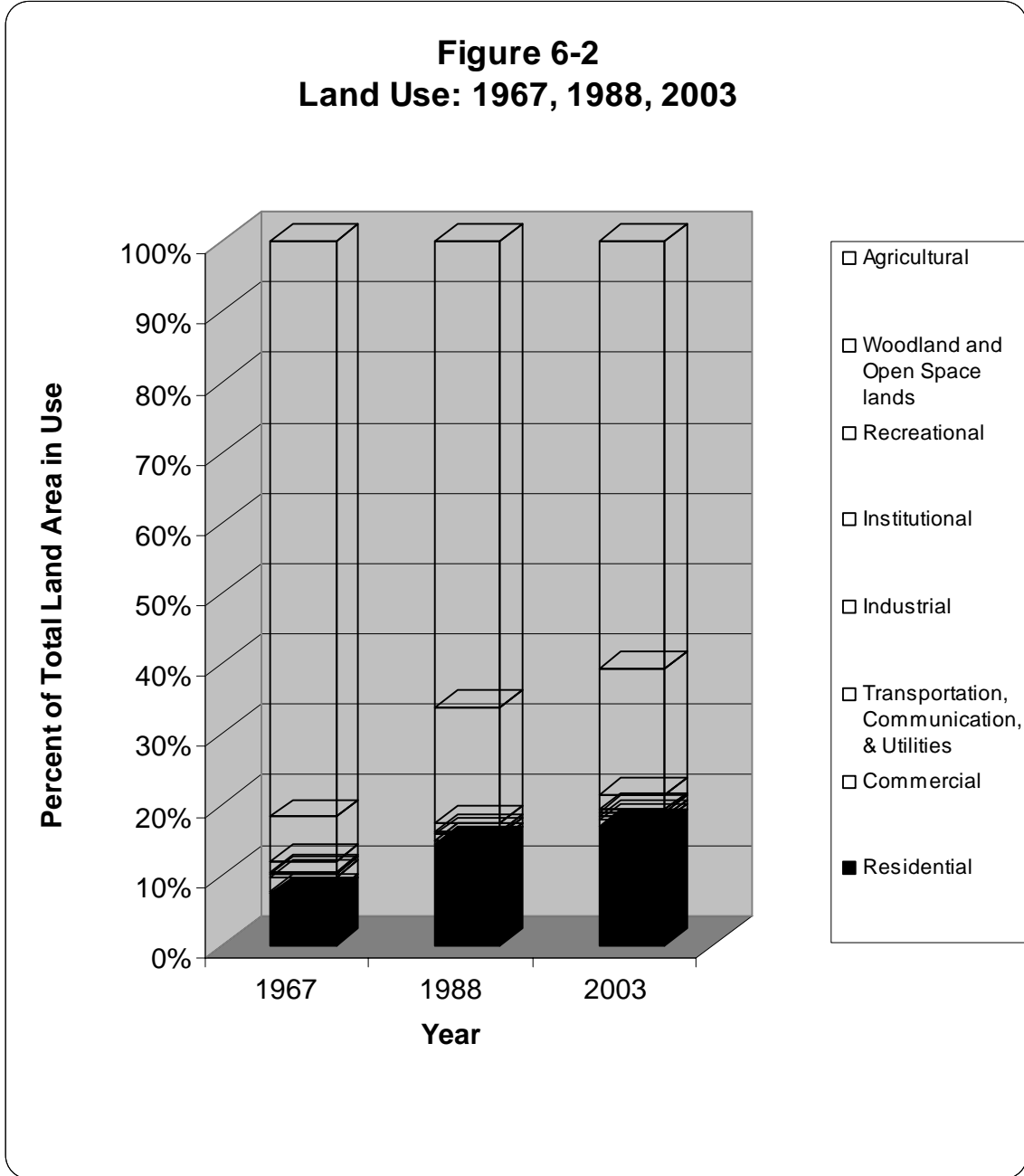
Table 6-2 Historic Land Use/Land Cover, Pequea Township, 1967-2003

Historic Land Use/Cover, Pequea Township, 1967-2003						
Land Use Classification	1967		1988		2003	
	Land Area (Acres)	Percent of Total Land Area	Land Area (Acres)	Percent of Total Land Area	Land Area (Acres)	Percent of Total Land Area
Developed						
Residential	630.4	7.3	1274.6	14.4	1457.3	16.9
Commercial	36.7	0.4	39.8	0.5	69.0	0.8
Industrial	40.0	0.5	73.6	0.8	45.5	0.5
Institutional	24.8	0.3	37.1	0.4	37.7	0.4
Transportation, Communication, & Utilities	163.2	1.9	3.2	0.0	48.2	0.6
Recreational	123.8	1.4	114.6	1.3	188.5	2.2
Total Developed	1,018.9	11.9	1,542.9	17.5	1,846.2	21.5
Undeveloped						
Agricultural	7,026.6	81.7	5,846.8	66.2	5,216.3	60.6
Woodland and Open Space lands	551.5	6.4	1443.7	16.3	1542.9	17.9
Total Undeveloped	7,578.1	88.1	7,290.5	82.5	6,759.2	78.5
Total (Developed+Undeveloped)	8,597.0	100.0	8,833.4	100.0	8,605.4	100.0
Open Water	114.4		114.4		114.4	
Total Township Area	8711.4		8947.8		8719.8	
			1988-2003		1967-2003	
			Change in Acreage	Percent Change	Change in Acreage	Percent Change
Developed						
Residential			182.7	14.3	826.9	131.2
Commercial			29.2	73.4	32.3	88.0
Industrial			-28.1	-38.2	5.5	13.8
Institutional			0.6	1.6	12.9	52.0
Transportation, Communication, & Utilities			45.0	1,406.3	-115.0	-70.5
Recreational			73.9	64.5	64.7	52.3
Total Developed			303.3	19.7	827.3	81.2
Undeveloped						
Agricultural			-630.5	-10.8	-1,810.3	-25.8
Woodland and Open Space lands			99.2	6.9	991.4	179.8
Total Undeveloped			-531.3	-7.3	-818.9	-10.8

Source: Lancaster County Planning Commission; Pequea Township

Note: Land use classification systems have improved dramatically since 1967. Woodlands on agricultural property were often classified with the agricultural parcel, historically. With increasing technology, land use and land cover can be more carefully analyzed and more accurately classified today and probably even more so in the future. Therefore, the loss of agricultural land to development and the gain in woodland and open space may be overstated.

Figure 6-1 Land Use, Pequea Township, 1967, 1988, 2003



6.1.2 Grassland/Open Space and Woodlands

Meadows and other wildlife areas fall under the category referred to as grassland/open space uses. These areas are scattered throughout the Township, with a noticeable concentration along the Conestoga River. Wooded areas, whether public or private are classified as woodland uses. Together, grassland/open space and woodlands total 1,133.0 acres or 13.2 percent of the Township. This category also includes mines and barren areas, of which there are few in the Township.

For comparison with historic data, these two categories were combined. Table 6-2 shows an increase of 1,023.3 acres since 1967. This increase of conservation land is misleading due to the discrepancy of land use categories between the 1969 Comprehensive Plan and the 1990 Comprehensive Plan. However, there has been a definite increase of land in woodland and open space uses, as some agricultural lands have been retired from active farming.

6.1.3 Residential

Pequea Township has three residential categories which are based on the number of dwelling units per acre. These categories are defined as follows:

- o Low density - 2 or less dwelling units per acre.
- o Medium density - 2.01 to 7 dwelling units per acre.
- o High density - 7.01 or more dwelling units per acre.

The majority (53.6 percent) of the residential category is considered low density. Low density residential units are scattered throughout the Township (Map 6), though three subdivisions—Doe Run Hills, Tuckahoe, Hayward Heath and Heatherfield—represent relative development concentration. The majority of low density residential units are located in the southern half of the Township, along Rawlinsville Road and West Penn Grant Road. There are 772.6 acres in this land use category, which is also 9.0 percent of the total land area.

Medium density residential areas include the village of New Danville, located at the intersection of the New Danville Pike and Marticville Road, and several subdivisions and scattered pockets of denser development throughout the Township. Medium density subdivisions include: Breezy Knoll, Enchanting Acres, Long Lane Acres, Lynn Dale Park, Manchester Village, Millwood Village, and Parkview. Pockets of medium density development are found along Baumgardner Road, Byerland Church Road, Long Lane, Marticville Road, and West Willow Pike. Medium density residential areas consume 671.0 acres or 7.8 percent of the total land area.

In Pequea Township, there is only one area that is classified as high density residential, namely the townhouse neighborhood of Westwood Village. High density residential land use is 0.2 percent of the Township or a total of 13.7 acres.

The residential land uses are the second largest land use type in Pequea Township. A total of 1,457.3 acres is dedicated to residential land use. This is an increase of 826.9 acres since 1967, but only 182.7 acres since 1988. Most of the land that has been converted to residential use was once agricultural land. This accounts for a large portion of agricultural land lost to other land use types.

6.1.4 Recreational

Recreational land is any park (county, municipal, public or private), campground, or golf course. Pequea Township has several recreational areas designated on Map 6. The Township's public park, Silver Mine Park, is located in the southwest corner of the Township. Pequea Elementary School's grounds are also classified as recreational. Outdoor World is a large, private campground located along the Conestoga River in northern Pequea Township. The Pequea Sportsmen's Association lands are located in the southern portion of the Township.

Recreational lands currently comprise 188.5 acres, or 2.2 percent of the Township. This is an increase of 73.9 acres or 64.5 percent during the last fifteen years. The increase is attributed to the acquisition and development of Silver Mine Park (approximately 120 acres) and the development of a recreational area behind the New Danville Mennonite School on Long Lane. Additional recreational use areas are located within lands classified as woodlands throughout the Township. See Map 6 for specific locations.

6.1.5 Commercial

Commercial land is limited in Pequea Township due to its rural character and is characterized by uses common to rural communities: construction services, kennels, rural grocery stores, etc. There are two areas of commercial concentration, namely the Brooks Industrial Park and the southern outskirts of Willow Street, both along Willow Street Pike. Additional commercial land is located at or near major road intersections. For example, the intersections of Marticville Road and Long Lane, Marticville Road and New Danville Pike, and Herrville Road are locations of commercial land and operations.

Commercial lands presently measure 69.0 acres, or 0.8 percent of the total land area in Pequea Township. This is an increase of 32.3 acres in commercial land since 1967. The majority of this increase occurred between 1988 and 2003. This relatively small percentage of commercial land is appropriately scaled to the Township's rural setting and rural road system.

6.1.6 Industrial

Industrial land includes facilities classified as major industry, light manufacturing and quarries. Industrial lands are located along Millwood Road north and south of Long Lane, along Millwood Road at Baumgardner Road, and along Linestown Road and Willow Street Pike.

This category increased by 33.6 acres between 1967 and 1988, and declined by 28.5 acres by 2003 due to the reclassification of industrial properties, or portions thereof, along Millwood Road and West Willow Road. Former Powell Steel lands remained classified as industrial, though the property is now a brownfield site. In 2003, industrial lands total approximately 0.5 percent of the total land. Similar to the low percentage of commercial land, this percentage is due, in part, to the fact that the Township is not located along the rapidly developing commercial/industrial corridors of the region, such as US 222, US 30, and PA 283.

6.1.7 Institutional

Institutional land includes churches, schools, cemeteries, hospitals, and government buildings. This category has increased by less than 1 acre over the past 15 years. Institutional facilities are scattered throughout the Township and comprise approximately 37.7 acres or 0.4 percent of the Township.

6.1.8 Transportation, Communications and Utilities

Lands which are dedicated to transportation, communications and utilities infrastructure in Pequea Township are rather limited. Transportation lands in Pequea Township include roadways, railways, and their rights-of-way, and sizeable parking areas. The triangular parcel between Willow Street Pike and Herrville Road owned by PENNDOT is also included in this category. Communications and utilities lands include one 3.2 acre parcel for the Pennsylvania Power and Light (PP&L) electric substation located along North Millwood Road and a telephone substation along Willow Street Pike.

6.2 Recent Development, 1990-2003

The annual number and type of building permits issued for new construction since 1990 was reviewed to assess trends in recent development. These figures are presented in Table 6-3 and Figure 6-3. Over the course of ten years, from 1990-1999, a total of 162 permits were issued by Pequea Township. The majority of these permits (73.5 percent) were for residential construction. The remaining 43 permits were issued for commercial structures or farm buildings. There was no new industrial development in the Township during this time.

Over the past four years, an additional 75 building permits have been issued. Similar trends occurred: the majority of permits (85.3 percent) were issued for residential construction, while the remainder was split between commercial and farm construction. Again, there was no new industrial development during this time.

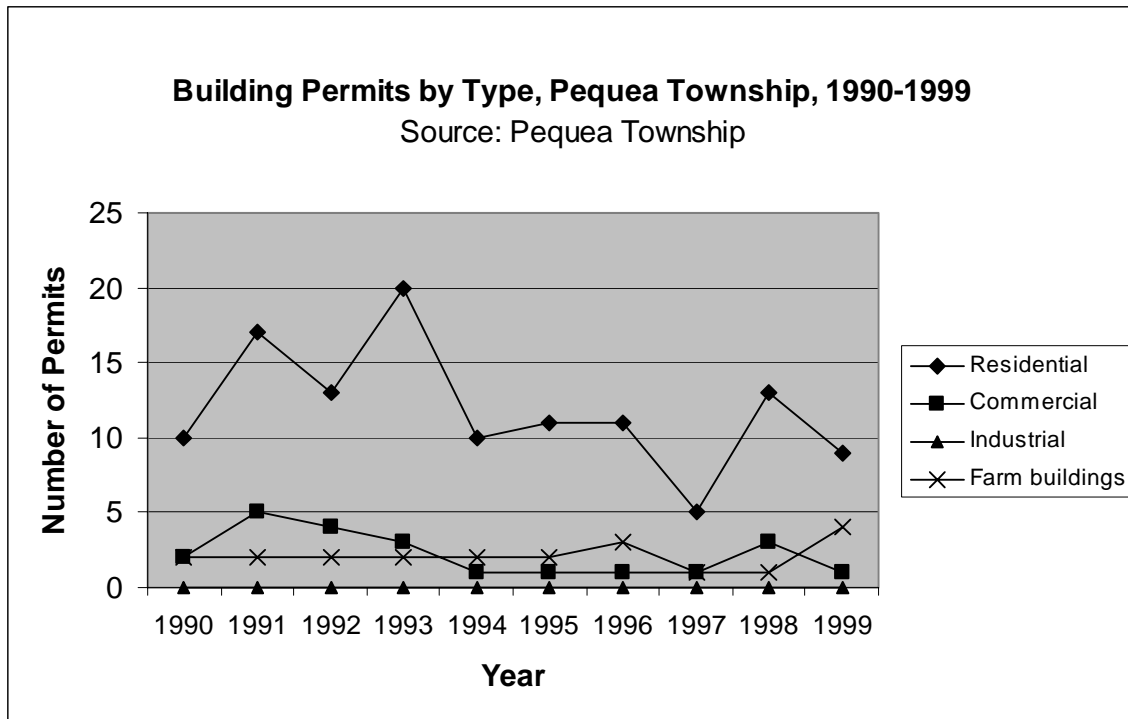
On average, the Township has issued 13.1 residential permits, 1.9 commercial structure permits, and 1.9 farm building permits per year since 1990. Therefore, development has occurred steadily over the past 14 years, led by residential development; agricultural development and expansion has been equally as active as commercial development.

Table 6-3 Building Permits, 1990-2003

Pequea Township Building Permits, 1990-2003					
Year	Residential	Commercial	Industrial	Farm buildings	Total
1990	10	2	0	2	14
1991	17	5	0	2	24
1992	13	4	0	2	19
1993	20	3	0	2	25
1994	10	1	0	2	13
1995	11	1	0	2	14
1996	11	1	0	3	15
1997	5	1	0	1	7
1998	13	3	0	1	17
1999	9	1	0	4	14
Subtotal 1990-1999	119	22	0	21	162
2000	20	3	0	1	24
2001	20	2	0	2	24
2002	15	0	0	3	18
2003	9	0	0	0	9
Subtotal 2000-2003	64	5	0	6	75
Total	183	27	0	27	237
Annual Average	13.1	1.9	0.0	1.9	16.9

Source: Pequea Township

Figure 6-2 Building Permits by Type, Pequea Township, 1990-1999



6.3 Urban Growth Boundary

The Lancaster County Planning Commission and its local municipalities have adopted urban growth boundaries that delineate urbanized areas targeted for future growth. The growth boundaries were established in primary reference to the capacity to absorb projected population increases under existing municipal zoning, and water and sewer service areas. The boundary is intended to separate areas that can readily support higher density development from those that, at the current time, are unable to support such development. The boundary's location should be evaluated and adjusted according to sound land use, transportation, and facilities planning on the part of the county, local government and authorities.

Pequea Township is one of 12 municipalities in the Central Lancaster County region or urban growth area, the largest urbanized region. As of July 2003, Central Lancaster County had a total acreage of 108,077 acres with 49,355 acres, or 45 percent of total acreage, within the urban growth boundary. Only a small portion of Pequea Township meets the designated criteria and lies within the growth boundary—1159.2 acres or 13.3 percent of the Township.

6.4 Municipal Policy and Regulations

Pequea Township's previous comprehensive plan was adopted in 1990. The plan provided the basis for the Township's 1994 zoning ordinance. The Township continues to utilize the subdivision and land development ordinance (SLDO) of Lancaster County (1991). The Township has indicated some interest in developing its own SLDO in order to more fully implement its land use goals.

6.5 Preserved Lands

Of Pequea Township's total acreage, 751 acres have been preserved for agriculture. Land owners have sold or donated their rights to develop their property to the Lancaster County Agricultural Preserve Board or another land trust organization, thereby removing the potential for future development.

6.6 Summary

The variation in the techniques used in the 1967, 1988, and 2003 land use surveys makes a direct measurement of land use changes difficult. However, several important statements can be made.

First of all, Pequea Township has maintained its rural character throughout the period. Developed uses totaled 11.9 percent of the Township in 1967 and now total 21.5 percent 36 years later.

Within this growth in rural land use types, there have been two important shifts. The first shift has been a conversion of agricultural land to residential land. In fact, the majority of the growth in residential land has converted farmland to development. Only a small percentage of development has converted wooded areas. The second shift has been a conversion of agricultural and railroad right-of-way lands to conservation/woodland.

There is very little industrial, commercial and institutional in the Township. In conjunction with the fact that most of the Township residents are employed in professional services, manufacturing, and retail trade (51.0 percent of the labor force) located outside the Township, Pequea Township can be accurately described as a bedroom community.

CHAPTER 7 TRANSPORTATION SYSTEM

The Pequea Township transportation system consists of 20.4 miles of state owned roadways, 29.8 miles of Township owned roadways and very limited public bus service provided by the Red Rose Transportation Authority. The overall condition of the Township's transportation system is good, but the impact of the regional growth described earlier is becoming increasingly obvious.

7.1 Classification of Major Thoroughfares

7.1.1 Township Classification

Pequea Township classifies both local and state roadways through Article 15, Building Lines and Road Classifications, of its zoning ordinance. These classifications are utilized in conjunction with land use provisions to determine land development potential in the Township. These classifications use similar terminology, e.g. urban principal arterial and rural minor arterial, but are not related to state/federal classifications. The Township's road classifications are shown on Map 7.

7.1.2 State/Federal Classification

The highway or street classifications used by the Lancaster County Planning Commission (LCPC) and the Pennsylvania Department of Transportation (PENNDOT) are based on accepted Federal Highway Administration (FHWA) definitions.

This highway classification system divides the highway system into urban and rural classes, with several subclasses. These subclasses are primarily based on the function of the roads within the overall transportation system for the region. The urban-rural distinction is based on census data. Table 7-1 outlines the functional classifications of state roadways in Pequea Township. All other roads in the Township are classified by PENNDOT as rural, local roads.

The purpose of the federal classification system is to formalize the flow of highway improvement funds, since particular classes of highways are eligible for particular portions of federal improvement funds. More funds are available for the higher classes of roads because they serve more important functions and typically carry more traffic. Similarly, the distinction between urban and rural roadways is for funding purposes, and ties back to the specific federal and state allocation procedures.

7.2 Traffic Volumes

Average annual daily traffic counts (AADT) for roadways in Pequea Township were obtained from the Lancaster County Planning Commission. Table 7-2 shows the traffic counts for particular roads in the Township. Map 8 illustrates AADT ranges for state roadways in the Township.

Traffic flow through the Township is predominantly in a north-south orientation as traffic flows in and out of the City of Lancaster. Millersville Road, PA 272 and the New Danville Pike are the major traffic carriers in this direction.

The major east-west route in the Township is Long Lane. Secondary east-west corridors include Baumgardner and West Penn Grant Roads.

Table 7-1 Functional Classifications of State Roadways in Pequea Township by PENNDOT

Functional Classifications of State Roadways in Pequea Township		
Road Name	Segment	Road Classification
PA Route 272 - Willow Street Pike	North of Penn Grant Road to beyond Township boundary	Rural Principal Arterial
	South of Penn Grant to beyond Township boundary	Urban Principal Arterial (non-interstate)
Marticville Road	North of Short Lane to Township boundary	Urban minor Arterial
	South of Short Lane to Danville Pike	Rural Minor Arterial
	South of Danville Pike to beyond southern Township boundary	Rural Major Collector
Long Lane	East of Millwood Road to Township boundary	Urban Minor Arterial
	West of Millwood Road to PA 324	Rural Minor Arterial
	West of PA 324 to Lehman Lane	Rural Minor Collector
	West of Lehman Lane to beyond Township boundary	Urban Collector
New Danville Pike	North of Bean Road to beyond Township's boundary	Urban minor Arterial
	South of Bean Road to Marticville Road	Rural Minor Arterial
	South of Marticville Road to beyond Township's western boundary	Rural Major Collector
Millwood Road	North of Penn Grant Road to beyond Township boundary	Urban Local
	South of Penn Grant Road to Marticville Road	Rural Minor Collector
Rawlinsville Road	South of Baumgardner Road to beyond Township boundary	Rural Minor Collector

Source: Lancaster County Planning Commission, PENNDOT

Table 7-2 Average Annual Daily Traffic on State Roads in Pequea Township, 1988-2003

Average Annual Daily Traffic, Pequea Township		
Roadway	ADT	
	1988*	2003
PA Route 272 - Willow Street Pike	4,584-9,170	6,501-16,500
Marticville Road - south of Long Lane	1,415-6,693	6,500 or less
Long Lane - east of Marticville Road	2,006-6,013	6,501-16,500
Long Lane - west of Marticville Road	2,006-6,013	6,500 or less
New Danville Pike	4,134	6,500 or less
Millersville Road	6,013	6,501-16,500
Millwood Road	310-1,675	6,500 or less

*Data from Pequea Township's 1990 Comprehensive Plan

Source: Lancaster County Planning Commission

Township roads typically carry less traffic than the State roads. The 1990 Comprehensive Plan indicated several exceptions to this rule in Pequea Township:

- Shultz Road is heavily used as a connector between the New Danville area and the Willow Valley complex (Township traffic count of 1647)
- Sprecher Road is apparently used to connect West Willow residents with Route 324 (Township traffic count of 1553)
- Cobblestone Drive is the single access point to the high density development of Manchester Village (Township traffic count of 1708)

No traffic counts were performed for this comprehensive plan update. Based on few changes in land use patterns in these areas, these trends are likely still present, and perhaps even more prominent today.

7.3 Deficiencies in the Existing System

Potential deficiencies in the existing transportation system have been identified through crash data provided by Lancaster County Planning Commission and PENNDOT. High volume crash areas are listed in Table 7-3 and illustrated in Map 8.

Some deficiencies are more significant than others because of higher traffic volumes or high crash counts. All of these deficiencies will not be programmed into the implementation program. They will be prioritized in the Comprehensive Plan and the higher priority problems will be programmed into the capital improvements program.

Within Pequea Township, there are several areas that exhibit high volume crash rates. New Danville Pike has three high crash areas. Intersections with Long Lane and Marticville Road are particularly dangerous, as well as the stretch of the New Danville Pike both north and south of Stony Lane. Crashes also occur at a high rate at the intersection of Long Lane and Marticville Road and along Long Lane just east of Millwood Road. In the southern portion of the municipality, there are two dangerous intersections along West Penn Grant Road. One is located

Table 7-3 High Volume Crash Areas, 2003

High Volume Crash Areas	
Roadway/Intersection	Potential Deficiency
PA Route 272 - Northbound lane, south of Penn Grant Road	Unexpected signal/Transition from uncontrolled to signal-controlled environment
PA Route 272 - Southbound lane, north of Penn Grant Road to Baumgardner Road	Unexpected signal in rural environment
PA Route 272 - Southbound lane, south of Penn Grant Road to Baumgardner Road	Poor intersection alignment with Boehms Road
Millersville Road/Marticville Road/Danville Pike	Vertical alignment - intersection located at crest of hill
Marticville Road/Long Lane	Poor visibility of northbound approach to intersection
Long Lane/Millwood Road	Speeding/Vertical alignment - hill just east of intersection, on westbound approach
Millwood Road/Penn Grant Road	High bank on northwest corner reduces visibility; evergreen tree approaching southwest corner reduced visibility
New Danville Pike/ Long Lane	Unexpected signal for noth- and southbound traffic
New Danville Pike/Stoney Lane	Reduced visibility to the north

Source: Lancaster County Planning Commission, PENNDOT, Gannett Fleming

along Millwood Road and the other further east at PA 272. Final locations of high crash rates occur in the Township along curving segments of PA 272.

7.4 Public Transportation Services

Public transportation service provided by the Red Rose Transit Authority (RRTA) skirts the edge of Pequea Township along Willow Street Pike. Route 15 services Kendig Square, Willow Valley, Manor and Willow Valley Lakes, and Willow Valley Square, connecting these destinations to downtown Lancaster. The weekday schedule includes service along West Willow Road, Pleasant View Drive and Wynwood Drive at the eastern edge of the Township. Route 15 operates between 6 AM and 6 PM, Monday through Friday and Saturdays from 8 AM to 5 PM; there is no Sunday service. Between 1992 and 2003, Red Rose Transit experienced an overall 17 percent drop in ridership. Ridership on Route 15 decreased by 27 percent over this same time period.

7.5 Transportation Improvement Plans

7.5.1 PENNDOT Improvements

The Twelve Year Transportation Program is the guide for developing a transportation agenda for the long-range future. The Transportation Improvement Program (TIP) represents the current four-year period of the Twelve Year Program and is a more focused plan for the immediate future. Administered by the Pennsylvania Department of Transportation (PENNDOT), it ensures Pennsylvania's continuing near-term and future success in addressing transportation needs and opportunities. While there are several projects in Pequea Township that

are noted in the Twelve Year Transportation Plan, only one project is currently scheduled on the TIP, namely replacement of the Pequea Creek Bridge. The intended phases and date of completion for the project are shown in Table 7-4.

The West Lampeter Township Comprehensive Plan includes a recommendation to return Willow Street Pike to a two-way traffic pattern through the village of Willow Street in order to reunite the “divided” village. The recommendation further describes the implication of this change as the need to construct two alternate northbound lanes outside the village. This northbound route could be relocated adjacent to the southbound lanes, as PENNDOT already owns right-of-way wider than the present southbound lane alignment. This recommendation would be a point of future discussion for West Lampeter and Pequea Townships, Lancaster County Planning Commission and PENNDOT.

Table 7-4 Planned Transportation Projects

2003 Transportation Projects										
PENNDOT's 2003-2004 Twelve Year Transportation Program										
					Costs (in thousands of dollars)					
Project	Route	Title/Sponsor	Improvement	Period	PE	FD	UTL	ROW	CON	Total
MODE: HIGHWAY										
50603	324	Marticville Road	Highway Restoration	1		166	2		1,646	1,814
61998	324	Marticville Road	Highway Restoration	1		150			1,878	2,028
MODE: BRIDGE										
19457	324	PA 324 Pequea Creek Bridge	Bridge Replacement	1	300	400			2,100	2,800
PENNDOT's 2003 Transportation Improvement Program (TIP)										
					Costs (in thousands of dollars)					
Project	Route	Title/Sponsor	Improvement	Period	PE	FD	UTL	ROW	CON	Total
MODE: HIGHWAY										
63371	272	PA 272 Willow Street Pike	Preventative Maintenance	1*	15	632	100		9,700	10,447
63807	741	Millersville Pike	Highway Restoration	1					2,100	2,100
MODE: BRIDGE										
19457	324	PA 324 Pequea Creek Bridge	Bridge Replacement	1**		200				200
				2			20	70		90
				4					250	250

Notes:

Period = The scheduled phase of completion within the Twelve Year Improvement Program.

PE = The cost of the Preliminary Engineering of the project development in thousands of dollars.

FD = The cost of the Final Design of the project development in thousands of dollars.

UTL = The cost of the utility changes (electric, telecommunications, mechanical) in thousands of dollars.

ROW = The cost of the right-of-way phase of the project in thousands of dollars.

CON = The cost of the construction phase of the project in thousands of dollars.

PRA = The costs of planning and research or administrative projects in thousands of dollars.

TOTAL = The total project cost in thousands of dollars.

*In the Twelve Year Transportation Program, 1-First Four Years of the Plan

**In the TIP:
 1-First Year of Plan (10/00-9/01)
 2- Second Year of Plan (10/01-9/02)
 3-Third Year of Plan (10/02-9/03)
 4-Fourth Year of Plan (10/03-9/04)

Source: PENNDOT

7.5.2 Township Improvements

Pequea Township has made numerous bridge improvements in recent years, using the Lancaster County Municipal Transportation Grants Program.¹⁰

The Municipal Transportation Grants Program provides County financial assistance for transportation improvements initiated by and partially funded by municipalities, Red Rose Transit Authority (RRTA), Lancaster Airport Authority, and Lancaster County Transportation Authority. The grant program can be used to fund those projects that meet the following purposes:

- Projects that are primarily designed to improve safety, or reduce congestion, or to mitigate impacts due to regional growth and development.
- Projects that primarily facilitate movement of County residents and their goods, including efforts to improve access to jobs.
- Projects that emphasize improvement to existing corridors rather than construction of new roads.
- Projects that would otherwise not be completed by the PENNDOT on a timely basis.
- Projects that address the movement of County residents by non-motorized methods of travel.

Eligible projects include intersection improvements, bridge replacements, shoulder widening, upgrades to roads to facilitate non-motorized movement, new sidewalks connecting different land uses, transit service and facility improvements, and traffic studies and related design work that will lead to future improvement projects. Projects which are completed, have construction underway, have a contractor under agreement, or have an approved construction bid award are not eligible for the Grant Program. However, planning and engineering expenses incurred prior to the submission of the grant application are eligible for reimbursement. Projects approved in previous years, which are not under contract with a contractor, may be submitted for a supplemental grant if there have been substantial and unforeseen increases in costs. Each supplemental grant request will be reviewed on an individual basis.

Funding ratios are generally based on a County dollar for municipal dollar basis. In case of applications funded jointly by two or more municipalities, the County may either match the amount pledged by one municipality, or the total amount pledged by all of the municipalities. Similarly, in special circumstances, the grant amount may exceed the amount contributed by a single municipality.

In January of each year, each municipality, as well as RRTA, Lancaster Airport Authority, and Lancaster County Transportation Authority, receives a copy of the application and guidelines. The application submission deadline for grant awards is typically in early May at the office of the Lancaster County Planning Commission followed by the grant applications review process. Final grant awards are typically announced in early July.

¹⁰ This information was summarized from Lancaster County Municipal Transportation Grants Program information available at <http://www.co.lancaster.pa.us/planning>.

Pequea Township has used this program to fund three bridge replacements since 1992, as well as earlier improvements. The Clearview Road bridge (T-492) was replaced in 1992, the Ship Rock Road bridge (T-557) was replaced in 1995 and the Millwood Road bridge (T-557) was completed in 2003. The Township has submitted a 2004 application for funding for the replacement of the Indian Hill Road bridge (T-557) over Good's Run.

7.6 Summary

Several state roadways pass through Pequea Township. These roadways are primarily classified as principal arterials, minor arterials, and major and minor collectors by PENNDOT. Willow Street Pike, Long Lane, and Millersville Road are the busiest roadways. High crash areas are located along these roadways, as well as along Millwood Road and New Danville Pike. PENNDOT has programmed improvements for several of these locations. West Lampeter Township's Comprehensive Plan recommends a new configuration for PA 272; PENNDOT has not publicly considered this recommendation to date.

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CHAPTER 8 COMMUNITY FACILITIES AND SERVICES

Pequea Township's community facilities and services are managed by a variety of public and quasi-public agencies including the Township (officials, commission members and staff), the Penn Manor School District, the Suburban Lancaster Sewer Authority and the Lancaster City Water Authority. A description of the community facilities and services is presented here and accompanied by Map 9, showing approximate facility locations.

8.1 Police Protection

Police protection for residents of Pequea Township is provided by the Southern Regional Police Department. The department consists of 7 full-time and 4 part-time police officers and a Chief of Police with 30 years of service. The department offers 24-hour protection with 4-5 officers on call at all times.

The Southern Regional Police Force, which is funded by grants and taxes, is recognized as one of the most technologically advanced departments in the area. The organization's headquarters are located in Conestoga Township; however, the Pequea Township municipal building serves as a substation for the department. While current police services have adequate space at both their headquarters and the Pequea Township substation, future growth and increased contracts with other municipalities may require the department to seek additional space.

Southern Regional has no lock-up facilities, therefore prisoners are retained at the Lancaster County Jail. Due to persistent police protection and community cooperation, there is limited crime in Pequea Township. However, the influx of crime from neighboring Lancaster City is a primary concern of the department. Other common issues include drug related calls, rental properties complaints, and general criminal mischief.

8.2 Fire Service

There are two fire companies that service the Township. The West Willow Fire Company is located on West Willow Road, and New Danville Fire Company is located on New Danville Pike. The two companies are located within two miles of one another, resulting in overlapping services areas. West Willow primarily services the southern and eastern section of the Township and New Danville Company primarily services the northern and western section of the Township. The one-mile service areas overlap between Sprecher Road and Long Lane. The two-mile service areas overlap significantly, encompassing the area between West Penn Grant Road, the New Danville Pike, the Township's eastern boundary and the Conestoga Creek, as shown in Map 9.

Both companies own their own facilities. New Danville Fire Company is housed in an expanded and renovated structure completed in 1992 on approximately two acres. The West Willow Fire Company owns its fire station and approximately four acres behind the building along West Willow Road. West Willow's fire station was originally built in the 1800s as a school house. A modern addition was added in 1940/50, when the fire company moved into the

building. In recent years, the building has begun to require significant maintenance. The company utilizes the additional property for its annual festival.

New Danville’s 2003 expenses were estimated at \$217,711, as reported to the Township, and its income exceeded its expenses by \$4,763 in 2003. The 2003 Financial Report for West Willow Fire Company indicates that 2003 expenses were approximately \$141,000. In the case of West Willow, expenses exceeded income by 39 percent. Both companies receive approximately \$17,500 from Township donations. The Township also provides Workman’s Compensation Insurance for the fire fighters. The Township does not provide liability insurance.

The fire companies supplement township donations with a variety of fund raising activities to meet their expenses. Summer festivals, lunch and dinner sales, craft sale events, and weekly bingo provide additional revenue.

Table 8-1 lists the fire fighting equipment currently owned by the two fire companies. Funds for purchasing equipment come from the annual budget, Township donations, and fund raising events. In addition to mutual aid agreements with Conestoga Township and Willow Street fire companies, the Willow Street Fire and Ambulance Company in West Lampeter Township allows the two fire companies located in Pequea Township to borrow equipment.

Table 8-1 Fire Company Equipment

Fire Company Equipment	
Year	Model
New Danville Fire Company	
1979	Pumper
1973	Ford Rescue Truck
1972	Tanker
1962	Pumper
West Willow Fire Company	
1996	Spartan Engine
late 80s-early 90s	Chevy Astrovan (Squad vehicle)
1983	Mack Pumper-Tanker
1976	Dodge 4-wheel-drive Mini-Pumper
Source: West Willow Fire Company	

The members of the fire companies are volunteers. West Willow Fire Company currently has 25-30 active members. Daytime volunteers are limited. The Company has seen increased participation by junior fire fighters (ages 14-17). These young fire-fighters assist on the scene by carrying equipment and supplies; by state and federal law, they are not permitted to participate in fire-fighting. These young people represent some of the best-trained company staff, and upon reaching the age of 18, are further trained and transitioned to full fire-fighter status.

The West Willow Fire Company is exploring the potential use of dry hydrants in rural areas of the Township, which commonly lack of adequate water volume and water pressure to

fight fires sufficiently. A dry hydrant is a non-pressurized pipe system permanently installed in existing lakes, ponds and streams that provides a suction supply of water to a fire department tank truck. Water supply and pressure are problematic across the Township, particularly in periods of drought.

Increased enforcement of building and fire prevention codes has reduced the occurrences of fire in the Township. The Township enforces national building and fire prevention codes developed by the Building Officials Code Administrators (BOCA) to minimize the number of structural fires in the Township. The Township is aware of the Uniform Construction Code (UCC) recently enacted by the Commonwealth. The Township has adopted the UCC as the baseline for building standards. The Township administers and enforces the UCC and continues to enforce its own codes where higher standards are desired.

8.3 Ambulance Service

Pequea Township does not have a municipal ambulance service. It is serviced by two public ambulance associations and two privately operated services. The Willow Street Fire and Ambulance Association is in West Lampeter Township, just one half mile from the Township line. Providence Township Ambulance is located in New Providence, south of Pequea Township. The Conestoga Ambulance Association is a private organization serving primarily Conestoga Township, west of Pequea Township. West End Ambulance is a privately run service from Millersville Borough located two miles northwest of the Township.

8.4 Public and Private School Facilities

8.4.1 Public Schools

Pequea Township is located in the Penn Manor School District which operates seven elementary schools, two middle schools, and one high school. Table 8-2 is a list of the schools, their location, the grade level, and the enrollment size.

8.4.2 Private Schools

There are two private schools located in Pequea Township: the New Danville Mennonite School and an Amish school on Byerland Church Road.

Table 8-2 Educational Facilities

Educational Facilities						
Name	Location	Grade Level	Enrollment			
			1990	2003	Change	
Public Schools in Penn Manor School District						
Ann LeTort Elementary	Washington Borough	Kindergarten-6	365	297	-68	-18.6
Central Manor Elementary	Manor Township	Kindergarten-5	273	439	166	60.8
Conestoga Elementary	Conestoga Township	Kindergarten-6	373	276	-97	-26.0
Eshleman Elementary	Millersville Borough	Kindergarten-6	377	332	-45	-11.9
Hambright Elementary	Lancaster Township	Kindergarten-6	378	455	77	20.4
Martic Elementary	Martic Township	Kindergarten-6	472	412	-60	-12.7
Pequea Elementary	Pequea Township	Kindergarten-6	439	383	-56	-12.8
Manor Middle School	Lancaster	7-8	N/A**	569	N/A**	N/A**
Marticville Middle School	Pequea Township	7-8	638	368	-270	-42.3
Senior High School	Millersville Borough	9-12	1344	1818	474	35.3
School District Total	Various	K-12	4659	5349	690	14.8
Private Schools						
New Danville Mennonite School	Lancaster	N/A*	N/A*	N/A*	N/A*	N/A*

Source: PA Department of Education, <http://www.pde.state.pa.us>

*Detailed information on non-public schools is not recorded by the Pennsylvania Department of Education

** Manor Middle School was opened in 1994

8.5 Public and Private Recreation Facilities

8.5.1 Public Recreation Facilities

Since the 1990 Comprehensive Plan, Pequea Township has added and begun to develop Silver Mine Park as a public recreation facility. A Silver Mine Park Master Plan was developed in 1996. The plan outlines a design for the park and a multi-phase improvement program. Phase I of the development plan has been completed, resulting in two ballfields that meet Little League design standards, soccer fields, a tot lot, a picnic pavilion and a walking trail. Future phases will rehabilitate the barn and internal circulation routes, provide additional trail features, reforest the floodplain portion of the park, install signage, improve parking and access, install additional playground and pavilion structures, and construct a community center, among other improvements.

Other public recreation facilities in the Township include a ballfield and playground at the Pequea Elementary School.

8.5.2 Private Recreation Facilities

There are several private recreational areas in Pequea Township. The New Danville Mennonite School owns 14 acres of open space, of which 8 acres have been developed as a modified softball field. The West Willow Fire Company has a pavilion on its property.

According to the LCPC standards, it is recommended that 15 acres of public parkland be set aside for each 1,000 persons of a given population; 5 of these acres could be County-owned.

Considering a total population of 4,358 in 2000, Pequea should have 64.5 acres of recreational land available to its residents. The acreage of Silver Mine Park exceeds this guidance, however this acreage is concentrated in the southwest corner of the Township, requiring nearly all residents to drive to the facility.

The County has no interest in acquiring land in Pequea Township at this time, since the entire Township lies within the 10-mile service area of the Lancaster County Central Park. The County also owns and manages the nearby Buckmiller Park in Lancaster Township. The County did contribute funds for the acquisition of Silver Mine Park, as well as for the renovation of the historic structures in the park.

In addition, Township residents are able to enjoy other nearby public and private recreation facilities:

- o Muddy Run (Philadelphia Electric)
- o Pequea Recreation Area (PP&L)
- o Safe Harbor Recreation Area
- o Pequea Marina (Public access to boat launch pads)
- o Millersville Borough Park
- o Conestoga Community Pool
- o Rockhill (PA Fish Commission Access Area)
- o Miscellaneous access points to Conestoga River, and
- o Pequea Creek for canoeing and tubing

8.5.3 Passive Recreation

There are areas of scenic quality in the Township which the residents enjoy. Two scenic waterways form the northern and southern borders of the township. The Conestoga River winds a 6-mile course along the northern edge of Pequea. It remains unscarred by man-made obstacles such as dams, dikes or levees. The river flows through a sparsely populated area offering a variety of scenery. Flat wide floodplains and wooded hillsides are also the feeding and nesting grounds for a number of wildlife species.

The Pequea Creek forms the southern border of the Township, meandering its way through a rural countryside setting. It is smaller than the Conestoga River, but it does attract a wide variety of mammals, birds and waterfowl.

Neither waterway offers an official canoe access point. However, both streams are enjoyed by fishermen and outdoorsmen. The Conestoga River channel is wide and deep enough for unobstructed canoeing. Being shallower and not as wide, the Pequea Creek poses more obstacles for boating. Fishing in the Conestoga River is mainly for bass, muskie, panfish, pickerel, catfish, carp, and suckers. Fishing in the Pequea Creek is mainly for bass, panfish, walleye, catfish, carp, and suckers. Collecting bait such as crayfish, minnows, and hellgrammites is done on both major streams and on smaller feeder streams. Duck hunting and birdwatching are other water-related sports commonly pursued in these corridors. Trapping muskrats along the Township's streams

and river is done in late fall and winter. In addition, several farm ponds in the Township offer fine fishing and are used for winter ice skating.

A portion of the Conestoga Trail System passes through the northern portion of the Township. This hiking trail system stretches 61 miles through central Pennsylvania from the Horseshoe Trail near Brickerville (northern Lancaster County) to the Mason-Dixon Trail (across the Conowingo Dam in southern Lancaster County).

8.5.4 1993 Regional Park and Open Space Plan

In 1993, the Lancaster Inter-Municipal Committee (LIMC) prepared a Regional Park and Open Space Plan to meet the municipal requirements for recreation planning as outlined in the Pennsylvania Municipalities Planning Code. Pequea Township was a participant. The Plan addresses parks and recreation facilities, greenways and environmental preservation as core components of the region's recreation network.

The LIMC aims to “continue to promote historic preservation, preserve agricultural land for farming; support the Lancaster County Natural Heritage Preservation System, and conserve the LIMC area's sensitive natural resources.” Most of the recommendations in this area of the plan are very general and designed to apply to all of the participating municipalities. Region-wide applications and implementation tools include zoning, public/private conservation easements, and other public/private cooperative actions and recommendations.

More specifically, the document includes a recreation resource inventory and an action plan for each partner municipality. The following recommendations are listed for Pequea Township.

Greenways

The Conestoga Recreation Trail is an existing greenway along the Conestoga Creek. Portions of this trail have been completed, while others remain undefined. The trail has both on-road and off-road segments. The 1993 Regional Park and Open Space Plan recommends additional off-road segments that “would provide residents...recreation opportunities such as canoeing, fishing, nature walks, and hiking...” in the immediate vicinity of the creek and would reduce vehicular conflicts. This recommendation is listed as a mid to long range priority (1996-1998+).

An inter-municipal greenway along the Pequea Creek could provide non-motorized access to Silver Mine Regional Park. Designation of this greenway would require cooperation with East and West Lampeter Townships, as well as other municipalities. The Pequea Creek greenway is listed as mid-range priority (1996-1998).

An inter-municipal greenway along a 9-mile abandoned railroad right-of-way located near the eastern border of Pequea Township would connect Willow Street and West Willow with areas to the north and south. The greenway would start in Southern Lancaster City, travel south through Pequea Township, and connect with the Atglen-Susquehanna Rail line in Providence

Township. This corridor was a high priority at the time of the plan’s preparation, as the corridor had recently been acquired by a single owner.

The plan encouraged the designation of “additional local greenways to augment those already proposed by LIMC area municipalities,” giving specific examples: along Silver Mine Run (midrange priority), along Goods Run, along an unnamed tributary of the Conestoga Creek from the New Danville area; and along Stehman Run from its headwaters to the Conestoga Line. The development of local greenways was identified as a long range priority (1998+).

Park and Recreation

This component of the action plan specified recommendations at the regional, community and local/neighborhood park level. At the region level, the plan recommended that Pequea Township support establishment and maintenance of a regional park at Silver Mine Run that by local municipalities and other conservation groups. Pequea Township has implemented this action item by acquiring the land and phasing improvements.

At the community level, the plan recommended that Pequea and West Lampeter Townships evaluate the feasibility of a joint community park in the Willow Street/West Willow area, a highly populated and underserved area characterized by rapidly diminishing available land.

At the local/neighborhood level, the action plan specified an improved facility at the Pequea Elementary School. The plan also noted a deficiency in recreational land acreage and recommended two additional local/neighborhood parks, perhaps in the New Danville and West Willow areas.

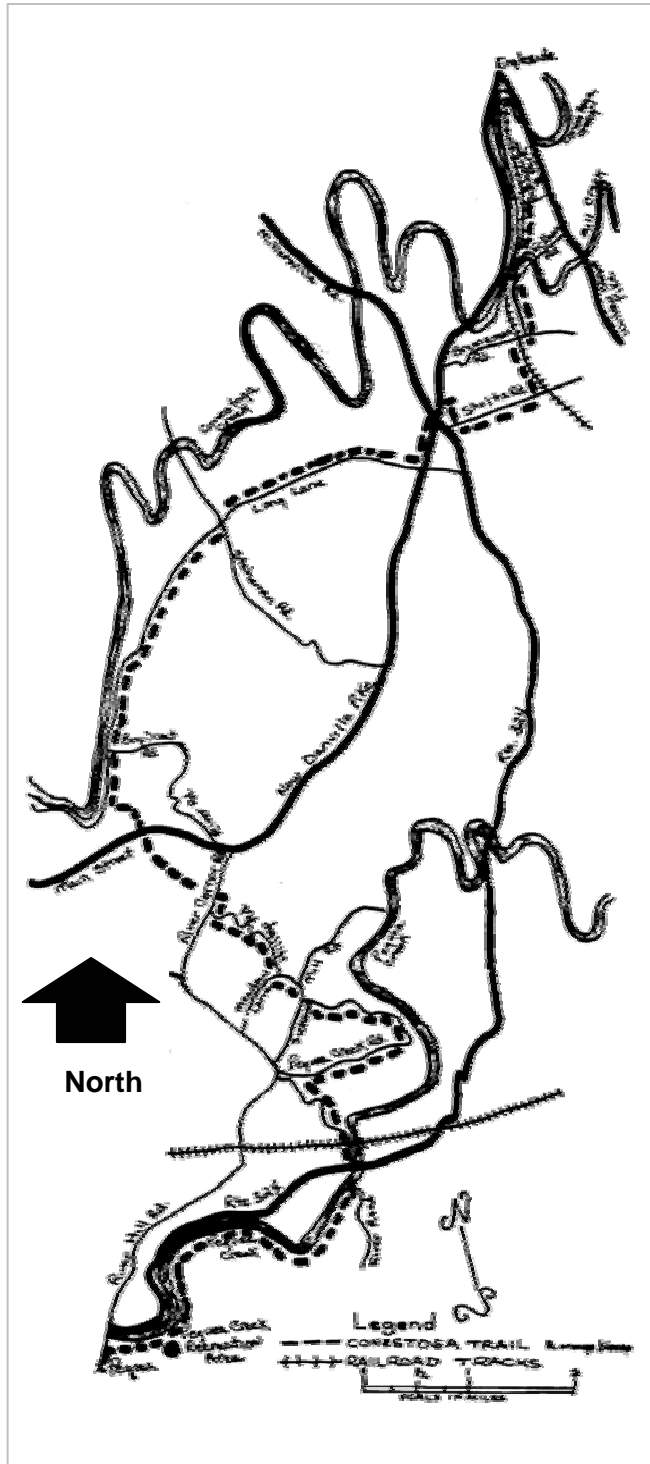


Figure 8-1 Map of Conestoga Trail

In addition, the plan notes “the area on Creek Road between the creek and the road could make a fine passive recreation or picnic area.”

Environmental Preservation

This component of the plan makes note of an endangered species sited in the Township in 1989, indicating the potential presence of the associated habitat. “The areas involving the actual Silver Mine and the possible caves that could hold Pizzini’s amphipod should be protected by the Township because of historical as well as biological diversity....” The Township’s subsequent acquisition of Silver Mine Park area now protects this area from development. Future park improvements are not anticipated to impact the mine or cave.

8.6 Municipal Buildings and Property

Pequea Township Municipal Building and Maintenance Garage are located at 1028 Millwood Road, Willow Street, Pennsylvania. The municipal building houses the Township offices and the office space used by the Southern Regional Police Force. This building has adequate space for current municipal administration activities.

Also, located on the municipal property is the Township maintenance garage. The Township’s road maintenance equipment and snow removal equipment are kept in this building. Repairs and general maintenance are done on Township vehicles and equipment within the confines of the maintenance building. No improvements are planned for either facility.

8.7 Library Facilities

Pequea Township does not have a library facility, however it lies within the service area of the Lancaster County Library System. The closest public library facility in this system is the Central Resource Library, the Duke Street Library, at 125 North Duke Street in downtown Lancaster. Branch libraries are located in Leola, Mountville, and Manheim Township.

Additionally, community library facilities are located in Quarryville and Strasburg and are affiliated with the Lancaster County Library System. These facilities are some programs, services, and resources with the County system, though they are each independently operated.

The Lancaster County Library System continues to operate a monthly Book Mobile service to several rural areas of the County, however this service is not available in Pequea Township at this time.

8.8 Summary

Community facilities and services provided by Pequea Township and other quasi-public service providers are generally adequate for the current population and community character. The Township has low crime, and is well-served by nearby emergency services. The voluntary nature of fire protection services has been effective, though both companies are fiscally challenged to meet their budgets. The acquisition and development of Silver Mine Park is a

significant achievement and addition to the Township community. Planned improvements will further enhance this facility. The local elementary and private schools supplement the Township's community park with recreational facilities. The 1993 LIMC Regional Park and Open Space Plan lists several recommended projects for Pequea Township and its neighboring municipalities. The municipal facilities continue to meet administrative needs.

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CHAPTER 9 COMMUNITY UTILITIES

Community utilities services are provided to Pequea Township residents by various entities. Water and wastewater services are provided by regional authorities, while stormwater management is overseen by Township staff. The following analysis of community utilities outlines current usage, total capacity, known deficiencies and planned improvements for these utilities.

9.1 Wastewater System

Due to the low population density and the dominance of rural land uses, most properties in Pequea Township utilize on-lot sewage systems. However, a portion of the Township is serviced by the Suburban Lancaster Sewer Authority (SLSA), specifically by Lancaster City's South Wastewater Treatment Plant. The West Willow area, specifically the Willow Gardens, Carriage House and Manchester Village developments, is the primary portion of the Township serviced by the South Plant. There is also a small area of service along Wyndmere Way. The existing public sewer lines and service areas are shown on Map 10.

9.1.1 Wastewater Treatment Capability

According to the 1987 Lancaster County Sewer and Water Resources Study, the capacity of the South Plant is currently 29.0 mgd. The average daily flow into the North and South Plants in 1986, before the flow transfer to the South Plant, was 18.5 mgd. As of 2003, the capacity allocated to the SLSA is 4.15 mgd. The average daily flow from the SLSA service area in 1986 was 0.9 mgd according to the County plan. Wastewater flows from Pequea Township are estimated at 195,000 gallons/day and generated by approximately 479 customers. Only two customers utilize metered service. Significant additional capacity is available for future regional growth.

9.1.2 Existing and Projected Problem Areas

The SLSA has not identified any sewer structural problems in the lines that service Pequea Township. In fact, the Goods Run Pumping Station, which services Pequea Township customers is one of the three largest pumping stations operated by SLSA. Its update and expansion was completed in 2000, which increased the quality of service to homes in Pequea Township. The Township has also reserved 350,000 gallons per day of capacity with SLSA for future expansion of service in the community.

9.1.3 On-Lot Systems

The 2000 estimate of housing units in the Township was 1,387. Subtracting the number of units served by public sewer (approximately 479) results in an estimate of 908 units served by on-lot systems.

The Township's sewage enforcement officer (SEO) has stated that 93 permits were issued in the past six years, from 1998 to 2003. Repair permits accounted for 47 or 50.5 percent of total permits issued. These figures yield an average annual rate of 15.5 permits per year.

The 1990 Comprehensive Plan indicated that approximately 700 of the on-lot systems in the Township should be built to the standards established by DEP in Chapter 73 in 1971. At the recent rate of 15.5 permits per year, resulting in an additional 201 permits since 1989, and the assumption that recent construction and repair meet DEP standards, the estimate of systems built to current standards now totals 901 on-lot systems.

As a result of these estimates, the 901 on-lot systems or 99.2 percent are likely built to current standards, while the remaining 7 systems or less than one percent of the existing systems could have been built to less stringent standards. These older systems may be more prone to malfunctioning and may require more maintenance than the newer systems.

Table 9-1 On-Lot Septic System Permit Trends, 1998-2003

On-lot Septic System Permit trends, 1998-2003				
Year	Permits by Type			Total Permits Issued
	New Construction		Repair	
	Conventional	Elevated sand mound		
1998	3	0	7	10
1999	5	2	7	14
2000	8	1	8	17
2001	7	4	15	26
2002	6	5*	7	18
2003	3	2	3	8
Total	32	14	47	93
Annual Average	5.3	1.8	7.8	15.5

Source: Pequea Township Sewage Enforcement Officer

* includes one at-grade system

According to the SEO, 78 percent of the systems installed in the last six years are conventional systems and the remainder is elevated sand mounds or other alternative systems. The common limitations for conventional in-ground systems are steep slopes, poor drainage and a high water table.

The SEO also reported that there have been 47 on-lot system repairs over the past six years. Eight of these repairs have replaced tanks and are not considered system malfunctions. The remaining 39 repairs were required to correct on-lot system malfunctions. These historic malfunctions are geographically dispersed throughout the Township. Most are found in areas of non-agricultural soils (soils that are not prime farmland soils or soils of statewide importance) with the exception of malfunctions located in New Danville, which developed prior to agricultural soil classifications.

Pequea Township does not have an on-lot disposal system management district. Within the past ten years, the Township did consider but did not adopt on-lot system

maintenance regulations. The means of enforcing such regulations were not defined or pursued and the measure was dropped.

9.2 Water Supply and Distribution System

9.2.1 Existing Water System

Pequea Township's public water is supplied from the City of Lancaster Authority, Bureau of Water¹¹. The Authority has two water intakes and filtration plants. The first intake and filtration plant is located on the Susquehanna River. The second intake and filtration plant is located on the Conestoga River. These two, conventional drinking water treatment plants are in need of upgrades to ensure compliance with the Interim Enhanced Surface Water Treatment (IESWT) Rule and the Stage II Disinfectants/Disinfection By-Products (D/DBP) Rule. The Conestoga Water Treatment Plant (WTP) is a 12 mgd WTP that was initially constructed in 1933, and the Susquehanna WTP is a 24 mgd WTP that was initially constructed in 1955. Each of these facilities has undergone minor upgrades since their original construction; however, much of both facilities are original. These facilities give the Authority a total daily treatment capacity of 36.0 mgd.

Due to a variety of design issues, these facilities have a difficult time producing water that will meet all of the future regulations associated with the 1996 Safe Drinking Water Act Amendments. Due to characteristics of the watersheds upstream of each WTP, the turbidity provisions associated with the IESWTR; the potential Cryptosporidium removal requirements associated with the LTESWTR; and the Stage II D/DBP Rule DBP requirements are of primary concern.

As a result, the City has embarked on an aggressive membrane piloting program that is comparing the performance of a five different microfiltration/ultrafiltration (MF/UF) membranes on the Lancaster water. A very unique aspect of this piloting effort is that the City and HDR are comparing the performance of MF/UF membranes on both raw and clarified water.

The goal of the piloting program is for both regulatory approval as well as the development of a procurement document for a fair and competitive bid between all of the membrane system suppliers. This is especially tricky when comparing the raw water and clarified water membrane systems.

The piloting program, which is designed to help the City determine the most cost-effective membrane system for both the Conestoga and Susquehanna WTPs, is scheduled to be complete in October 2002. Pilot studies are small-scale membrane systems that are operated similarly to full-scale membrane systems to determine the most cost effective design for the unique waters feeding Lancaster's water treatment plants.

Once the pilot study is complete, the City will be selecting the membrane system that provides the lowest life-cycle costs for each of the City's plants. This ensures the lowest costs for the City customers.

¹¹ Source: www.cityoflanasterpa.com, Bureau of Water homepage.

Upon membrane system selection, engineering design will commence. Construction is anticipated to start in early 2004 and be complete during the Summer of 2005.

There are approximately 13,800 feet of six inch water distribution lines in Pequea Township. These lines are limited to the Manchester Village and Willow Gardens areas. The remainder of the Township water supply comes from individual wells. There are no public supply wells in Pequea Township. Water service areas are shown on Map 10.

9.2.2 Proposed Extensions to the System

Gannett Fleming, Inc. prepared a report entitled “West Lampeter Township Water Service Investigations” in early 2003 for the City of Lancaster Authority. As public water service reaches Pequea Township through the West Lampeter Township system, this report is important on a regional scale. The report addressed projected demands on the system, the reduction of high pressures, the limit of potential for low pressure, an increase in available fire flows, and an overall simplification of system operations. In particular, the study documents records of occasional low water pressure in the area north of the Willow Street pumping station. Short term improvements to the system to help improve daily service and fire flows are included in the report.

9.3 Stormwater Management

Pequea Township developed and adopted a stormwater management ordinance in 2001. The ordinance was recognized by both Lancaster County and the state as an outstanding example of municipal policy on stormwater management. Like many stormwater management ordinances, policy goals include minimized flooding impacts from stormwater volumes and peak discharge rates, however goals for minimizing impacts to stream temperatures, minimizing impacts that could influence the development of sinkholes, and maintaining groundwater recharge volumes are also specified.

The ordinance addresses design standards for infiltration, detention, retention, conveyance, and erosion and sediment control. Design standards include:

- no increase in stormwater run-off volume for up to the 2 year , 24-hour storm event
- peak rate discharge not to exceed 50 percent of the pre-development rate discharge for storm events up to and including the 100-year storm
- water quality protection through specified filtration practices
- addition restrictions at the discretion of the township, based on known conditions on the hydrologic system, e.g. downstream areas of frequent flooding , and
- a “no harm” provision where the above standards are met without constructed stormwater management facilities.

The ordinance also details plan and permit requirements.

The ordinance's innovation lies in its best management approach and practices, riparian buffer zone designation, and maintenance provisions. The best management approach emphasizes prevention of stormwater generation through site design that minimizes impervious coverage. A comprehensive stormwater management procedure within the document outlines a site planning process that identifies natural opportunities for drainage, which can result in minimal costs to the developer for stormwater related construction when employed.

The riparian buffer zone provisions designate areas where a 3-zone management strategy is to be employed, namely along watercourses. Zone 1 (15 feet) lies adjacent to the waterway and is regulated as an area of no disturbance. Zone 2 (35 feet) is regulated for selective removal of vegetation and designated for passive uses. Zone 3 (50 feet) lies nearest development areas and is regulated for only dispersed sheet flow (no stormwater concentration permitted). This 3-zone approach to riparian buffer management is widely recognized and recommended by state environmental agencies and environmental organizations. Pequea Township is one of few municipalities that have incorporated such provisions to date.

The ordinance's provisions for stormwater facility maintenance address responsibility during and after construction, standards for maintenance, e.g. care of vegetation and silt/sediment removal, and facility acceptance, inspection and right of entry by the Township. These provisions clearly reflect the Township's intent for an attractive, functional stormwater management system.

9.3.1 Stormwater Management Areas of Concern

In the spring of 2003, the Zoning Officer and the Township Roadmaster toured the Township to identify existing and potential stormwater management areas of concern. They noted that most of the problems are related to roadway maintenance, the age of the cartways, and cartway and shoulder design features. The following list of areas of concern was submitted to the Board and to the Planning Commission, along with recommended Township actions and landowner and PENNDOT responsibilities.

- Creek Road
- Mount Hope School Road south of Byerland Church Road
- Herrville Road (west side) south of Ship Rock Road
- West end of Whipporwill Drive
- New Danville Pike (east side)) north of Penn Grant Road
- Millwood Road south of Kendig Road
- New Danville Pike south of Brenneman Road
- Church Road (east side) north of Pequea Brethren-In-Christ Church
- Shultz Road (west of stream)

9.4 Solid Waste Management System

Solid waste generated in Pequea Township is contracted by the property owner and collected by private haulers licensed by the Lancaster County Solid Waste Management Authority (LCSWMA). Solid waste is transported directly to the Creswell Landfill in Manor

Township. The LCSWMA establishes fees for disposal at the landfill, however individual haulers determine collection rates for their customers.

LCSWMA licenses over 1,000 private haulers for service across the county. Pequea Township chooses to license trash haulers specifically for service to the Township, as listed in Table 9-3.

Table 9-2 Waste Haulers Licensed by Pequea Township, 2003

Waste Haulers Licensed by Pequea Township, 2003	
York Waste Disposal	York
Waste Management	Lancaster
Browning Ferris Industries (BFI)	West Chester
B & J Disposal	Conestoga
Menden Hall Waste	
Margret Butler	Lancaster
Bill Carson Disposal	Lancaster

Residential trash collection is done on a weekly basis.

LCSWMA maintains a database of information contained in the manifests of each delivery to the land fill. This information includes the origin of the waste, the type (general refuse, construction/demolition, or residual), the weight and hauling company. LCSWMA can generate a summary of amount, the source, or the type of solid waste for a given period, at the Township’s request.

9.5 Summary

Approximately 480 property owners utilize public sewer service. These properties are predominantly located in the urban growth boundary. Pequea Township has reserved additional capacity with SLSA for future growth. Most properties in Pequea Township utilize on-lot disposal or septic systems. This results in the need for private system maintenance by the owner. Based on system permit trends, most systems have likely been built to or upgraded to current standards.

Lancaster City’s Bureau of water provides public water service to a portion of the properties within the urban growth boundary in the Township, as shown on Map 10. The Bureau is in the process of upgrading its facilities to meet current standards. A recent study by Gannett Fleming, Inc. for West Lampeter Township indicated that improvements to the water system would help improve daily service and fire protection flows.

The Township has a state-of-the art stormwater management ordinance to address new development. Problem areas among existing development are identified annually and responsible parties notified.

Solid waste management is contracted privately, though Lancaster County and the Township license haulers to manage and monitor service practices.

CHAPTER 10 BUDGET AND TAX SUMMARY

10.1 Budget Summary

The 2004 general fund budget of Pequea Township is \$1,191,750.00. This is an increase of \$113,998.00, or 10.6 percent, over the 2003 budget. The general fund is the operating fund for general government activities. Table 10-1 gives a brief summary of the 2003 and the 2004 general fund budgets. A detailed description of the categories and figures given in Table 10-1 can be found in the 2004 Pequea Township budget.

Table 10-1 General Fund Budgeted Expenditures, 2003-2004

General Fund Budgeted Expenditures, 2003 and 2004				
Expenditure	2003	2004	Increase	
			#	%
General Government	311,580	246,592	-64,988	-20.9
Public Safety	302,400	316,000	13,600	4.5
Health and Welfare	58,810	85,170	26,360	44.8
Highways, Roads and Streets	206,176	316,351	110,175	53.4
Recreation	11,675	16,100	4,425	37.9
Miscellaneous	187,111	211,537	24,426	13.1
Total	1,077,752	1,191,750	113,998	10.6

Source: Pequea Township

10.2 Taxation

Taxes for Pequea Township residents include the earned income tax, realty transfer tax, real estate tax, admission and amusement tax, and street lighting tax.

The earned income tax is levied by the Township and the Penn Manor School District. The tax is one percent of an individual's gross earned income. The tax is collected at the county level. Pequea Township and the Penn Manor School District each receive half of the one percent earned income tax.

Also collected at the county level is the realty transfer tax levied by the Township and the School District. This is also a one percent tax on the sale price of real estate, of which the Township and the School District each receive half.

Residents also pay a 1.7 mill real estate tax which is collected by the Lancaster County Tax Office. The real estate tax structure has changed significantly since the 1990 comprehensive plan. At that time, the tax millage rate was based upon a 25 percent assessment of real estate value. The Township rate was 5.5 mills in 1992, and 7.5 mills from 1993 to 1996. In 1997, Lancaster County adjusted its assessment ratio to 100 percent. Pequea Township followed by adjusting the millage rate to 1.12 mills to sustain the tax value (in dollars). In 2002, the

Township raised the tax millage rate to 1.7 mills, resulting in the first real estate tax increase in over ten years.

A street lighting tax is imposed as a special assessment on the property owners of land where street lights are provided. The tax per property is dependent upon the street frontage of the property. The assessment is \$.40 per front footage for developed lots and \$.10 per front footage for undeveloped lots. The tax is collected by the tax collector.

An admission and amusement tax is levied by the Township on businesses that provide entertainment type services at the rate of 10 percent of total receipts. The Township takes 8 percent and the remaining 2 percent is kept by the business for collecting the tax.

Table 10-2 shows the estimated 2003 and 2004 revenues that Pequea Township is expected to receive. The largest portion of the expected revenue comes directly from the taxes imposed on Pequea residents and equity from the Township's invested funds. The greatest expenditures are made on public safety services. Figures 10-1 and 10-2 graphically show the distribution of revenues and expenditures for 2002, an example year.

Table 10-2 General Fund Budgeted Revenues, 2003-2004

General Fund Budgeted Revenues, 2003 and 2004				
Revenue	2003	2004	Change	
			#	%
Taxes	892,000	918,931	26,931	3.0
Licenses, Permits and Fines	59,075	59,450	375	0.6
Interest & Rents	2,146	2,146	0	0.0
Intergovernmental Revenues	47,293	79,058	31,765	67.2
Charges for Services	19,373	19,500	127	0.7
Contributions	0	0	0	0.0
Miscellaneous Revenues*	19,784	11,418	-8,366	-42.3
Insurance Recovery	0	0	0	0.0
Total	1,039,671	1,090,503	50,832	4.9

Source: Pequea Township

* Miscellaneous revenues have been allocated to other revenue accounts where appropriate.

Figure 10-1 Distribution of General Fund Revenues, 2002

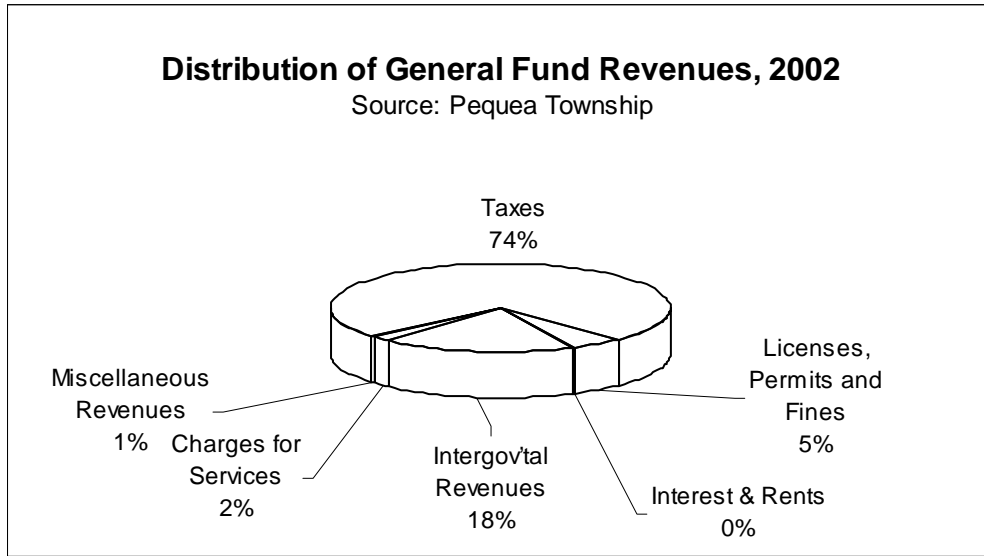
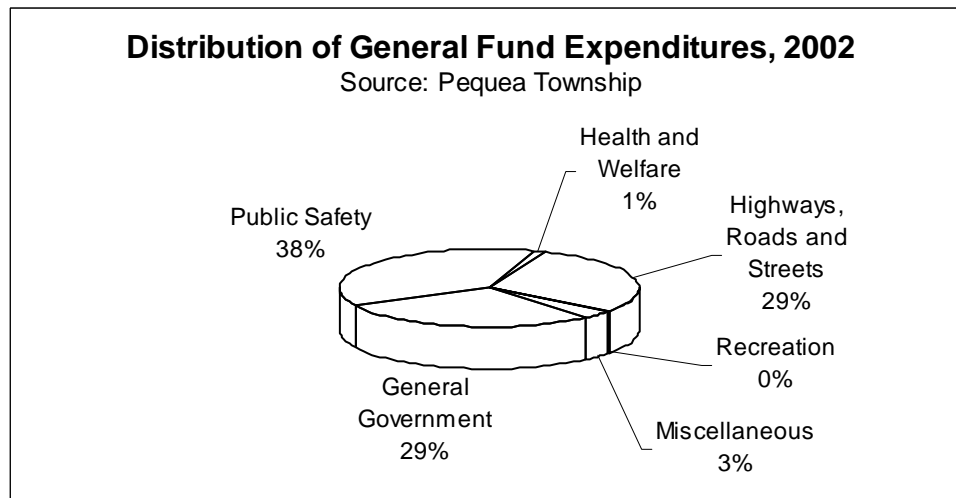


Figure 10-2 Distribution of General Fund Expenditures, 2002



10.3 Historical General Fund Financial Analysis

Over the past five years, 1998-2002, the Township's expenditures declined overall. Actual annual expenditures ranged from a low of \$ 889,400 (2000) to \$ 1,011,658 (1998). General government, public safety, and highways, roads and streets consistently required the largest percentages of the Township budget, comprising 75.5 percent to 94.5 percent of the total budget. Recreation expenditures were quite variable. Miscellaneous expenditures were relatively stable.

Over the same time period, the Township's revenues rose overall. Actual annual revenues ranged from \$ 792,554 to \$ 1,244,657. Taxes consistently provided between 67.2 percent and

84.4 percent of the total revenue. Licenses, permits, and fines and intergovernmental revenues are highly variable from year to year. Charges for services and miscellaneous revenues are relatively stable. Interests and rents have steadily declined.

Table 10-3 Distribution of General Fund Expenditures, 1998-2002

Distribution of General Fund Expenditures, 1998-2002											
Expenditure	1998		1999		2000		2001		2002		1998-2002
		%		%		%		%		%	%
General Government	213,373	21.1	290,490	29.1	245,740	27.6	219,717	20.9	260,672	28.7	22.2
Public Safety	264,304	26.1	272,377	27.2	264,576	29.7	347,414	33.0	338,611	37.2	28.1
Health and Welfare	12,331	1.2	11,948	1.2	12,378	1.4	14,425	1.4	12,156	1.3	-1.4
Highways, Roads and Streets	243,899	24.1	192,225	19.2	328,687	37.0	438,144	41.6	266,004	29.3	9.1
Recreation	257,949	25.5	204,043	20.4	1,000	0.1	2,320	0.2	1,056	0.1	-99.6
Miscellaneous	19,802	2.0	28,623	2.9	37,019	4.2	31,653	3.0	30,909	3.4	56.1
Total	1,011,658	100.0	999,706	100.0	889,400	100.0	1,053,673	100.0	909,408	100.0	-10.1

Source: Pequea Township Financial Statements

Table 10-4 Distribution of General Fund Revenues, 1998-2002

Distribution of General Fund Revenues, 1998-2002											
Revenue	1998		1999		2000		2001		2002		1998-2002
		%		%		%		%		%	%
Taxes	668,549	84.4	703,350	67.2	731,487	83.4	744,735	76.9	918,399	73.8	37.4
Licenses, Permits and Fines	32,946	4.2	34,188	3.3	33,184	3.8	83,028	8.6	63,097	5.1	91.5
Interest & Rents	27,197	3.4	21,480	2.1	21,438	2.4	9,466	1.0	4,516	0.4	-83.4
Intergovernmental Revenues	41,784	5.3	260,237	24.9	59,503	6.8	85,811	8.9	226,027	18.2	440.9
Charges for Services	15,257	1.9	16,632	1.6	14,828	1.7	26,573	2.7	24,432	2.0	60.1
Contributions	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
Miscellaneous Revenues	6,821	0.9	10,189	1.0	16,783	1.9	18,466	1.9	8,186	0.7	20.0
Insurance Recovery	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
Total	792,554	100.0	1,046,076	100.0	877,223	100.0	968,079	100.0	1,244,657	100.0	57.0

Source: Pequea Township Financial Statements

10.4 Specialized Pequea Township Funds

Pequea Township has a number of separate funds for specialized projects and programs. These additional funds are summarized below.

The State Highway Aid Fund is used specifically and only for road and bridge projects.

The Long Lane Signal Fund is specifically for costs and maintenance of the traffic signal located at Millwood Road and Long Lane. Revenue for this fund was obtained from the developer of Millwood Industrial Park per agreement with the Township. The fund is temporary and money remaining in the fund at the end of the ten-year agreement term will be returned to the developer.

The West Penn Grant Road Bridge Project Fund is a capital holding fund for the future costs of this specific bridge replacement.

The BOCA Inspection Fund was originally created to cover building inspection costs incurred by Pequea Township. This process has been privatized and residents now pay inspectors

directly. The Fund has been retained to cover possible inspection costs for rental or other violations for which the Township would be responsible.

The Street Lighting Fund is used specifically and only for street lighting costs. Revenue is obtained from the street light tax levied upon residents and landowners where street lighting is provided, namely in Manchester Village and Westwood Village. Additional funds are transferred from the General Fund to the Street Lighting Fund to pay the costs of overhead street lights at intersections within these neighborhoods.

The Firemen's Relief Fund and Pension Fund hold revenue from the state. Relief Funds are distributed equally to the two fire companies. Pension Funds are used to support the police pension and the non-uniform pension plan. Priority is given to the police pension, however the Township has been able to fully fund the non-uniform pension plan for the past ten years.

The Firemen's Appreciation Fund is a holding fund for donations and transfers to the two fire companies, the West Willow Fire Company and the New Danville Fire Company.

The Recreation Fund is specifically for costs associated with the Township's Silver Mine Park. Revenue is generated from the Admission and Amusement Tax and from transfers from the general fund.

The Park Donation Fund is specifically for a "Youth Fishing Derby" Held at the Township's Silver Mine Park or for care and maintenance of the ponds at the park. Revenue for this fund was obtained from resident donations for these purposes.

The Equipment Fund is a holding fund for capital expenditures for vehicle and large equipment.

The Major Storm Water Fund is for Capital expenditures for storm water projects.

The Official Map Fund is a holding fund.

The Historical Preservation Fund is a capital holding fund for the preservation of the historical pony truss bridge on Byerland Church Road. Preservation of the bridge will entail moving it to Silver Mine Park in 2005.

10.5 Summary

Pequea Township's municipal revenues have been steadily increasing in recent years, while its expenditures have remained relatively stable. The Township utilizes specialized taxes and holding funds to finance particular township services.

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CHAPTER 11 SURROUNDING MUNICIPALITIES AND LANCASTER COUNTY

Pequea Township is surrounded by seven municipalities. The planning activities in these municipalities may directly or indirectly affect areas of Pequea Township. A brief synopsis of planning and recent development for each municipality follows.

11.1 West Lampeter Township

West Lampeter Township borders Pequea to the east. The township recently adopted an updated 2003 Comprehensive Plan. The township's Sewage Facilities Plan was adopted in 1990; its 1998 update, as part of the Suburban Lancaster Sewer Authority Swage Facilities Plan, has also been approved by DEP. The Township's subdivision and land development ordinance dates to 1990 and its current zoning ordinance to 1988. The township has its own stormwater management ordinance (1990) and is guided by the Lancaster Inter-Municipal Committee Lampeter-Strasburg Park, Recreation and Open Space Plan (1994).

Current zoning along the Pequea Township border is residential from the northernmost point to Shultz Road; industrial from Shultz Road to Long Lane; agricultural between Long Lane and Kendig Road (the affected parcel is preserved farmland); and residential along the remainder of the border. The township's future land use map in its updated comprehensive plan indicates two potential new zoning districts—Main Street District and Open Space, Recreation, and Conservation District—along the northbound lanes of PA 272. These new districts are the intended implementation of the township's vision for revitalizing Willow Street. The future land use map also indicates a high density residential area just east of the Millwood Road and Schultz Road intersection, which consumes a portion of the previous industrial zoning.

The southernmost portion of West Lampeter Township lies adjacent to the Central Lancaster County urban growth boundary along Route 272 in Pequea Township. The future land use map indicates low density residential uses in this area.

The northern portion of the Township is serviced by the Suburban Lancaster Sewer Authority and the Lancaster City Water Authority. Sewer service areas branch out from the Willow Street Pike corridor. Sewer service extends into Pequea Township primarily to serve Manchester Village, Westwood Village and portions of West Penn Grant Road. Further extension of sewer lines could occur into Pequea through existing lines in West Lampeter Township, though no extension is planned at this time.

Kendig Square is a shopping center in western West Lampeter Township along the Willow Street Pike. The shopping center is a relatively large retail commercial service center, and draws north-south traffic along Willow Street Pike and east-west traffic along Long Lane.

The recommendation of West Lampeter Township's comprehensive plan to return Willow Street Pike to a two-way street is a substantial planning topic that will be a point of future discussion for West Lampeter and Pequea Townships, Lancaster County Planning Commission and PENNDOT.

11.2 Providence Township

Providence Township is located south of Pequea Township. The township adopted its Comprehensive Plan in 1991, followed by its Sewage Facilities Plan and stormwater management ordinance in 1992. The township's zoning ordinance dates to 1995 with amendments through August 2004. The township has a subdivision and land development ordinance, which dates to 1992 with amendments through December 2003. Current zoning along the Pequea Township border is predominantly agricultural and rural, with a small commercial area along Route 272.

The only portion of the Township which is served by public sewer is the southeastern corner, serviced by the Quarryville Sewage Treatment Plant. No extensions to sewer lines are planned for the near future. There are no public water lines which service the Township.

11.3 Martic Township

Martic Township adopted its Comprehensive Plan in 1991. The Township's Zoning Ordinance dates to 2002. Martic Township uses the County's Subdivision and Land Development Ordinance (1991). The township also utilizes the County's stormwater management regulations. Current zoning along the Pequea Township border is a mix of agricultural and rural conservation. Martic Township currently has no public water or sewer service.

Development in Martic Township is limited to an occasional 2-3 lot subdivision. Larger developments are limited in number, due to low groundwater yields.

11.4 Conestoga Township

Conestoga Township is located west of Pequea Township. The township's current Comprehensive Plan dates to 1993 and its zoning ordinance to 1984, although adoption of a comprehensive update is anticipated in the near future. Its zoning has been amended as recently as 1993. The Lancaster County Subdivision and Land Development Ordinance (1991) regulates land development in Conestoga Township. The township also utilizes the County's Stormwater Management Ordinance. The Township anticipates development of its own stormwater management ordinance to meet the requirements of Phase II of the NPDES permitting program in the near future. The Township completed and approved its Sewage Facilities Plan in 1991.

Zoning along the Pequea Township line is agricultural from the mouth of Goods Run to Long Lane, with a small section of the rural district applied to Tuckahoe Village. From Long Lane to the Conestoga Creek, zoning is residential. Conestoga Township has a conservation designation for a 200' deep buffer along Pequea Creek.

The Township currently has no public water or sewer service. There are no plans for public utilities to be placed in the Township in the near future. There are no plans for roadway improvements; widening and culvert replacements are scheduled according to maintenance needs.

11.5 Millersville Borough

Millersville Borough is located northeast of Pequea Township. The Borough's most recent comprehensive plan was adopted in 2001. Additionally, the Borough is currently participating in the central Lancaster County regional plan, Growing Together, initiated by the Lancaster Inter-Municipal Committee. The Borough's zoning ordinance was adopted in 1995. Areas of the Borough adjacent to Pequea Township are zoned residential and buffered by the Conestoga Creek. There are no direct roadway or bridge connections between Millersville Borough and Pequea Township.

Millersville Borough owns and operates its own sewage treatment plant. The Borough's water system was sold to the City of Lancaster Authority, Bureau of Water in 1998. The majority of the homes and businesses are serviced by these utilities. The Borough has no plans to extend sewer service lines into surrounding communities.

11.6 Lancaster Township

Lancaster Township is adjacent to northern Pequea Township. Lancaster Township has a comprehensive plan for the 2002-2007 period and a zoning ordinance, which was updated in 1997 and subsequently amended. The township is currently participating in the Lancaster Inter-Municipal Committee regional plan for central Lancaster County. The township's Subdivision, Land Development and Storm Water Management Ordinance is dated May 2000.

Current zoning along the Pequea Township border is a combination of low and medium density residential, and is naturally buffered by the Conestoga Creek. PA 741/Millersville Road and the New Danville Pike both cross Conestoga Creek and enter Pequea Township from Lancaster Township. There are no bridge or roadway improvements planned for these facilities at this time.

Areas in the Township which receive public sewer service are the more densely populated areas and newer housing developments. Basically, the western portion of the Township is serviced by the Lancaster City Sewer Authority, the eastern portion is serviced by the Lancaster Area Sewer Authority (LASA), and the southern portion is serviced by the Lancaster City Sewer Authority and the Suburban Lancaster Sewer Authority (SLSA). Lancaster Township's portion of the SLSA 1998 Sewage Facilities Plan was approved and LASA's Sewage Facilities Plan update is in progress. There are no planned extensions to these sewer lines that would affect Pequea Township at this time.

11.7 Lancaster Inter-Municipal Committee

The Lancaster Inter-Municipal Committee (LIMC) is developing a multi-municipal comprehensive plan for Central Lancaster County, Pennsylvania. This plan will establish 20-year goals and policies for land use, housing, transportation, community facilities, parks and open space, natural resource protection, historic resource protection, and utilities. The program is called Growing Together: A Comprehensive Plan for Central Lancaster County and includes East Hempfield Township, East Lampeter Township, East Petersburg Borough, Lancaster City,

Lancaster Township, Manheim Township, Manor Township, Millersville Borough, Mountville Borough, West Hempfield Township and West Lampeter Township.

Growing Together is halfway through its planning process at the time of this publication. Inventory and assessment phases are complete. The LIMC is now developing its future land use map and discussing general policy topics.

11.8 Lancaster County

The Lancaster County Planning Commission maintains the County's Comprehensive Plan. The Plan includes a Policy Plan, a Growth Management Plan, an Action Plan, and Regional Plans. The Policy Plan is the fundamental document and encourages future growth to be directed toward urban areas where a full range of public facilities and services exist and away from productive agricultural and sensitive environmental areas. The Growth Management Plan guides the location, pattern, and timing of growth and determines areas appropriate for agricultural, resources, and rural uses through the application of urban and village growth boundaries. The growth boundaries are lines on maps that identify developed community cores and enough buildable land to meet future land use needs through 2010.

The growth boundary separates the urban from the rural environments and provides a limit for the extension of urban services, particularly water and sewer. Growth within the growth boundary is encouraged to meet an average gross residential density of 5.5 dwelling units per acre. The Plan seeks to preserve the character and function of rural areas by supporting agriculture as the backbone of the rural economy, by encouraging villages to continue to function as community and service centers, and by protecting resources lands for uses which are compatible with their carrying capacities.

The Lancaster County Planning Commission worked with each of the municipalities in cooperatively establishing growth boundaries, as shown on the County's future land use map. In 1993, Pequea Township amended its 1990 Comprehensive Plan to adopt the growth boundary policy at the Township level and to integrate its purpose with the Township's existing policies.

11.9 Summary

Planning the municipalities surrounding Pequea Township has been active in the past 10-15 years. The Township is most likely to be affected by planning, subsequent development and municipal improvements in Conestoga and West Lampeter Townships. Regional impacts from the immediate north and south are mitigated to some extent by the natural barriers of the Conestoga and Pequea Creeks.

Development pressure is unlikely to occur from the south due the efforts of the Lancaster County Planning Commission to guide growth to its existing, core communities in the urban and village growth boundaries.

CHAPTER 12 HOUSING NEED, DEVELOPMENT POTENTIAL
AND BUILD-OUT ANALYSIS

A theoretical build-out analysis determined Pequea Township’s potential for accommodating future residential development under current policy and regulations, and provided context for future land use planning.

12.1 Farmland Consumption

Pequea Township acknowledges that Lancaster County has experienced tremendous growth over the past 50 years. The Township has absorbed a portion of this growth, particularly in the 1950s, 1960s, and 1970s. Some of this Countywide growth occurred at the expense of valuable farmland and the farming industry in Lancaster County. In Pequea Township, 537.34 acres of its 4,017.0 acres of prime farmland soil (13.38 percent) have already been intensively developed and are no longer functionally suitable for farmland. Furthermore, 185.79 acres of its 2,242.0 acres of lands comprised of soils of statewide importance (8.29 percent) have also already been developed. The Township aims to protect its remaining farmland and agricultural districts vigorously.

Table 12-1 Farmland Soils by Land Use, 2003

Farmland Soils by Land Use, 2003				
Land Use	Prime Agricultural Soils		Soils of Statewide Importance	
	# of parcels	Acres	# of parcels	Acres
Commercial	27	38.5	15	18.7
Confined Feeding Operation	55	52.9	34	26.3
Cropland & Pasture	321	2,508.3	236	1,444.5
Forest	119	176.4	122	167.3
Grass & Shrubland	104	87.1	89	92.8
High Density Residential	5	9.6	2	4.1
Industrial	10	33.1	4	3.4
Institutional	16	25.1	5	5.5
Low Density Residential	218	300.9	147	210.8
Medium Density Residential	98	400.4	41	143.5
Mines & Barren Land	6	6.5	7	14.5
Orchards	29	220.5	13	64.3
Recreational	18	108.7	10	30.3
Transportation	19	30.6	11	10.6
Water	53	13.5	31	3.5
Wetlands	22	5.1	15	2.1
Total acreage of soil type		4017.3		2,242.1
Intensively developed uses (shown in bold)	1,120	537.3	782	185.8
Intensively developed uses as a percentage of soil type		13.4%		8.3%

Source: Gannett Fleming

12.2 Existing Growth Management Policy

Lancaster County’s growth management policy, namely the use of urban and village growth boundaries, has been accepted by its municipalities. The UGBs and VGBs are absorbing growth, but development outside the growth boundaries is still occurring at a rapid pace. And densities in the UGBs are still too low to accommodate the majority of the recent and projected population increase in ways that truly accomplish smart growth.

12.3 Development Potential and Build-Out Analysis

The Township wanted to determine what level of population increase the current UGB would accommodate and, if that capacity was significantly higher than projected population for the next 25-30 years, where could UGB adjustments and zoning changes be made to more rigorously manage land development and resource conservation, namely farmland conservation.¹² This analysis was intended to answer these questions and to inform the future land use map and zoning ordinance recommendations. This analysis does not change the current zoning policy, rather it recommends that changes be considered as one of many components of implementing this comprehensive plan.

This analysis utilized the existing land use, zoning, sewer service area, and environmental features data sets, which were examined to yield acreage and associated zoning of currently undeveloped but developable land. The existing land use data provided an illustration of developed and undeveloped land uses geographically. Zoning data included both geographic locations and boundaries of zoning districts, as well as the ordinance provisions that control development density for residential uses (dwelling units). Utility data is considered, as the availability of water and sewer service can result in higher potential development density according to the ordinance provisions. Finally, additional regulations that protect sensitive environmental features, i.e. floodplains, steep slopes and wetlands, from development and its impacts were considered in order to exempt these areas as truly undevelopable.

¹² The Township recognizes that UGBs are intended to be adjusted to accommodate growth incrementally. In this case, reducing the area in the UGB will more efficiently guide growth. In the future, perhaps 10, 20, or 30 years from now, the UGB may need to be adjusted (likely expanded) based on the population projections and development trends available at that time.

Table 12-2 Developable Lands, 2003

Undeveloped, developable lands, 2003				
		Pequea Township	Pequea Township Inside UGB	Pequea Township Outside UGB
Undeveloped lands <i>(Agricultural, Grassland/Open Space, and Woodland Uses)</i>		6,759.2	667.6	6,091.6
Undevelopable lands <i>(undeveloped lands constrained by sensitive environmental features)</i>		749.5	46.6	702.9
Slopes 15-25%	429.3		34.7	394.6
Slope greater than 25%	31.8		0.0	31.8
Floodplains and wetlands (net total acreage)	288.4		11.9	276.5
Undeveloped, developable lands <i>(undeveloped lands without environmental constraints)</i>		6,075.5	621.0	5,454.5
<i>Undeveloped, developable lands by Zoning District</i>				
Agricultural A		5229.2	5.3	5,223.9
Residential R-1		386.9	247.6	139.3
Residential R-2		280.5	280.5	-
Commercial		64	57.3	6.7
Industrial		33.5	30.4	3.1
Mineral Recovery		81.4	0	81.4

Pequea Township has approximately 6,075.5 acres of undeveloped but developable land. Of this total, 621.0 acres (10.2 percent) are located inside the current UGB and the remaining 5,454.5 acres (89.8 percent) are located outside the current UGB. This acreage includes many acres of land currently in agricultural activity. Most of the undeveloped lands lie outside the sewer service area, resulting in potential for only lower density development. These undeveloped, developable lands are the subject of the following analysis.

12.3.1 Maximum Development Potential

This analysis estimated that 1,297 dwelling units could be developed under current (2003) zoning policy. Such development would occur in the R-1, R-2, and agricultural districts, as shown in Table 12-2 and shown on Map 11, Maximum Future Residential Development Scenario. Of these, 1,086 units would be located within the UGB and 161 would be located outside the UGB.

12.3.2 Probable Development

The Township's experience of development rate outside the UGB suggests that as little as 1/3 of property owners outside the UGB, specifically farmers, would actually choose to maximize their development rights, thereby reducing development outside the UGB by 2/3 or by 54 structures. This perspective includes the assumption that the Outdoor World camp is not

likely to develop its 3 permitted dwelling units under the effective agricultural zoning, and the fact that the Township is aware of a substantial land development plan within the R-2 district. Current zoning is estimated to allow 26 units on the proposed site. However, the plan proposes 55 units. If approved, development potential within the R-2 district would decrease by at least 26 units. Therefore, a realistic or probable build-out condition would involve the development of 1,217 additional residential units. These figures are presented in Table 12-2 and illustrated on Map 12, Probable Residential Development Scenario.

12.3.3 Preferred Development Density

The Township also explored the possibility of rezoning some parcels to the agricultural district in an effort to manage growth and conserve farmland more vigorously. It considered these potential zoning changes in conjunction with the probable development pattern described above. This scenario is presented on Map 13, Preferred Residential Development Scenario. Figures are shown in Table 12-2.

Reducing the density of certain R-1 parcels by rezoning to them to the agricultural district would further reduce the total development potential by 290 dwelling units. This proposed rezoning reduces the number of R-1 units by 265 inside the UGB and by 32 units outside the UGB. Furthermore, reducing certain R-2 parcels that lie well outside the current public utility areas to the agricultural district would reduce the Township's R-2 capacity by 126 units. Parcels that have already been developed as single family homes would be revised to the R-1 district.

These changes would increase the number of dwelling units permitted in the agricultural district by a total of 7 units (1 outside the UGB and 6 inside the UGB). This rezoning could also entail the relocation of the UGB. This adjustment to the UGB was considered due to the fact that public utilities are neither present nor planned for the specified parcels inside the UGB at this time.

Table 12-3 Residential Development Scenarios

Residential Development Scenarios					
Maximum Residential Development Potential					
Under 2003 zoning					
Zoning District	Inside UGB	Outside UGB	Total Township		
A	0	81	81		
R-1	286	80	366		
R-2	800	0	800		
Exceptions*	no specific locations		50		
Total	1,086	161	1,297		
Probable Future Residential Development Potential					
Continued viability of agriculture (only 1/3 of property owners in the agricultural district convert to other use)				Net Gain/Loss	
	Inside UGB	Outside UGB	Total Township		
A	0	27	27		
R-1	286	80	366		
R-2	774	0	774	-26	
Exceptions*	no specific locations		50		
Total	1,060	107	1,217	-26	-54
Probable Future + Proposed Zoning Change					
Proposed Change of 346.4 acres R-1 to Ag (comprised of 290.5 acres inside the current UGB and 55.9 acres outside the current UGB), 57.3 acres of R-2 to Ag and 2.7 acres of R-2 to R-1.				Net Gain/Loss	
	Inside UGB	Outside UGB	Total Township		
A	6	28	34	6	-53
R-1	21	48	69	-265	-32
R-2	648	0	648	-152	
Exceptions*	no specific locations		50		
Total	801	76	801	-411	-85

* In addition to development potential under the current zoning ordinance, there is potential for another 25-50 dwelling units on single and separate lots, permitted (or grandfathered) by regulations that pre-date the Township's current effective agricultural zoning.

Source: Gannett Fleming

Removing the potential for these 416 residential units by rezoning these parcels to the agricultural district would reduce the total development potential of the Township to 801 additional dwelling units. With these proposed changes, the Township would be able to accommodate its projected population and housing needs through 2030, as shown in Table 12-3, and provides a variety of housing types, unit densities, and locations.

Table 12-4 Comparison of Residential Unit Need to Development Potential

Comparison of Residential Unit Need to Development Potential					
	2000-2003	2003	2003-2010	2010-2020	2020-2030
Recent Dwelling Unit Development	64				
Projected Housing/Dwelling Unit Need			68	127	112
Future Dwelling Unit Development Potential <i>based on recommended UGB adjustment and rezoning of select R-1 parcels to the agricultural district</i>		801	733	606	494
Surplus			665	479	382

Source: Gannett Fleming

12.4 Summary

Development in Pequea Township has already consumed more than 700 acres of prime farmland soils and soils of statewide importance. This analysis was prepared to determine if the Township has sufficient lands zoned for development to accommodate housing for its projected population increases over the next 20 years. The Township considered the maximum development allowed under its current zoning, a more probable scenario of development based on historic trends, and a preferred scenario that included potential zoning changes to further conserve farmland and buffer protected lands. Under each of these scenarios, including the preferred scenario, the Township is able to accommodate housing for its projected population.

CHAPTER 13 COMMUNITY GOALS AND OBJECTIVES

Pequea Township's goals and objectives are based upon the Township's historic policy. These goals and objectives have been updated to reflect several contemporary issues and concerns expressed by the Board of Supervisors, Planning Commission, EAC and Township staff.

13.1 Future Land Use

- ❖ Provide for growth in appropriate areas
 - Utilize urban growth boundaries to identify lands to be developed for urban uses and at urban densities.
 - Periodically review the urban growth boundary with Lancaster County Planning Commission and amend, if needed.
 - Support development of lands within the growth boundary with the planned provision of public utilities.
 - Focus development within the urban growth boundary to areas, namely where public infrastructure is already provided.
 - Direct housing growth within the urban growth boundary to handle the population projection in this report.
 - Direct commercial activities to appropriate zoning districts.
 - Encourage re-use and redevelopment of existing developed sites.
- ❖ Maintain the rural character of the Township
 - Promote preservation of those areas suited to agriculture and open space.
 - Maintain the Township's current zoning principles and general district locations with the proposed zoning changes.
 - Limit the extension of public water and sewer to service problem areas, where no feasible alternative is possible.
- ❖ Guide new development to complement the character of its site and contribute to the character and community of the Township.
 - Develop a Pequea Township subdivision and land development ordinance.

13.2 Transportation

- ❖ Maintain adequate roadway conditions in the Township.
 - Prioritize requests to PENNDOT for improvements on state roads with a high number of crashes.
 - Continue to identify, program and complete Township road and bridge improvements, e.g. through the Township's 5-year roadway improvement program.
 - Improve roads to serve all road-based travel modes.
 - Improve Township roads to meet minimum standards in the LCPC Functional Classification Map Study.
- ❖ Determine whether certain Township roads or portions thereof should be vacated and no longer be owned and maintained as public roads.
- ❖ Support mobility in the regional transportation network.
 - Participate in regional transportation studies to express and coordinate Township policy with study conclusions and recommendations.
 - Support improvements that do not consume farmland.

13.3 Public Facilities and Services

- ❖ Maintain support for police services.
- ❖ Continue to support fire protection services.
- ❖ Continue to improve park and recreational facilities.
 - Support development of parks at New Danville and West Willow
 - Construct planned, phased improvements to Silver Mine Park.

13.4 Public Utilities

- ❖ Support extension and maintenance of public sewer and water service within the urban growth boundary at the expense of the developers.
- ❖ Discourage the extension of public water and sewer beyond the urban growth boundaries except where necessary to service problem areas and where no feasible alternative is possible.

- ❖ Continue to publish the Township newsletter to educate residents on Township concerns, decisions, and projects.
- ❖ Limit development that proposes to use on-lot sewage treatment systems to lots large enough to have two approved disposal areas.
- ❖ Encourage quality construction and property maintenance in the Township.
 - Establish a Township on-lot system maintenance program to promote maintenance of the systems.
- ❖ Reference state permit requirements for the development and operation of package sewage treatment plants and limit their location through Township ordinances.
- ❖ Maintain the Township's requirement for waste haulers to obtain a permit to monitor solid waste collection services in the Township.
- ❖ Maintain a functional stormwater management network.

13.5 Natural and Cultural Resources

- ❖ Protect environmentally sensitive areas
 - Maintain or improve the existing water quality of surface and ground water resources.
 - Sustain wetland and floodplain areas.
 - Enforce and improve existing floodplain and wetland regulations.
 - Require hydrologic studies for new development of all types, including intensive agriculture, not receiving public water.
 - Encourage low impact development to protect the natural resources.
 - Encourage participation in the agricultural security and agricultural preservation programs.
 - Promote the preservation of historic resources and their contextual or surrounding landscape.
 - Promote the designation and management of greenways along Pequea and Conestoga Creeks and their tributaries.

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CHAPTER 14 LAND USE PLAN

The land use plan designates the future locations of residential, commercial, industrial, institutional, agricultural and recreational uses in the Township. The plan is designed to ensure a safe and attractive environment in the Township through the planning period. The plan update process in Pequea Township has shown an overwhelming desire to maintain the Township as a rural community with an active farming industry and abundant open space. This has been indicated by the Board of Supervisors, the Planning Commission, and the Environmental Advisory Council.

This plan promotes continued agricultural activity and preservation of agricultural lands and effective zoning in the Township. It also provides for modest growth to accommodate the projected population increase in the Township. The Comprehensive Plan has been developed to maintain the agricultural environment of Pequea Township while accepting its fair share of new residents and their associated housing in appropriate areas.

The land use plan should be viewed as a guide for future growth and development. The land use plan is a generalized description of the manner in which land should be used during the next 10-20 years. It is intended to be a flexible guide for the uses of land. The land use plan should be reviewed periodically by the Township and revised, if necessary, to keep pace with evolving development pattern and trends.

The land use plan is not a zoning ordinance or zoning map and should not be construed as such. As the Township implements the future land use plan, it will amend the zoning ordinance and map through the procedures designated in the Pennsylvania Municipalities Planning Code.

14.1 Goals and Objective

As stated in Chapter 13, the following are the goals and objectives for future land use in Pequea Township.

- ❖ Provide for growth in appropriate areas
 - Utilize urban growth boundaries to identify lands to be developed for urban uses and at urban densities.
 - Periodically review the urban growth boundary with Lancaster County Planning Commission and amend, if needed.
 - Support development of lands within the growth boundary with the planned provision of public utilities.
 - Focus development within the urban growth boundary to areas, namely where public infrastructure is already provided.

- Direct housing growth within the urban growth boundary to handle the population projection in this report.
- Direct commercial activities to appropriate zoning districts.
- Encourage re-use and redevelopment of existing developed sites.
- ❖ Maintain the rural character of the Township
 - Promote preservation of those areas suited to agriculture and open space.
 - Maintain the Township’s current zoning principles and general district locations with the proposed zoning changes.
 - Limit the extension of public water and sewer to service problem areas, where no feasible alternative is possible.
- ❖ Guide new development to complement the character of its site and contribute to the character and community of the Township.
 - Develop a Pequea Township subdivision and land development ordinance.

14.2 Future Land Use Types

There are eight (8) general future land use types in this plan: agricultural, low density and high density residential, commercial, industrial, institutional, recreational, and extraction. The land use plan is illustrated on Map 14. The amount of land allocated to each land use type is given in Table 14-1.

Table 14-1 Future Land Use Distribution

Future Land Use Distribution					
Future Land Use	Acres	Percent of total Township	Acres in Use in 2004	Net Effect of Future Land Use	Net Effect as Change in Percent
Ag & Open Space (includes water)	7,205.9	82.6%	6,873.6	332.3	4.8%
Commercial	73.2	0.8%	69.0	4.2	6.1%
Industrial	96.9	1.1%	45.5	51.4	113.0%
Institutional	36.2	0.4%	37.7	-1.5	-4.0%
Mineral Extraction	163.9	1.9%	0.0	163.9	-
Recreational*	156.7	1.8%	188.5	-31.8	-16.9%
Low Density Residential	669.3	7.7%	772.6	-103.3	-13.4%
High Density Residential	474.3	5.4%	684.7	-210.4	-30.7%
Transportation and Utility ROW	n/a		48.2		-
Total	8,719.7	100.0%	8,719.8		

Source: Gannett Fleming

* Future recreational uses are shown on the future land use map as an overlay to underlying agricultural/open space and mineral extraction uses. The future recreational acreage is not counted in the total land area.

14.2.1 Agriculture and Open Space

What percentage of the Township is currently used for agricultural and open space uses? The area shown on Map 14 for future agricultural and open space use is almost entirely prime farmland soils and soils of statewide importance for agricultural productivity. This area does not have public sewer or water and such utilities are not proposed to be extended into this area.

Due to the predominance of prime farmland soils in the Township and the Township's desire to preserve important agricultural lands, permanent preservation of these lands is a priority and in fact a principle for the Township. Preserved agricultural or open space land is a key component of the Township's rural character.

The high percentage of prime farmland soils and other soils of statewide importance should help the prioritization of development rights purchases in the Pequea Township agricultural security area.

Amendments to the Municipalities Planning Code in 2000 (Act 68) further enhanced a municipalities authority to preserve farmland through agricultural easements and transfer of development rights, among other planning authorities. The Purpose of the Act was amended to include the following:

To promote the preservation of this commonwealth's natural and historic resources and prime agricultural land; ...to encourage the preservation of prime agricultural land and natural and historic resources through easement, transfer of development rights and rezoning; to ensure that municipalities enact zoning ordinances that facilitate the present and future economic viability of existing agricultural operations in this Commonwealth and do not prevent or impede the owner or operators' need to change or expand their operations in the future in order to remain viable;...and wherever the provisions of this act promote, encourage, require or authorize governing bodies to protect, preserve, or conserve open land, consisting of natural resources, forest, and woodlands, and actions taken to protect, preserve or conserve such land shall not be for the purposes of precluding access for forestry.

If landowners in this area do not wish to participate in the agricultural easement program, the Township's existing agricultural zone is an acceptable tool to promote the agricultural preservation of this area.

14.2.2 Low Density and High Density Residential

Two principles guide the location of future residential uses in the Township.

- 1) residential uses shall be located in areas served by public utilities, and
- 2) residential uses shall be located in areas poorly suited to agriculture and without environmental constraints, e.g. wetland.

Following these two principles will expand existing residentially developed areas, enable higher density development to occur in concentrated locations, provide cost-effective public utilities, and protect the large open spaces of the Township from scattered (sprawl) development. In order to expand existing residentially zoned areas and to enable higher density development of all urban uses, all lands within the urban growth boundary should be provided with both public water and sewer in a planned manner. In order to cost effective public utilities, the Township should strive for an average density of approximately 5.5 dwelling units per acre within developable areas as suggested in the Lancaster County Comprehensive Plan: Growth Management Plan (1993). Together, these methods will help to protect the rural areas of the Township from development pressure and sprawl.

In guiding residential development to areas poorly suited to agriculture, an attempt has been made to place residential uses in areas without prime agricultural soils and within existing public utilities service areas. Residential development potential on steep slopes is recommended with guidance for adapting site design to the topography of the parcel.

These future residential areas are able to accommodate population forecasts for Pequea Township, and in fact, their capacity has already estimated the impact of environmental protection ordinances. By accommodating future population within residential areas, development pressure on the agricultural and open space areas will be minimized.

The future land use plan proposes that 1,143.6 acres or 13.1 percent of Pequea Township be designated for existing and future residential development. These acres are comprised of 669.3 acres of low density residential uses and 474.3 acres of high density residential uses. The total represents a decrease in residential lands of 313.7 acres from the current zoning. A portion These residential lands has already been developed and is unlikely to change in use. Nonetheless, the development intensity of these lands should not increase.

Nearly 350 acres of residentially zoned land (R-1) are recommended for rezoning to an agricultural district. Approximately 58 acres of residentially zoned land (R-2) along the PA 272 corridor are recommended for rezoning to an agricultural district to separate the village of Willow Street from its rural surroundings and to improve consistency with adjacent zoning in West Lampeter Township. The build-out analysis has shown that the remaining R-1 and R-2 lands can adequately accommodate housing units for the projected population.

14.2.3 Commercial

No significant change is recommended for the location of commercial uses in the Township. The future land use plan shows capacity for an increase in commercial land use of 4.2 acres or 6.1 percent in currently commercially-zoned areas.

14.2.4 Industrial

A small percentage of the Township (96.9 acres or 1.1 percent) remains designated for future industrial development. These areas are located along roadways that can best handle the high traffic volumes and heavy traffic of industrial operations. The future land use plan

accommodates an additional 51.4 acres or 113.0 percent in industrial lands in locations already permitted for such uses by the zoning ordinance.

14.2.5 Institutional

Institutional land uses include public and quasi-public services, such as churches, schools, fire stations, and municipal or government offices. The land use plan shows a nominal decrease in this land use type (1.5 acres or 4.0 percent). The institutional acreage total does not include churches, since churches, as well as some other institutional uses, are often compatible with a wide range of other land use types and may be accommodated within other residential, commercial, industrial or agricultural areas. Rather than specify individual parcels for institutional uses, such uses should be permitted within appropriate areas, i.e. zoning districts, where compatible.

14.2.6 Recreational

Pequea Township has made substantial progress in providing public recreational land over the past ten years. The acquisition of Silver Mine Park has created not only public recreation land in the Township but also public access to Pequea Creek. The Silver Mine Park Master Plan signifies that the Township intends to continue to make improvements to this facility. Additional recreational lands, namely the lands surrounding the Pequea Elementary School, are located on Map 14. These recreational lands are shown as an overlay to the underlying agricultural/open space and institutional uses. Like institutional uses, recreational activities can be integrated with other development and should be integrated through zoning provisions.

These public recreation lands total 156.7 acres or 1.8 percent of the Township. This total does not include the 31.8 acres of recreational land associated with the New Danville Mennonite school, which is shown as an institutional use.

While the total acreage exceeds historic guidance of 10 acres per 1,000 residents, the Township should continue to pursue the development or enhancement of recreational facilities in order to provide recreational opportunities near its residential concentrations. Access and enhancement to quasi-public recreation sites, such as school playgrounds and ballfields, are certainly in character with rural community recreation, however neighborhood parks for the residents of the Township's villages should also be considered.

14.2.7 Mineral Extraction

Future mineral extraction uses are proposed for 163.9 acres of the Township. This acreage reflects the total acreage zoned for such uses, although the Township's Silver Mine Park occupies a portion of these lands. Extraction activities are not anticipated for this area in the foreseeable future. However, the total zoned acreage for mineral extraction should remain 163.9 acres.

14.3 Urban Growth Boundary

Pequea Township adopted an urban growth boundary as an integral part of its future land use plan in 1993. The urban growth boundary is part of a larger Central Lancaster County Urban Growth Boundary, designating growth areas for the City of Lancaster and its immediate surroundings. Lands within the urban growth boundary are considered urban. Urban indicates lands where a full range of public services, including sewer, water, police, fire, schools, and roadways, are provided to land owners. These services are not provided or planned for in rural areas.

Urban lands are planned for residential, commercial, industrial, institutional, and recreational uses. These same uses are accommodated in suburban areas at lower densities and with some or all of the abovementioned services.

With the exception of parks and open space, urban uses are strongly discouraged from being permitted outside the urban growth boundary. Public sewer and water systems are similarly strongly discouraged from being extended outside the urban growth boundary, except on a case-by-case basis where there is a public health hazard that cannot be otherwise rectified. In such cases, sewer and water systems should be limited in capacity to solve the existing problem and not stimulate additional development of rural lands, such as was designed for the West Penn Grant Road sewer extension.

14.4 Recommendations and Strategies

- Encourage participation in the Agricultural Security Area program.

Preservation of farmland is important to Pennsylvania, as well as to Pequea Township. In 1981, Pennsylvania legislators enacted the Agricultural Areas Security Law (Act 43) authorizing the creation of Agricultural Security Areas to preserve farmland.

It is the declared policy of the Commonwealth to conserve and protect and to encourage the development and improvement of its agricultural lands for the production of food and other agricultural products. It is also the declared policy of the Commonwealth to conserve and protect agricultural lands as valued natural and ecological resources which provide needed open spaces for clean air, as well as for aesthetic purposes. Article VIII, section 2 of the Constitution of Pennsylvania provides that the General Assembly may, by law, establish standards and qualifications for agricultural reserves. Agriculture in many parts of the Commonwealth is under urban pressure from expanding metropolitan areas. This urban pressure takes the form of scattered development in wide belts around urban areas, and brings conflicting land uses into juxtaposition, creates high costs for public services, and stimulates land speculation. When this scattered development extends into good farm areas, ordinances inhibiting farming tend to follow, farm taxes rise, and hopes for speculative gains discourage investments in farm improvements. Many of

the agricultural lands in the Commonwealth are in jeopardy of being lost for any agricultural purposes. Certain of these lands constitute unique and irreplaceable land resources of statewide importance. It is the purpose of this act to provide means by which agricultural land may be protected and enhanced as a viable segment of the Commonwealth's economy and as an economic and environmental resource of major importance.

- Statement of legislative findings, 3 P. S. § § 903

An Agricultural Security Area is a unit of 500 or more acres of viable agricultural land owned by one or more persons and used for the production of crops, livestock and livestock products; an area may be made up of several non-contiguous parcels, in which case the local government may place a minimum acreage requirement not to exceed 50 acres. Once established, land owners in the agricultural security area are eligible for purchase of their development rights by the county agricultural preservation board.

Once the agricultural area is designated, government agencies shall give the land in the area special treatment designed to keep the land in agricultural use and prevent unreasonable restrictions on farm operations. Specifically, land owners with agricultural security areas enjoy the following benefits:

- (a) The local government unit shall encourage the agricultural area by not enacting laws or ordinances which would restrict farm structures or farm practices unless the laws or ordinances bear a direct relationship to the public health or safety.
- (b) A local law or ordinance defining or prohibiting a public nuisance shall exclude from the definition of the nuisance agricultural activity or operation conducted using normal farming operations within the agricultural area if the agricultural activity or operation does not bear a direct relationship to the public health and safety.
- (c) Commonwealth agencies with programs that might negatively affect farmers shall conduct their programs in a manner that will encourage the continuance of viable agriculture in the areas.
- (d) Limitations are placed on the use of land condemnation procedures— eminent domain—by Commonwealth and local agencies unless approval is obtained from the Board.
- (e) Participants may elect to sell the rights to develop their land to the county governing body as part of a purchase program that counties may authorize.

Agricultural Security areas are reviewed and renewed every seven years. At the time of review/renewal, additional parcels may be added to the agricultural security area.

The Township should encourage landowners to participate in the program by including program information (e.g. program description, contact information, and recent enrollments) in the Township newsletter and in discussions with landowners on agricultural protection techniques (e.g. landowners adjacent to enrolled parcels prior to ASA renewal).

- Encourage applications to the County Agricultural Preserve Board¹³

In 1980, the County Commissioners appointed a nine-member Agricultural Preserve Board to devise ways to protect the County's agricultural lands. In 1983, the Preserve Board added staff and was made a County department. Since 1983, the Preserve Board has administered a purchase of development rights program to preserve land for farming. Landowners apply to sell development rights to the Preserve Board which then ranks the applications for priority, hires appraisers to estimate the value of development rights, and makes a formal offer to the landowner. Landowners who sell their development rights must maintain the land in farming.

The Preserve Board receives funding from both the County and the Commonwealth. In 1989, the Preserve Board began to participate in Pennsylvania's statewide purchase of development rights program.

Over 45,000 acres of farmland have been preserved by the Board with 529 conservation easements that were acquired, or under agreement as of December 31, 2003. The Preserve Board has a responsibility to monitor these farms for compliance with the terms of the conservation easement placed on the landowner's deed when the development rights are sold.

The Preserve Board has a staff of five, including a Director, two Farmland Preservation Specialists, an Administrative Assistant II and a Secretary.

Agricultural easement information and application forms are available on the County website (<http://www.co.lancaster.pa.us/>) or directly from the Board's office:

County of Lancaster
Agricultural Preserve Board
50 N. Duke St
P.O. Box 83480
Lancaster, Pa. 17608-3480

The Township should encourage landowners to explore this preservation option by including program information in the Township newsletter and discussing the option with residents as land preservation topics arise. The

¹³ Lancaster County website. <http://www.co.lancaster.pa.us/>.

Township has posted a map of ASA-enrolled properties and preserved farms in the Township building and should continue to do so as long as the maps are current and remain available.

Lancaster Farmland Trust complements the County Agricultural Preserve Board's efforts by offering a private, non-government option for the acquisition of development rights on farmland. LFT offers an important option crucial to the County's plain sect farmers whose beliefs discourage the acceptance of public monies. Over half of the farms preserved by the Trust are owned by Plain Sect farmers.¹⁴

Lancaster Farmland Trust
128 East Marion Street · Lancaster, PA 17602
717-293-0707
<http://www.savelancasterfarms.org/>

- Consider municipal funding to supplement County and state funding for agricultural preservation.

Pennsylvania and Lancaster County have dedicated funding for agricultural preservation, however this funding is limited. Instances may arise when County funding falls short of funding needed to place lands in preservation. The Township has documented and demonstrated its support for agricultural preservation through previous comprehensive plans and effective agricultural zoning. The Township may want to consider floating a municipal bond to supplement County funds for agricultural preservation in Pequea Township.

- Develop a Pequea Township subdivision and land development ordinance.

Specifically address open space requirements, recreational lands or fee-in-lieu requirements, curb/sidewalk/sidewalk alternative requirements in both urban and rural contexts.

- Revise the policies of the Lancaster County subdivision and land development ordinance (SLDO) to suit Pequea Township, or identify and revise another model SDLO
- Work with the Lancaster County Planning Commission to amend the urban growth boundary.

The future land use map indicates recommended zoning changes that reduce development potential and density based on the conclusion that other lands in the Township can accommodate projected growth. The urban growth boundary should be adjusted accordingly.

¹⁴ Lancaster Farmland Trust. <http://www.savelancasterfarms.org/>.

- Encourage developers of parcels in the R-1 and R-2 zoning districts within the growth boundary to pursue residential densities that average 5.5 dwelling units per acre. The 5.5 dwelling units per acre guideline is the Lancaster County growth management goal for development density within its urban growth boundaries. The Township's zoning ordinance currently allows for a range of one to six dwelling units per acre, thereby allowing for development to achieve the density guideline. No change to the ordinance is needed, however the Township should encourage developers to maximize development potential in these areas where public utilities and other services are readily available, as a means of reducing development pressure on the agricultural and open space lands of the Township. Such development densities should be adequately supported by the transportation network, namely through driveway access management and roadway upgrades, where needed.
- Revise zoning and SLDO to establish a maximum size for home- and farm-based businesses.

Home- and farm-based businesses are part of many rural communities and their growth is clearly an asset to local economies. Yet, such businesses can outgrow the home or farm location, leading to access and congestion issues on adjacent roadways and potential negative impacts to neighbors. The Township should revise its zoning ordinance to establish limits on the size of home- and farm-based business and direct these growing operations to appropriate locations. The Township may consider basing the maximum size of an operation on building size, roadway classification, and/or other relevant criteria.

- Amend zoning to address commercial operations that utilize open space instead of structures or fixed operation locations, e.g. commercial hunting, commercial recreation, etc.
- Amend zoning districts in the urban growth boundary to include mixed use development as a permitted use. Also, permit applications of traditional neighborhood development.

Pequea Township should review and revise its zoning policies to permit a compatible mix of uses and appropriate densities within its residential, commercial, and industrial zoning districts. Mixed-use zoning and higher densities allow residents to live within comfortable biking and walking distances of work, school, shopping and recreational activities.

- Identify potential target markets for sites with re-use and/or redevelopment potential. Consider desirable markets from the Township's perspective on use, transportation requirements, utilities requirements, etc.

Potential State/Federal Funding Sources: US EPA – Brownfields Assessment Demonstration Pilots, US EPA – Brownfields Clean Up Revolving Loan Fund, US EPA – Sustainable Development Challenge Grant Program

- Adopt zoning policies and subdivision regulations that will result in development patterns that makes it convenient to bicycle and walk in Pequea Township, particularly within the growth boundary but also throughout the Township.

Pequea Township should ensure that all development within the urban growth area supports bicycling and walking. The urban growth areas are intended to concentrate development of intensive uses in specific areas to maintain the vitality of urban neighborhoods and protect the rural landscape. Higher density land use in combination with bicycle and pedestrian facilities makes bicycle and pedestrian travel more attractive to residents, resulting in a higher level of physical fitness and lower levels of environmental pollution from motorized vehicles, among other community benefits.

Pequea Township should also include requirements for sidewalks, pedestrian friendly intersections, connected roadways, driveway access management and shoulder space for bicycles on specified roadways in the more intensively developed areas of the Township, e.g. collector and arterial roadways, through a Township Subdivision and Land Development Ordinance. The Township should also include requirements for bicycle friendly intersections, driveway access management and shoulder space for bicycles along select roadways in the less intensively developed portions of the Township, namely outside the UGB.

- Review housing vacancy rates reported in the 2010 Census, sooner if data is available, to determine if rates have continued to rise. Rates reported in the 2000 Census were low, however, they represented an increase over the 1990 rates.

14.4 Funding

Funding for most of these land use related strategies would need to come from the Township, except where noted. Recommendations that address changes to ordinances may be eligible for funding through PA DCED's Land Use Planning and Technical Assistance Program (LUPTAP).

14.5 Land Use Along the Township Boundary

As Chapter 11 indicated, Pequea Township has no significant land use conflicts with adjacent municipalities. With minimal changes in future land use, no conflicts are anticipated. Two of the recommended changes are located along the Township boundary.

One area is located in the southeastern corner of the Township across Pequea Creek from Providence Township and adjacent to West Lampeter Township. Such a change, if it occurs, would in fact be more consistent with agricultural and rural zoning in Providence Township. This change, again if it occurs, should also entail the contraction of the urban growth boundary, perhaps reducing development pressure along the PA 272 corridor.

The second area is located along the Township's western boundary on the south side of Run Valley Road. The adjacent parcel in Conestoga Township is an agricultural parcel and again would be more consistent as an agricultural and open space use.

The proposed R-1 to Agricultural changes for the parcels southwest of Willow Street may have a limited impact on the ultimate growth of the village, however hydrologic (wetland) and topographic (steep slope) constraints already severely limit the development potential of these sites. Open space preservation or conservation by design approaches would be more applicable to this area.

14.6 Summary

The land use plan has been developed to meet the applicable community goals and objectives; to be compatible with adjacent municipalities; and to provide for Pequea Township's fair share of regional development. This plan should be reviewed and revised, if necessary, throughout the planning period in light of on-going development trends and initiatives.

CHAPTER 15 TRANSPORTATION PLAN

The Transportation Plan focuses on improved mobility and safety among residents, businesses, institutions, and recreational sites; traffic safety; and roadway improvements.

15.1 Goals and Objectives

As stated in Chapter 13, the following are the goals and objectives for transportation in Pequea Township.

- ❖ Maintain adequate roadway conditions in the Township.
 - Prioritize requests to PENNDOT for improvements on state roads with a high number of crashes.
 - Continue to identify, program and complete Township road and bridge improvements, e.g. through the Township's 5-year roadway improvement program.
 - Improve roads to serve all road-based travel modes.
 - Improve Township roads to meet minimum standards in the LCPC Functional Classification Map Study.
- ❖ Determine whether certain Township roads or portions thereof should be vacated and no longer be owned and maintained as public roads.
- ❖ Support mobility in the regional transportation network.
 - Participate in regional transportation studies to express and coordinate Township policy with study conclusions and recommendations.
 - Support improvements that do not consume farmland.

15.2 Recommendations and Strategies

- Support study of high volume crash areas, most notably PA 272, Long Lane and New Danville Pike.

The inventory of high volume crash areas is shown in Table 7-3. The Township, in coordination with the Lancaster County Transportation Coordinating Committee (LCTCC), should request a ranking of high crash areas in the Township from PENNDOT District 8-0 and submit requests for study of high crash areas in order of rank.

The request for study would entail a minor effort on the part of the Township. Studies would be funded by PENNDOT through the LCTCC.

- Review Township road conditions annually to identify potentially deficient conditions.

The Township should conduct an annual review of local road conditions. (This review could be coordinated with the recommended review of stormwater problem areas.) Roadway alignment, lane configurations, and intersections should be reviewed. Surface cracking, faded, damaged or missing traffic controls (signs, lines, etc), and shoulder collapse are examples of potential problems that should be noted and considered for the improvement program. Review should consider the impacts of shared use by vehicles, buggies, bicycles and pedestrians.

- Utilize the Township’s five-year roadway improvement program to schedule and budget for identified improvements.
 - Include bicycle and pedestrian improvements, particularly with already developed areas of the Township. PENNDOT’s Hometown Street/Safe Routes to School Grant program is available to fund to such projects. Information on the grant program is available at PENNDOT’s website, <http://www.dot.state.pa.us>.
 - Consider the installation of alternate lanes for buggies and bicycles, where these could significantly improve safety.
- Vacate Township roads that do not serve the general Township community. Establish criteria for vacating such roads, e.g. provides only secondary access to private properties.
 - Identify roadways.
 - Notify and discuss the potential with land owners.
 - Follow appropriate legal requirements.
- Participate in the future study of West Lampeter Township’s concept to relocate thru traffic on PA 272. Express the Township’s position that significant roadway improvements should not consume farmland.

Participation would entail a minor effort on the part of the Township. This cost of the study preparation would likely be funded by PENNDOT through the LCTCC.

- Participate in initial and all stages of regional transportation studies conducted by state and county agencies to express and coordinate Township policy with study conclusions and recommendations.

It is important to participate early and consistently in these planning studies in order to express the Township’s position on farmland preservation. Funding would come from PENNDOT through LCTCC.

15.3 Funding

Funding for these transportation related strategies would come from the Township, except where noted. Recommendations that address changes to ordinances may be eligible for funding through PA DCED's Land Use Planning and Technical Assistance Program (LUPTAP).

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CHAPTER 16 PUBLIC FACILITIES AND SERVICES

Municipal governments are charged with protecting the health, safety, and welfare of their residents. The buildings, parks, and other facilities and services necessary to implement these responsibilities are the focus of the Public Facilities and Services Plan.

16.1 Goals and Objectives

As stated in Chapter 13, the following are the goals and objectives for public facilities and services in Pequea Township.

- ❖ Maintain support for police services.
- ❖ Continue to support fire protection services.
- ❖ Continue to improve park and recreational facilities.
 - Support development of parks at New Danville and West Willow
 - Construct planned, phased improvements to Silver Mine Park.
 - Continue support for maintenance for Silver Mine Park.

16.2 Recommendations and Strategies

- Continue to evaluate the effectiveness of regional police services as the partner municipalities grow.
- Strive to maintain a police service ratio of approximately one officer per 1,000 residents.

While a 1:1,000 ratio is less than the county average (1.4 officers per 1,000 residents¹⁵), it is an appropriate goal for these rural two townships.

- Continue to provide financial and facility support for the regional police force.
- Continue to encourage the regional police force to maintain statistical data on crime trends and to report such statistic to the respective Boards of Supervisors annually.
- Continue annual contributions to the fire companies in the Township.
- Continue to provide workers compensation insurance to the fire companies in the Township.

This is an important service that aids in the continued viability of volunteer

¹⁵ Uniform Crime Report, PA State Police.

fire protection services.

- Develop public parks or support development and enhancement of private parks in New Danville and West Willow.

Though not within the urban growth boundary, New Danville does represent a concentration of residents. As such, recreational opportunities should be made available to residents within a short distance, preferably a walkable distance. A partnership with the Mennonite school might allow for enhancement of their facilities to include other recreational fields, trails, playground equipment, for example. Residents of the New Danville area should be involved in determining the need for recreational features.

A similar approach could be used in West Willow in partnership with the elementary school.

- Support trail development as a network throughout the Township for bicyclists and pedestrians. Include both on-road and off-road trails, as appropriate, considering functional classification as a factor in designating routes.

There are two approaches to trail network development that the Township should consider.

1. An operative approach would identify specified trail projects by location and would work to acquire, design, construct, and maintain the trail facility. This approach is suitable to both developed and undeveloped environments.
2. A latent approach would identify key trailheads and desired connections, allowing the private sector to design and construct the trail facility. This approach is suitable to open space and developing environments, where private interests are active.

The first approach is recommended for Pequea Township as a follow-up project to the Silver Mine Park improvements, in order to extend access to the park.

16.3 Funding

Funding for these community facilities and services related strategies would come from the Township. Funding for recreation projects is available from PA DCNR, namely the Community Conservation Partnership Program. Grant preparation workshops are held annually to assist applicants in preparing grant requests. Funding for recreational trail projects is available from PA DCNR through the Community Conservation Partnership Program (C2P2), as well as through PENNDOT's Home Town Streets/Safe Routes to School Program.

CHAPTER 17 PUBLIC UTILITIES PLAN

The Public Utilities Plan emphasizes maintenance of the existing systems and service areas. This Action Plan also supports the Land Use Action Plan by limiting the extension of sewer service to areas where development is desired by the Township. This Action Plan also addresses stormwater as a component of the natural hydrologic system.

17.1 Goals and Objectives

As stated in Chapter 13, the following are the goals and objectives for public utilities in Pequea Township.

- ❖ Support extension and maintenance of public sewer and water service within the urban growth boundary at the expense of the developer.
- ❖ Discourage the extension of public water and sewer beyond the urban growth boundaries except where necessary to service problem areas and where no feasible alternative is possible.
- ❖ Continue to publish the Township newsletter to educate residents on Township concerns, decisions, and projects.
- ❖ Limit development that proposes to use on-lot sewage treatment systems to lots large enough to have two approved disposal areas.
- ❖ Encourage quality construction and property maintenance in the Township.
 - Establish a Township on-lot system maintenance program to promote maintenance of the systems.
- ❖ Reference state permit requirements for the development and operation of package sewage treatment plants and limit their location through Township ordinances.
- ❖ Maintain the Township's requirement for municipal waste haulers to obtain a permit in order to monitor solid waste collection services in the Township.
- ❖ Maintain a functional stormwater management network.

17.2 Recommendations and Strategies

- Update the Township's Act 537 Plan. Coordinate with future land use and recommended zoning changes to yield cost effective system support and maintenance. Include a detailed study of nitrate levels and update the nitrate levels map from the Township's 1990 comprehensive plan.

System maintenance is critical to the viability of the West Willow area. If

utility systems fall into disrepair, developers, redevelopers and residents will seek alternate locations where quality services are available or can be installed on site. The latter would result in greater development pressure on the rural landscape.

Funding is available from PA DEP to assist in the preparation and update of municipal Act 537 plans.

- Prioritize system maintenance over system expansion in water and sewer system programming.
- Encourage maintenance of the water system.
- Discourage extension of sewer service beyond the urban growth boundary.
- Strengthen current regulations to require two approved on-lot disposal areas for plan approval outside the urban growth boundary.

This recommendation intends to assure that if the original on-lot system malfunctions, a second system can be installed. This would minimize the need for the extension of public sewer service to resolve on-lot system problems.

- Continue to license municipal waste haulers and to monitor collection practices.
- Continue to identify, program, and correct stormwater management problem areas, specifically those that are the responsibility of the Township.

The Township should conduct a tour to identify stormwater management problem areas. Those problem areas for which the Township is responsible should be corrected as soon as possible to reduce liability. Other areas for which the Township is not responsible should be corrected by the appropriate entity. The Township may want to convey these problem areas to the appropriate entity in an effort to encourage improvement toward a safer, more healthful community environment.

- Urge public and quasi-public service providers to site facilities on lands that do not contain prime agricultural soils.

This comprehensive plan clearly indicates that certain soils are the foundation of this community. Just as private developers are guided to place development sensitively, public and quasi-public agencies should be urged to do the same.

- Encourage the protection of water recharge areas and wellhead protection zones around private water wells.

- Encourage private well owners, particularly those located in the Conestoga Formation, to test their well water annually.

Regular testing will help to identify contamination early.

- In conjunction with the Lancaster County Conservation District, encourage farmers to prevent run-off from agricultural lands from reaching adjacent properties, particularly where private wells are located.
- Strengthen well construction provisions to reduce the potential for bacterial contamination.

A May 2004 report, *The Influence of Well Construction on Bacteria Contamination*, prepared for the Center for Rural Pennsylvania found that the well cap or seal is critical to preventing bacteria contamination in private wells. This cap or seal prevents contaminants from directly accessing the groundwater. Historic well construction practices have not typically included this specific element, leaving many rural homeowners at risk for well water contamination. New construction standards should be developed to protect drinking water quality.

17.3 Funding

Funding for these public utilities related strategies would come from the Township, except where noted. Recommendations that address changes to ordinances may be eligible for funding through PA DCED's Land Use Planning and Technical Assistance Program (LUPTAP).

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CHAPTER 18 NATURAL AND CULTURAL RESOURCES PLAN

The Natural and Cultural Resource Plan focuses on public and private efforts to conserve streams and woodlands, to interconnect the community with greenways, and to promote community identity and heritage. Open space protection through farmland preservation (addressed under Future Land Use) and woodland conservation are key to retaining the remaining rural character of the Township. Finally, efforts to conserve the Township's heritage should be encouraged to enhance the Township's contemporary and historic identity.

18.1 Goals and Objectives

As stated in Chapter 13, the following are the goals and objectives for natural and cultural resources in Pequea Township.

- ❖ Protect environmentally sensitive areas
 - Maintain or improve the existing water quality of surface and ground water resources.
 - Sustain wetland and floodplain areas.
 - Enforce and improve existing floodplain and wetland regulations.
 - Require hydrologic studies for new development of all types, including intensive agriculture, not receiving public water.
 - Promote the designation and management of greenways along Pequea and Conestoga Creeks and their tributaries.
 - Encourage participation in the agricultural security and agricultural preservation programs.
- ❖ Promote the conservation and protection of natural landscape systems.
 - Encourage development to protect the natural resources of a given sites through low impact site design techniques.
- ❖ Encourage the preservation or conservation of historic and cultural resources.
 - Promote the preservation of historic resources and their contextual or surrounding landscape.
 - Protect scenic viewsheds.

18.2 Recommendations and Strategies

- Amend current stormwater regulations to address water quality protection, including protection for wetlands and private wellheads.

When municipalities were initially authorized to regulate stormwater, the purpose was to manage the quantity of water generated by impervious surface to reduce flooding offsite. Today, water quality is considered equally important. PA DEP has mandated that certain municipalities enhance their stormwater regulations to include water quality protection measures. Pequea Township is not currently among these municipalities under mandate, however it may want to enhance its regulations in an effort to protect environmental quality for its residents. The Township should amend the stormwater ordinance to decrease contaminants in stormwater run-off from known non-point sources.

- Amend environmental impacts regulations to require hydrologic studies for new development, particularly in karst areas or when intensive agricultural operations are proposed.

As noted in Chapter 2, karst areas are located throughout the Township. These areas are susceptible to depression and sinkhole occurrence. These conditions can be exacerbated by concentrated surface water flows resulting from land development and even minor grading. Thorough subsurface investigations should be completed prior to land development plan considerations in order to inform developers, landowners and neighbors, and Township officials of the potential development risks.

- Amend the existing environmental impact provisions to address the potential impacts of intensive agricultural operations on residents.

These provisions should include, but are not limited to, water consumption, stormwater, odor, and illumination.

- Strengthen air quality protection through provisions that regulate open burning.

Open burning is a common practice in rural areas. However, it can have significant impacts to air quality. An EPA report published in November, 1997 showed that a single household burn barrel may emit as much toxic chemicals as a well-controlled municipal incinerator.¹⁶ PA DEP is focusing current educational efforts on small sources (households) of air quality impacts. To this end, PA DEP has developed a model open burning ordinance to assist municipalities in regulating open burning activities. This model

¹⁶ PA DEP website. December 6, 2004.

ordinance is included in the Appendix.

- Reference site design guidance provided by the Township's Comprehensive Stormwater Management Procedures to developers in early discussions and in plan review sessions regarding subdivision, land development and stormwater design.

The Comprehensive Stormwater Management Procedure referenced in the stormwater management ordinance is quite similar to a method authored by Randell Arendt of the Natural Lands Trust. Use of this method should be strongly promoted, as it integrates natural and cultural resource protection with land development.

- Adopt an on-lot disposal system (OLDS) ordinance to improve maintenance of existing systems and future installations.

This issue was raised during the 1990 comprehensive planning process. The Planning Commission began work on an on-lot sewerage disposal ordinance that was not completed or adopted. This type of ordinance is still needed to prevent groundwater contamination. The working file of the previous effort is included in the Appendix.

- Amend the Township zoning ordinance to require that home heating oil tanks be installed above ground or in basements where they are visible for maintenance inspection.

The intent of this recommendation is to protect water quality. Leaking tanks that are located below the ground surface are not easily monitored for necessary maintenance and repair and can result in ground and surface water contamination.

- Participate in greenway designations and watershed assessment studies. Promote general knowledge and understanding of greenways: benefits, techniques, etc., through the Township newsletter. Participate in these studies to express and coordinate Township policy with study conclusions and recommendations.

Funding for such studies would likely originate from PA DCNR or PA DEP and be awarded to the study sponsor, e.g. watershed association.

- Encourage the protection of riparian buffers along the waterways in the Township.
 - Consider enhancements to the Township's riparian buffer regulations. Warwick Township has developed riparian buffer easement provisions in its stormwater ordinance; this may serve as a starting point.

Alternatively, a model buffer ordinance is included in the Appendix.

- Encourage easement donations or purchases for buffer protection. Landowners along the waterways may be interested in donating or selling the development rights associated with riparian corridor. The Township should be able to direct such interest to land trusts, such as the Lancaster County Conservancy, or other regional organizations able to receive these rights.

Warwick Township is located in the Lititz Run watershed. As part of the Township's Storm Water Ordinance, a Riparian Buffer Easement provision was enacted to control land use along riparian corridors. The easement requires a minimum 35 foot zone (measured from the centerline of the watercourse) and requires the preservation of existing vegetation and "the planting of additional native trees, shrubs and other plant material as determined necessary in order to create a suitable riparian canopy and understory" within the buffer easement. The planting requirements are based on published practices and guidelines. The easement is incorporated into the deed of all newly developed property and in some cases is also written as a separate specific agreement between the landowner and township. When the easement provision was enacted in 1999, it codified and mandated what had been initially a voluntary riparian buffer restriction in the township. Township officials have found that early intervention in the planning stage of land development is key to acceptance of the easement by developers. The township will identify properties with applicable riparian areas and work with the developer in the early planning stages to protect and perhaps restore the riparian zone. Open space and trails along waterways in a newly developed property have been well-received amenities by homebuilders and developers.

- Encourage the conservation of forested areas.

Forests are just one example of natural systems that benefit the community. Clear air and water are due, in part, to this pollution-absorbing vegetation. In addition, forests provide scenic focal points during the changing seasons and support a wide range of outdoor recreation activities.

- Continue to strengthen illumination control.

While illumination is important for nighttime safety, over-illumination can negatively impact wildlife and views of the night sky and can reduce safety when it causes glare. The Township should carefully review its illumination requirements in order to minimize these negative impacts.

- Identify priority scenic viewsheds and explore protection techniques.

This plan lists numerous scenic viewsheds identified in the 1990

Comprehensive Plan. The Township generally believes that development between 1990 and the present time has not significantly impacted these viewsheds. However, an updated assessment should be completed to verify the continued scenic quality of these vistas and to prioritize their protection. This assessment and prioritization should amend this document.

Current regulations provide a degree of protection for these sites by way of the types and intensities of permitted development. Certain sites may have unique natural or cultural resource value and may be eligible for easement or acquisition programs. The Township should prioritize the list of scenic viewsheds and begin to explore protection methods. If the landowners of these priority sites become interested in land donation, easement, or sale, the Township will be prepared to act upon the opportunity quickly.

- Strengthen and enforce the landscape ordinance.

In addition to current provisions, the Township may wish to address the utilization of landscape features to manage stormwater (non-structural techniques such as rain gardens, vegetated swales).

- Conduct a historic resource inventory.
- Classify historic resources in the Township.
- Assist in seeking the designation of historic sites and districts to the National Register of Historic Places, state designation, or other designation of significance.

18.3 Funding

Funding for these natural and cultural resource related strategies would come from the Township, except where noted. Recommendations that address changes to ordinances may be eligible for funding through PA DCED's Land Use Planning and Technical Assistance Program (LUPTAP).

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CHAPTER 19 IMPLEMENTATION PLAN

19.1 Capital Improvements Program

A number of recommendations for physical improvements in the Township have been set forth in the preceding chapters. The process recommended for the implementation of these project proposals is known as a capital improvements program. This program prioritizes and schedules public improvements over a period of time with consideration for financial capabilities.

Substantial benefits can be derived from this systematic approach to planning improvement projects because the individual projects can be made to coincide with both the Township's objectives and its financial capabilities. The schedule of improvements serves as a guide in making sound annual budget decisions and in achieving the optimum utilization of available funds. Sharp changes in the tax structure and indebtedness can be avoided and an advance selection of the most economical means for financing each project can be made.

Table 19-1 presents the recommended 10-year capital improvements program for Pequea Township. Projects are prioritized by year and indicate project responsibility. The capital improvements program should be reviewed, evaluated, and revised, as needed, annually. This will allow the program to be accelerated or delayed in response to current community support and financial conditions.

19.2 Recommended Plan Updates and Ordinance Revisions

The effective implementation of this plan will require updates to the Township's infrastructure plans and the application and enforcement of municipal and county ordinances, as they apply. Revisions to these ordinances may be needed to fully implement the intent of these recommendations. A recommended schedule for plan updates and ordinance revisions is included in Table 19-1.

19.3 On-going Township activities and communications with residents

In addition to these formal applications of the comprehensive plan's recommendations, the Township can promote sound community development through day-to-day activities and interaction with residents. The following list summarizes the principles and programs with which Township officials and staff should continue to be familiar:

- Agricultural security and agricultural preservation
- Site design guidance located in the Township zoning ordinance (Conservation by Design)
- Greenways
- Riparian buffers and easements

Table 19-1 Implementation Schedule

Implementation Schedule					
Capital Improvement	2005/2006	2007/2008	2009/2010	2011/2012	2013/2014
Indian Hill Road Bridge Replacement	X				
Silver Mine Park Improvements	X	X	X		
Park development/enhancement in New Danville					X
Park development/enhancement in West Willow				X	
Trail Network Design				X	
Plan Updates and Ordinance Revisions	2005/2006	2007/2008	2009/2010	2011/2012	2013/2014
Township zoning ordinance and map		X			
Lancaster County urban growth boundary relocation		X			
Township Subdivision and Land Development Ordinance (new)			X		
Township Stormwater Ordinance		X			
Township Act 537 Plan and related regulatory provisions	X				
Township Building Codes (if not replaced by the Uniform Construction Code)		X			
Transportation Studies and Improvements	2005/2006	2007/2008	2009/2010	2011/2012	2013/2014
Request discussion of PA 272 improvements with LCPC, West Lampeter Township, and PENNDOT	X on-going and as needed				
Request study of high crash locations on PA 741 by PENNDOT		X for upcoming MPO TIP			
Request study by PENNDOT of additional high crash locations: Millwood Road/Penn Grant Road New Danville Pike/ Long Lane New Danville Pike/Stoney Lane			X for upcoming MPO TIP		

CHAPTER 20 STATEMENTS OF PLANNING IMPLICATIONS AND RELATIONSHIPS

This plan has been prepared in accordance with the guidance provide by the Pennsylvania Municipalities Planning Code. This guidance includes a requirement for the following statements on the interrelationships and impacts of the recommendations.

20.1 Statement of Interrelationships

Each of the five functional plans—future land use, transportation, community facilities and services, public utilities, and natural and cultural resources—addresses relevant issues. In addition to this functional relationship between recommendations and strategies, there are significant relationships between the functional plans. These include:

The land use and public utilities plans work together to manage growth by supporting and attracting intensive land use with public utilities. Areas where low intensity uses are recommended, private, on-lot systems are recommended to serve development.

The land use and natural and cultural resources plans work together to protect productive agricultural soils from unnecessary conversion to developed uses. Agriculture and open space are identified as appropriate uses, as they do not compromise the future use of these soils for agriculture.

The land use plan supports the continued presence of local public safety services by illustrating these are one type of institutional future land uses.

The transportation recommendations are supported by the future land use plan. The two support study of regional mobility improvements but not at the expense of farmland.

Finally, the transportation and natural and cultural resources plans are related by way of recreational travel on trails and greenways.

20.2 Statement of Regional Impacts

The most significant impact that this comprehensive plan will have on the region is the protection of the rural landscape and aggressive growth management, tailored to the foreseeable future. With little other change, the plan is not expected to have additional regional impacts.

20.3 Statement of Comprehensive Plan Review, Maintenance and Adoption

Once adopted, this comprehensive plan will serve as the policy document to guide future decision making in Pequea Township. As the future unfolds, the Township should periodically review the comprehensive plan to assure that it retains is relevance.

The Township Planning Commission should annually review the issues and community development recommendations in the comprehensive plan to assess the accomplishments of the

previous year and to identify future projects. This review should be submitted to the Board of Supervisors.

In the event that the plan is determined to need revision, these revisions would be developed according to the guidance established in the PA MPC. Like the plan preparation process, public review is required prior to adoption of amendments or future plan updates.

Maps

Map 1 Geology

Map 2 Soils

Map 3 Hydrology

Map 4 Environmentally Sensitive Areas

Map 5 Cultural Resources and Scenic Vistas

Map 6 Existing Land Use

Map 7 Functional Classifications for State Roadways

Map 8 Average Annual Daily Traffic (AADT) Volumes

Map 9 Community Facilities and Service Areas

Map 10 Community Utilities

Map 11 Maximum Future Residential Development Scenario

Map 12 Probable Residential Development Scenario

Map 13 Preferred Residential Development Scenario

Map 14 Future Land Use

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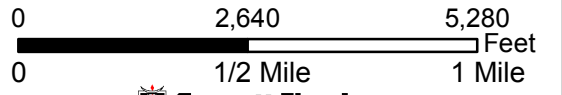
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TOWNSHIP

CONESTOGA TOWNSHIP

MARTIC
TOWNSHIP

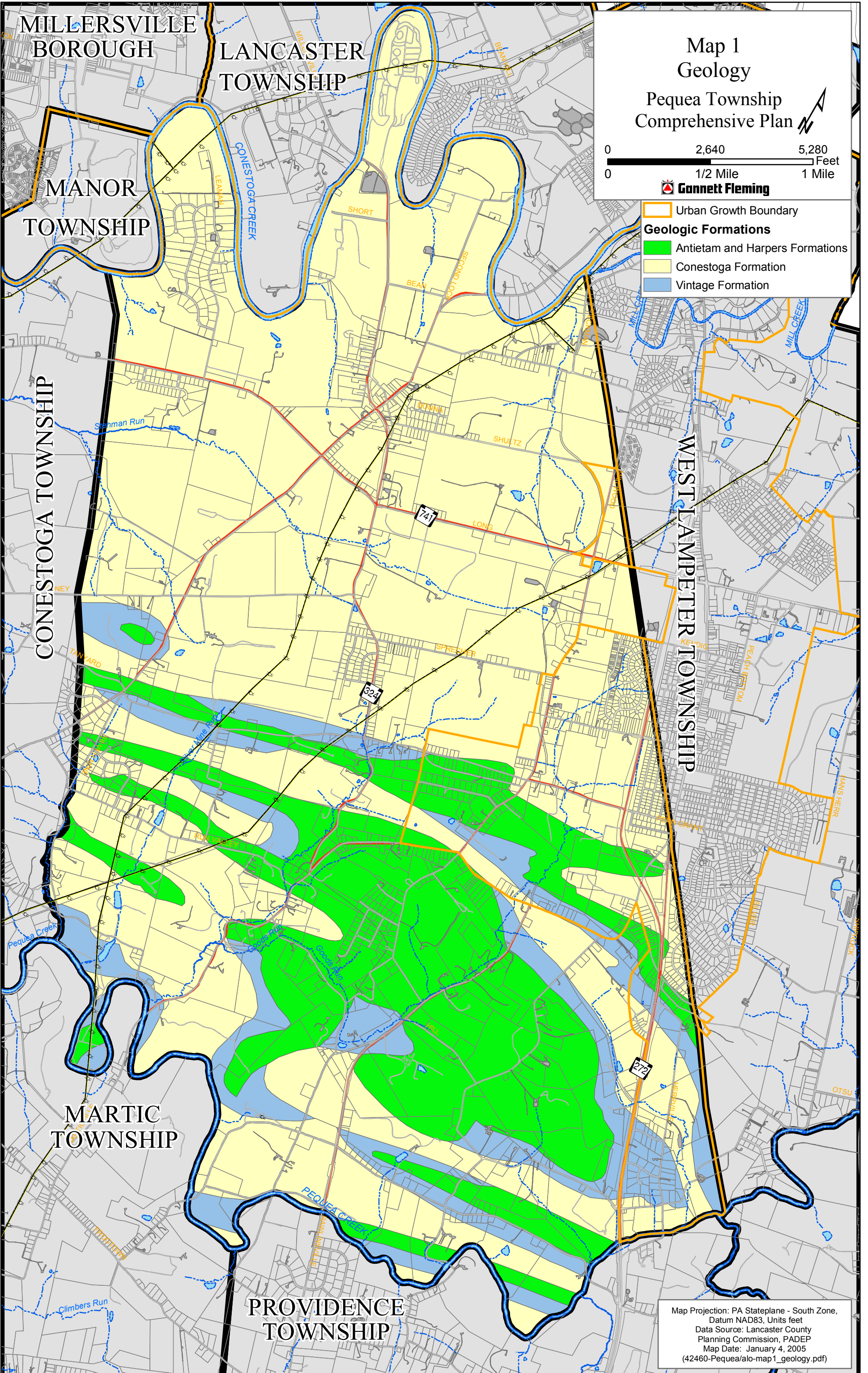
PROVIDENCE
TOWNSHIP

Map 1 Geology Pequea Township Comprehensive Plan



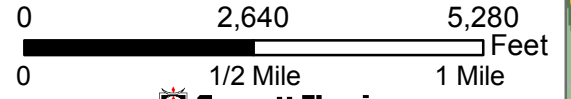
Gannett Fleming

- Urban Growth Boundary
- Geologic Formations**
 - Antietam and Harpers Formations
 - Conestoga Formation
 - Vintage Formation



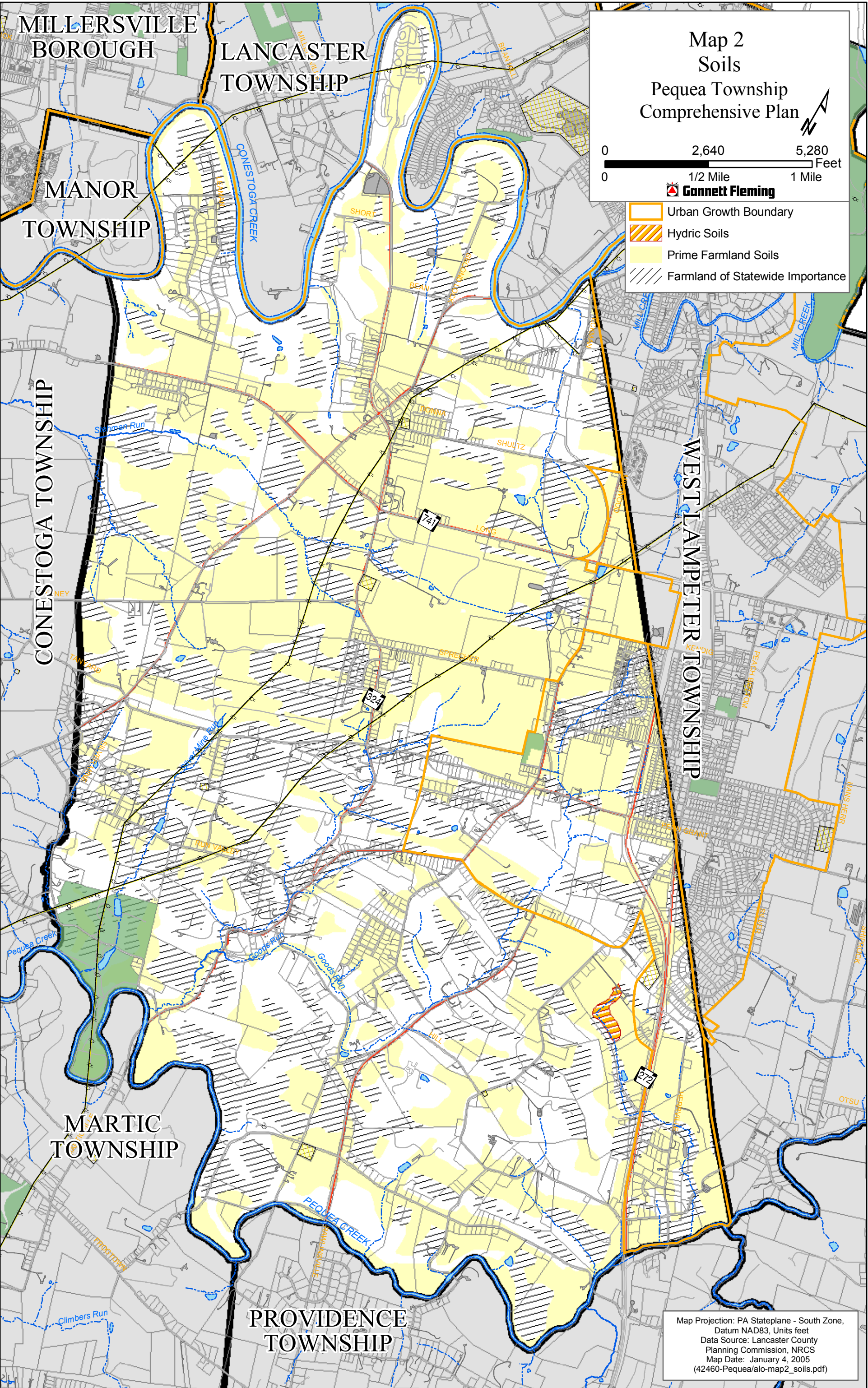
Map Projection: PA Stateplane - South Zone,
Datum NAD83, Units feet
Data Source: Lancaster County
Planning Commission, PADEP
Map Date: January 4, 2005
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Map 2
Soils
Pequea Township
Comprehensive Plan



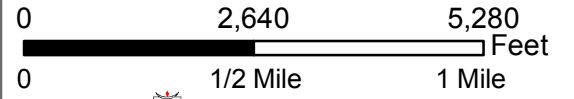
Gannett Fleming

- Urban Growth Boundary
- Hydric Soils
- Prime Farmland Soils
- Farmland of Statewide Importance



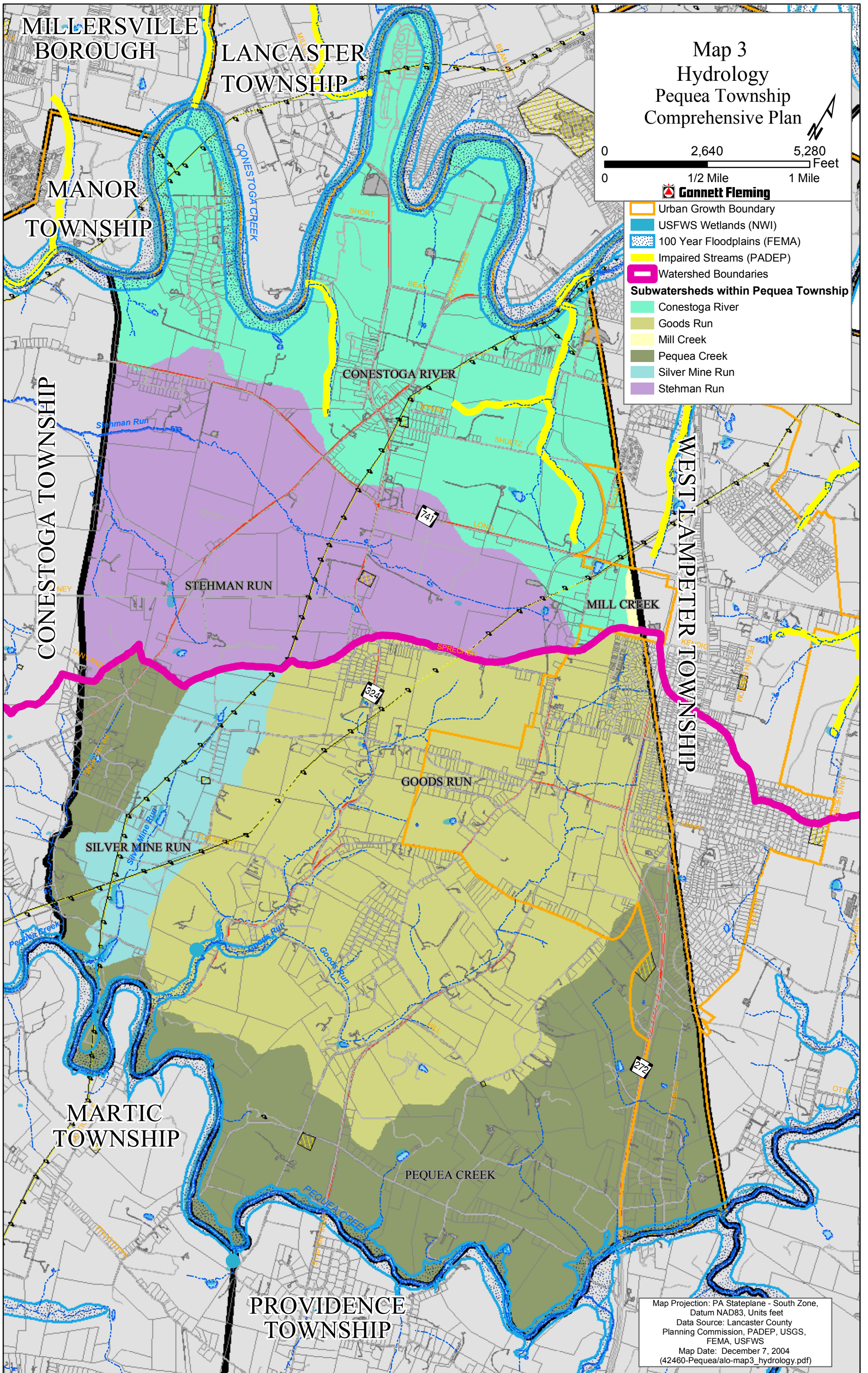
Map Projection: PA Stateplane - South Zone,
Datum NAD83, Units feet
Data Source: Lancaster County
Planning Commission, NRCS
Map Date: January 4, 2005
(42460-Pequea/alo-map2_soils.pdf)

Map 3 Hydrology Pequea Township Comprehensive Plan



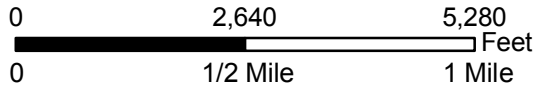
Gannett Fleming

- Urban Growth Boundary
 - USFWS Wetlands (NWI)
 - 100 Year Floodplains (FEMA)
 - Impaired Streams (PADEP)
 - Watershed Boundaries
- Subwatersheds within Pequea Township**
- Conestoga River
 - Goods Run
 - Mill Creek
 - Pequea Creek
 - Silver Mine Run
 - Stehman Run



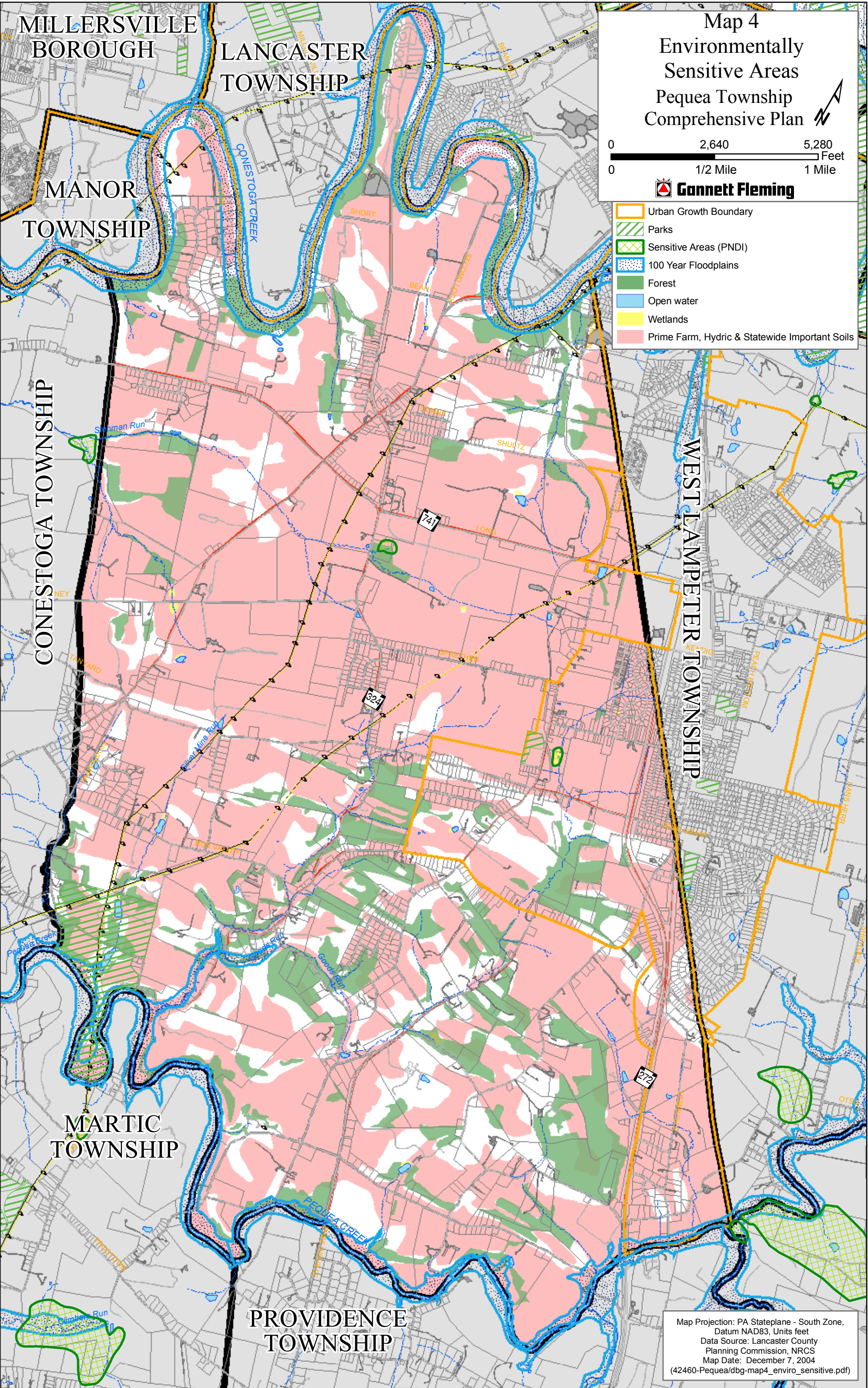
Map Projection: PA Stateplane - South Zone, Datum NAD83, Units feet
 Data Source: Lancaster County Planning Commission, PADEP, USGS, FEMA, USFWS
 Map Date: December 7, 2004
 (42460-Pequea/alo-map3_hydrology.pdf)

Map 4
 Environmentally Sensitive Areas
 Pequea Township
 Comprehensive Plan



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- Urban Growth Boundary
- Parks
- Sensitive Areas (PNDI)
- 100 Year Floodplains
- Forest
- Open water
- Wetlands
- Prime Farm, Hydric & Statewide Important Soils



Map Projection: PA Stateplane - South Zone,
 Datum NAD83, Units feet
 Data Source: Lancaster County
 Planning Commission, NRCS
 Map Date: December 7, 2004
 (42460-Pequea/dbg-map4_enviro_sensitive.pdf)

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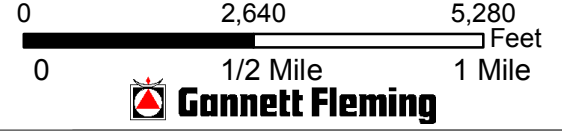
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TOWNSHIP

CONESTOGA TOWNSHIP

MARTIC
TOWNSHIP

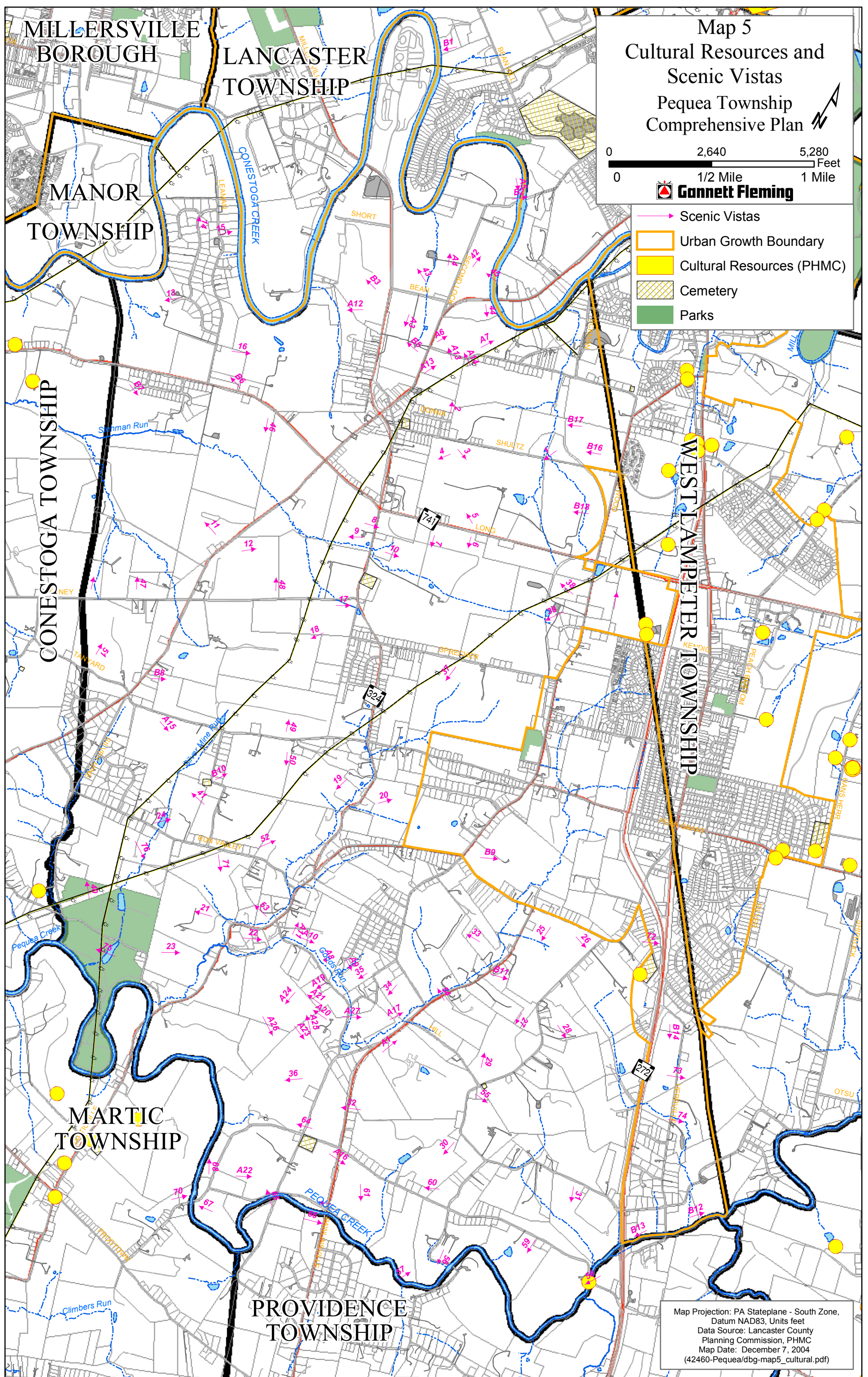
PROVIDENCE
TOWNSHIP

Map 5 Cultural Resources and Scenic Vistas Pequea Township Comprehensive Plan



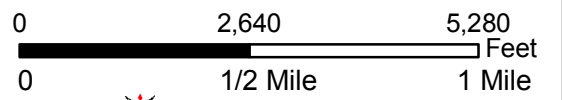
Gannett Fleming

- Scenic Vistas
- Urban Growth Boundary
- Cultural Resources (PHMC)
- Cemetery
- Parks

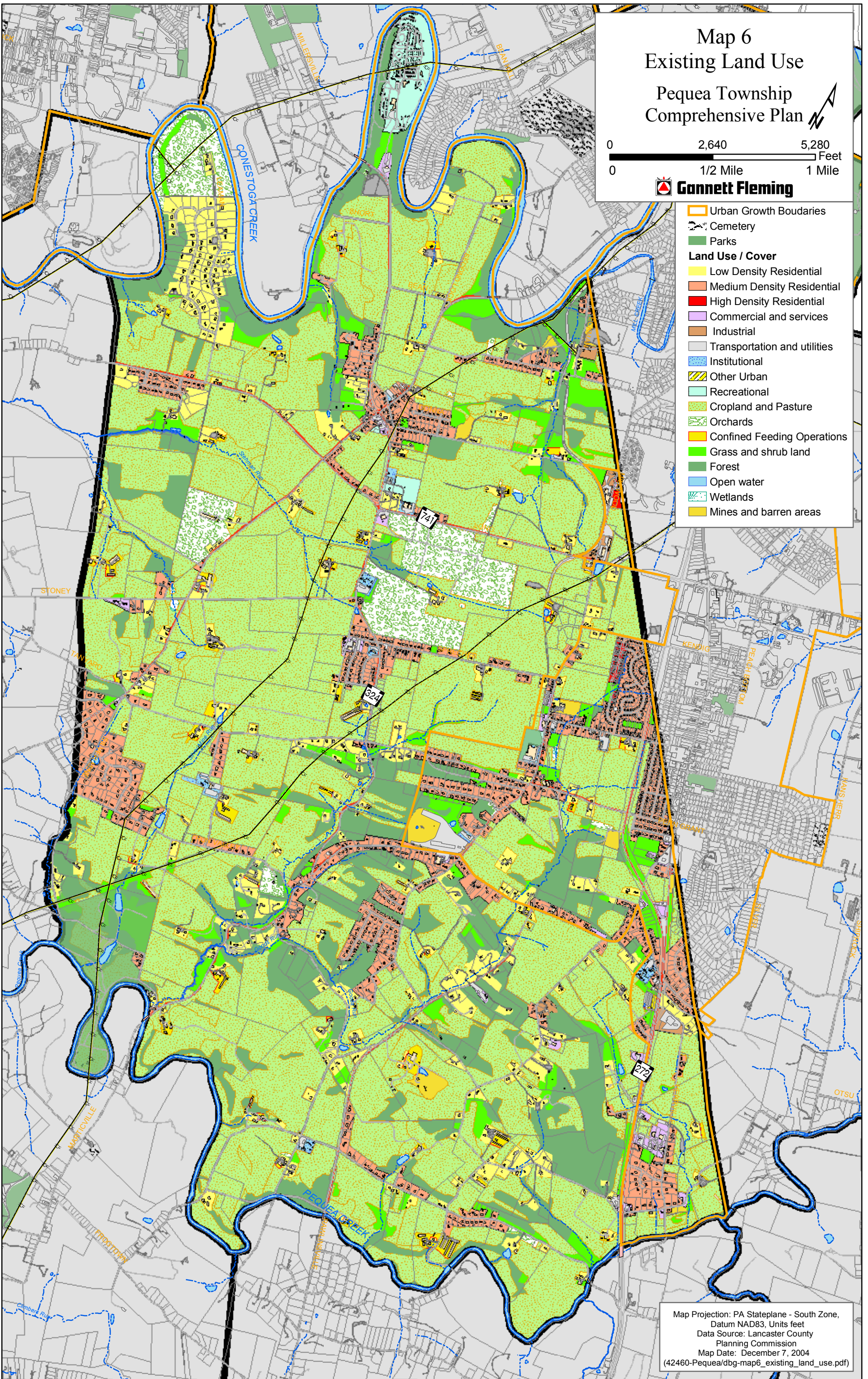


Map Projection: PA Stateplane - South Zone,
Datum NAD83, Units feet
Data Source: Lancaster County
Planning Commission, PHMC
Map Date: December 7, 2004
(42460-Pequea/dbg-map5_cultural.pdf)

Map 6 Existing Land Use Pequea Township Comprehensive Plan

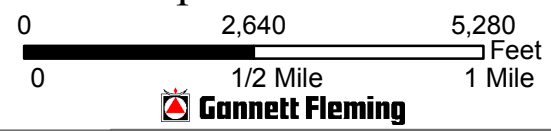


- Urban Growth Boundaries
- Cemetery
- Parks
- Land Use / Cover**
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Commercial and services
- Industrial
- Transportation and utilities
- Institutional
- Other Urban
- Recreational
- Cropland and Pasture
- Orchards
- Confined Feeding Operations
- Grass and shrub land
- Forest
- Open water
- Wetlands
- Mines and barren areas

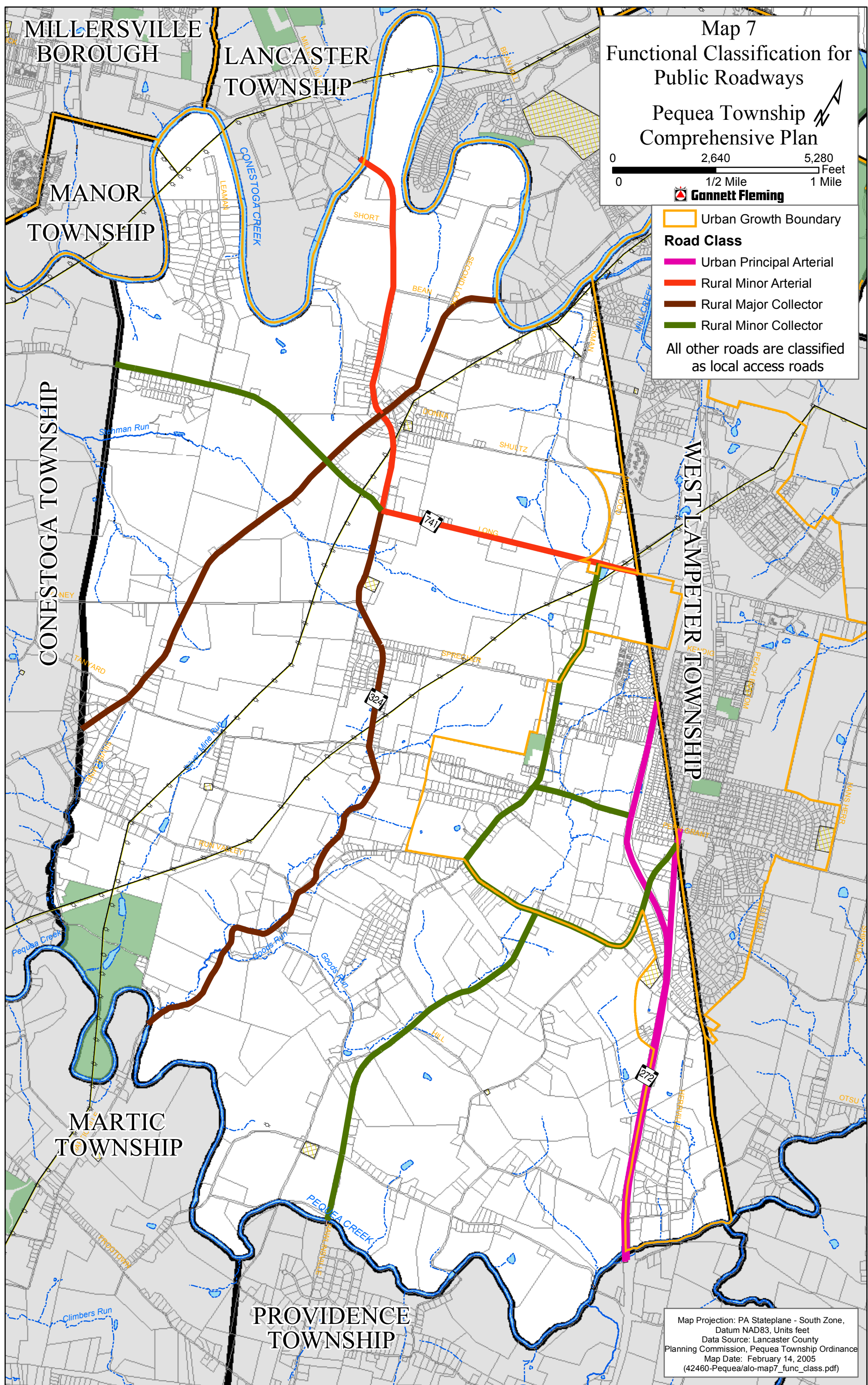


Map Projection: PA Stateplane - South Zone,
Datum NAD83, Units feet
Data Source: Lancaster County
Planning Commission
Map Date: December 7, 2004
(42460-Pequea/dbg-map6_existing_land_use.pdf)

Map 7
 Functional Classification for
 Public Roadways
 Pequea Township
 Comprehensive Plan



- Urban Growth Boundary
- Road Class**
- Urban Principal Arterial
- Rural Minor Arterial
- Rural Major Collector
- Rural Minor Collector
- All other roads are classified as local access roads



Map Projection: PA Stateplane - South Zone,
 Datum NAD83, Units feet
 Data Source: Lancaster County
 Planning Commission, Pequea Township Ordinance
 Map Date: February 14, 2005
 (42460-Pequea/alo-map7_func_class.pdf)

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TOWNSHIP

Map 8 Average Annual Daily Traffic (AADT) Volumes Pequea Township Comprehensive Plan

0 2,640 5,280
0 1/2 Mile 1 Mile

Gannett Fleming

MANOR
TOWNSHIP

- Urban Growth Boundary
- Accident Concentrations
- Average Annual Daily Traffic**
- 0 - 6,500 Vehicle Trips
- 6,501 - 16,500 Vehicle Trips
- 16,501 - 41,500 Vehicle Trips
- 41,501 - 107,696 Vehicle Trips

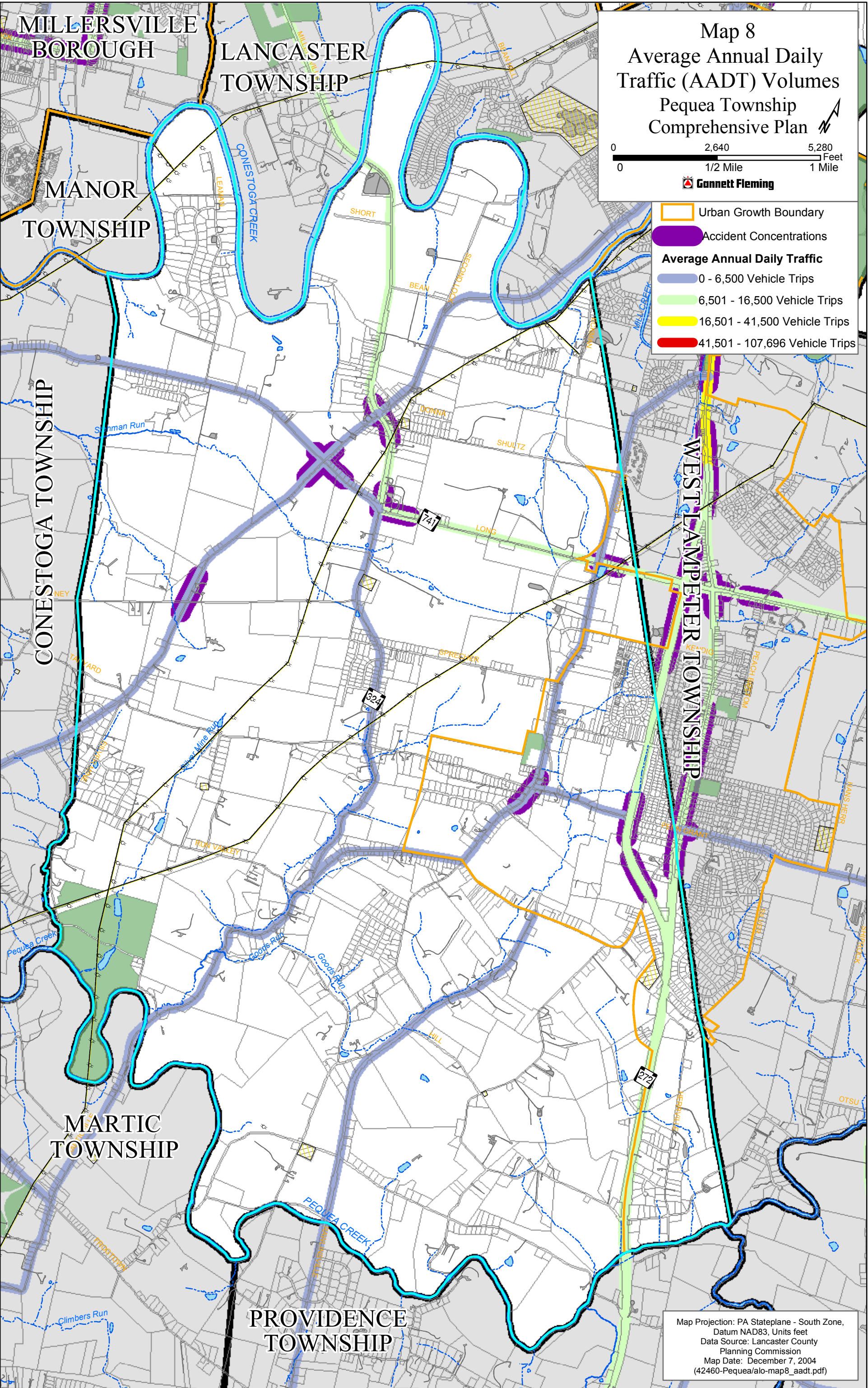
CONESTOGA TOWNSHIP

WEST LAMPETTER TOWNSHIP

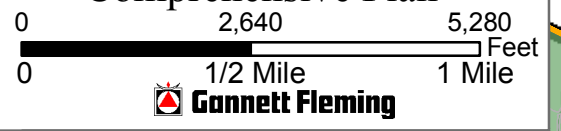
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Map Projection: PA Stateplane - South Zone,
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Planning Commission
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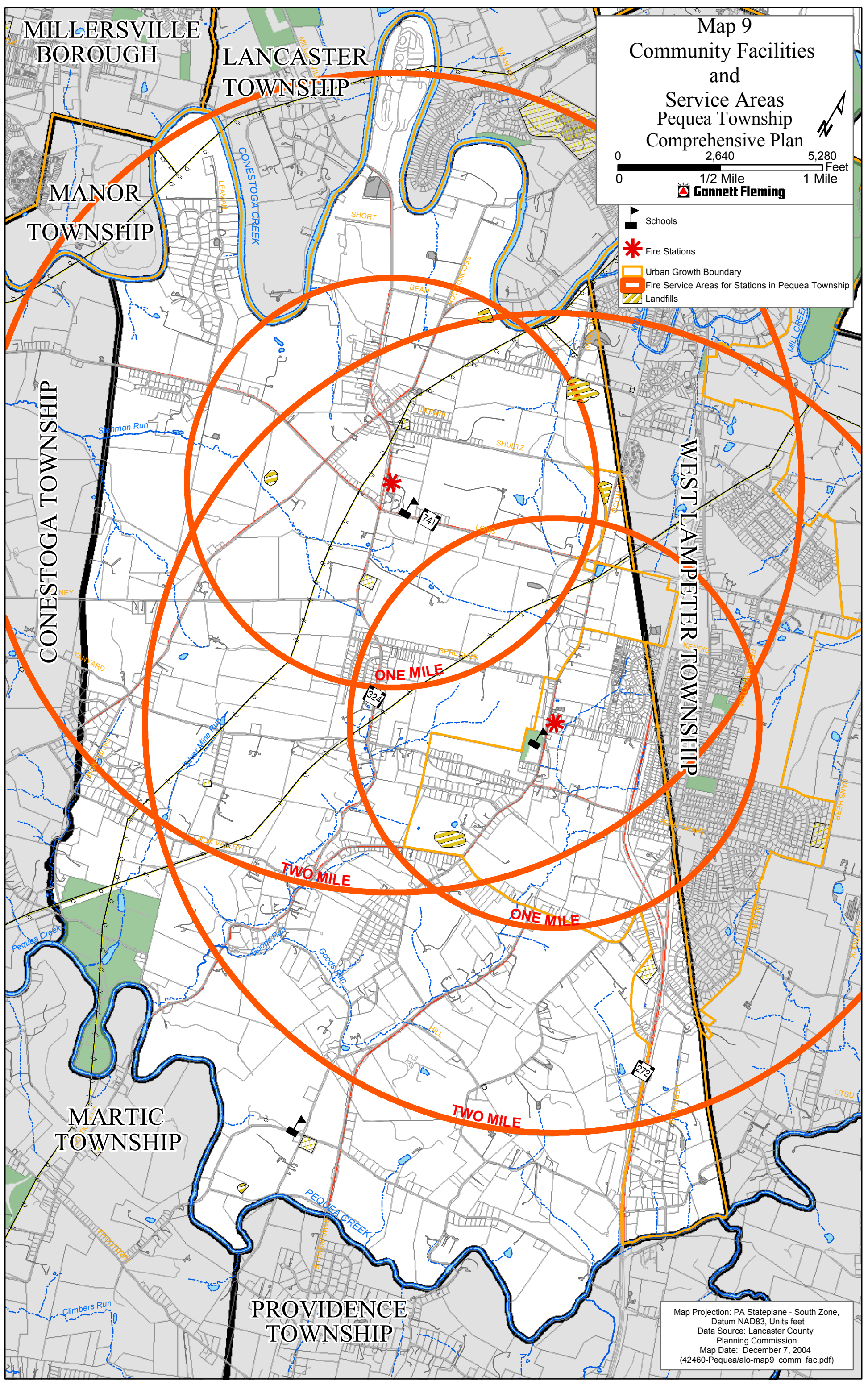


Map 9
Community Facilities
and
Service Areas
Pequea Township
Comprehensive Plan



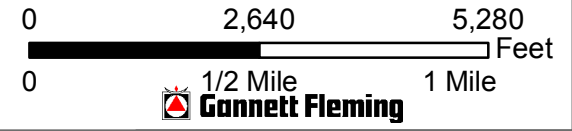
Gannett Fleming

- Schools
- Fire Stations
- Urban Growth Boundary
- Fire Service Areas for Stations in Pequea Township
- Landfills

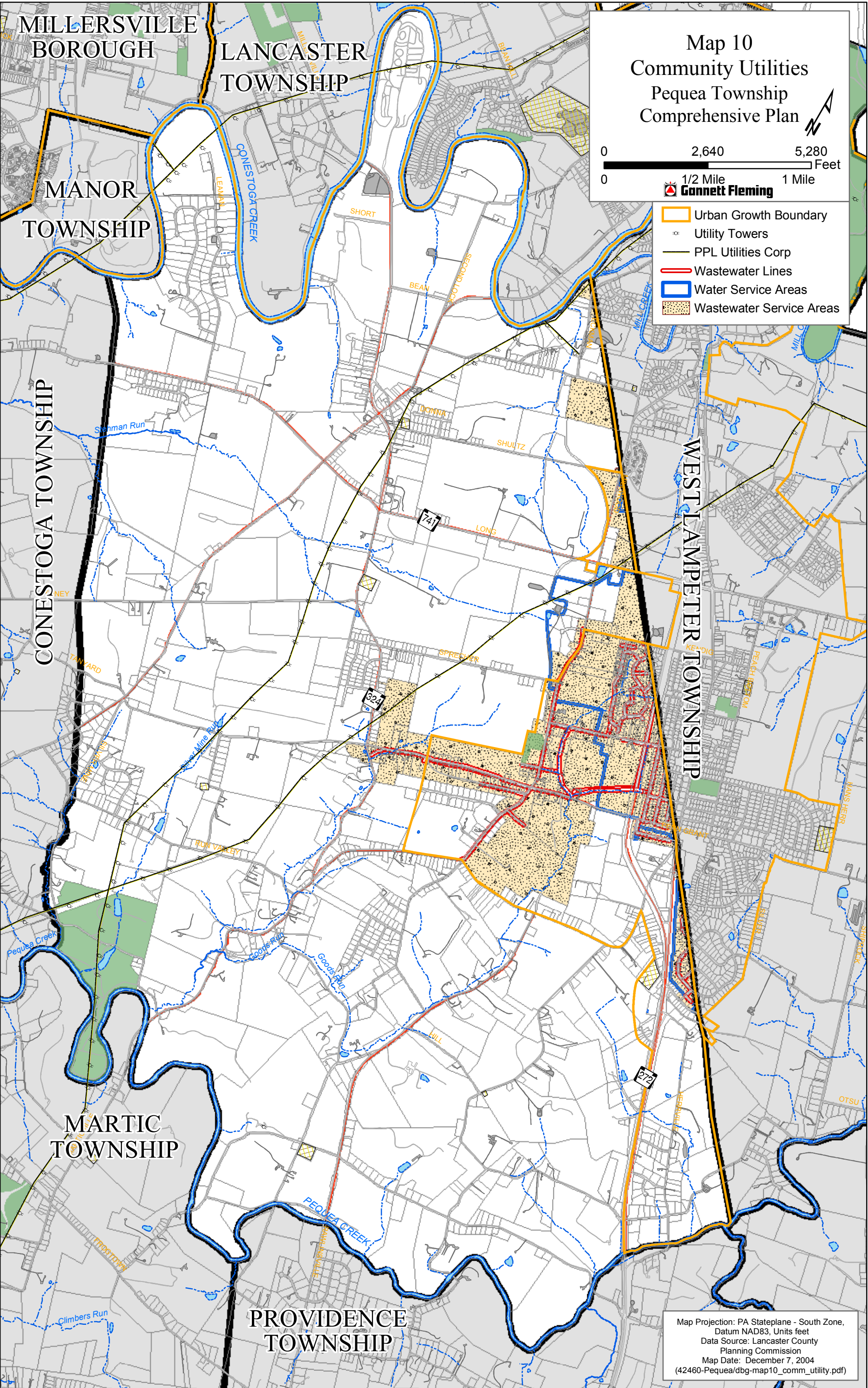


Map Projection: PA Stateplane - South Zone,
Datum NAD83, Units feet
Data Source: Lancaster County
Planning Commission
Map Date: December 7, 2004
(42460-Pequea/alo-map9_comm_fac.pdf)

Map 10 Community Utilities Pequea Township Comprehensive Plan

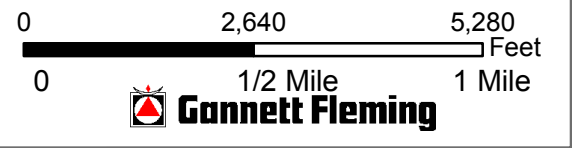


- Urban Growth Boundary
- Utility Towers
- PPL Utilities Corp
- Wastewater Lines
- Water Service Areas
- Wastewater Service Areas

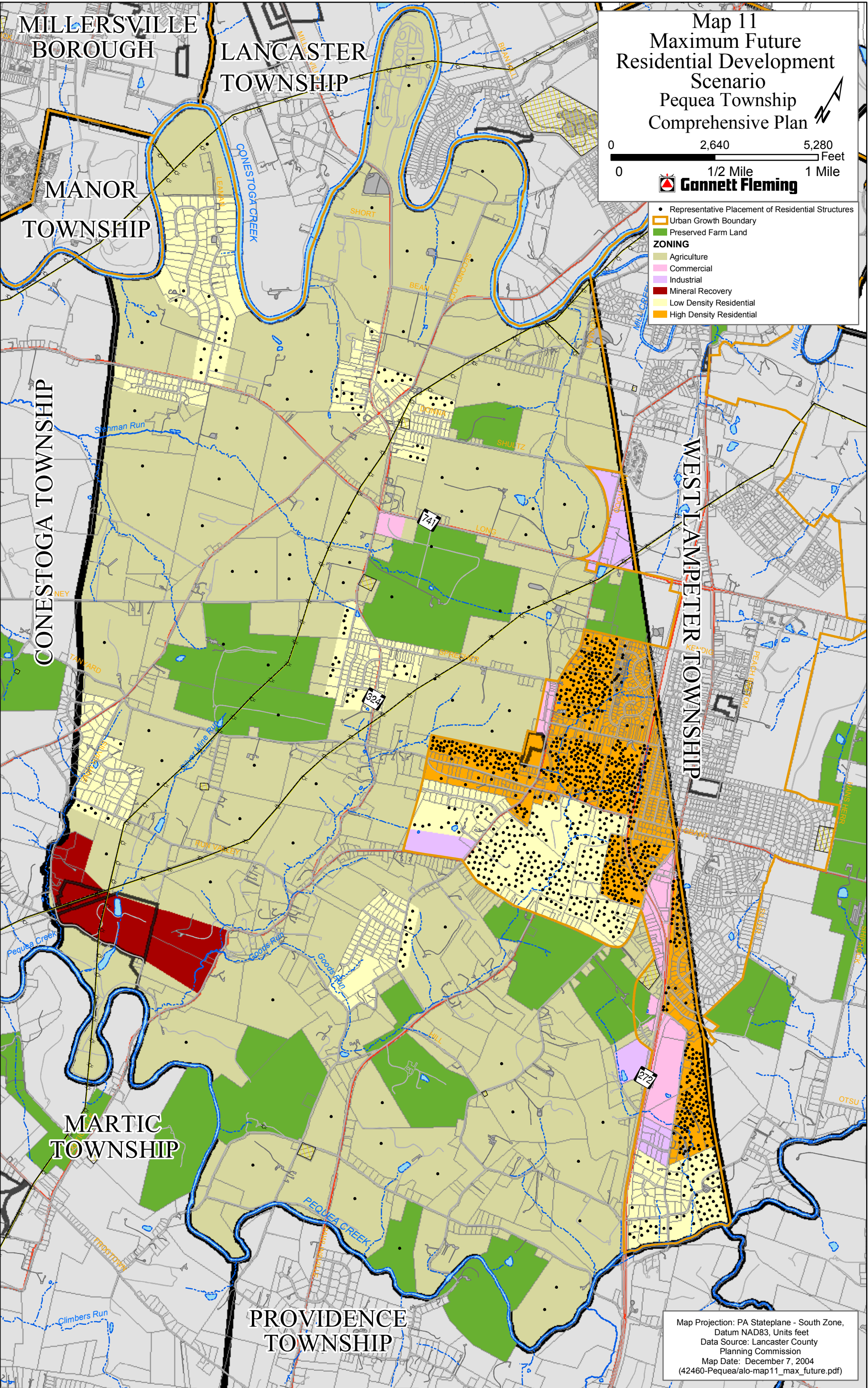


Map Projection: PA Stateplane - South Zone,
Datum NAD83, Units feet
Data Source: Lancaster County
Planning Commission
Map Date: December 7, 2004
(42460-Pequea/dbg-map10_comm_utility.pdf)

Map 11
 Maximum Future
 Residential Development
 Scenario
 Pequea Township
 Comprehensive Plan



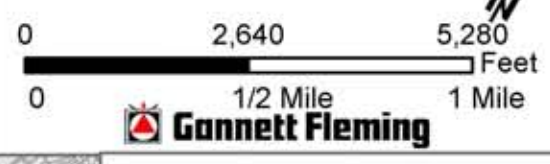
- Representative Placement of Residential Structures
- ▭ Urban Growth Boundary
- ▭ Preserved Farm Land
- ZONING**
- ▭ Agriculture
- ▭ Commercial
- ▭ Industrial
- ▭ Mineral Recovery
- ▭ Low Density Residential
- ▭ High Density Residential



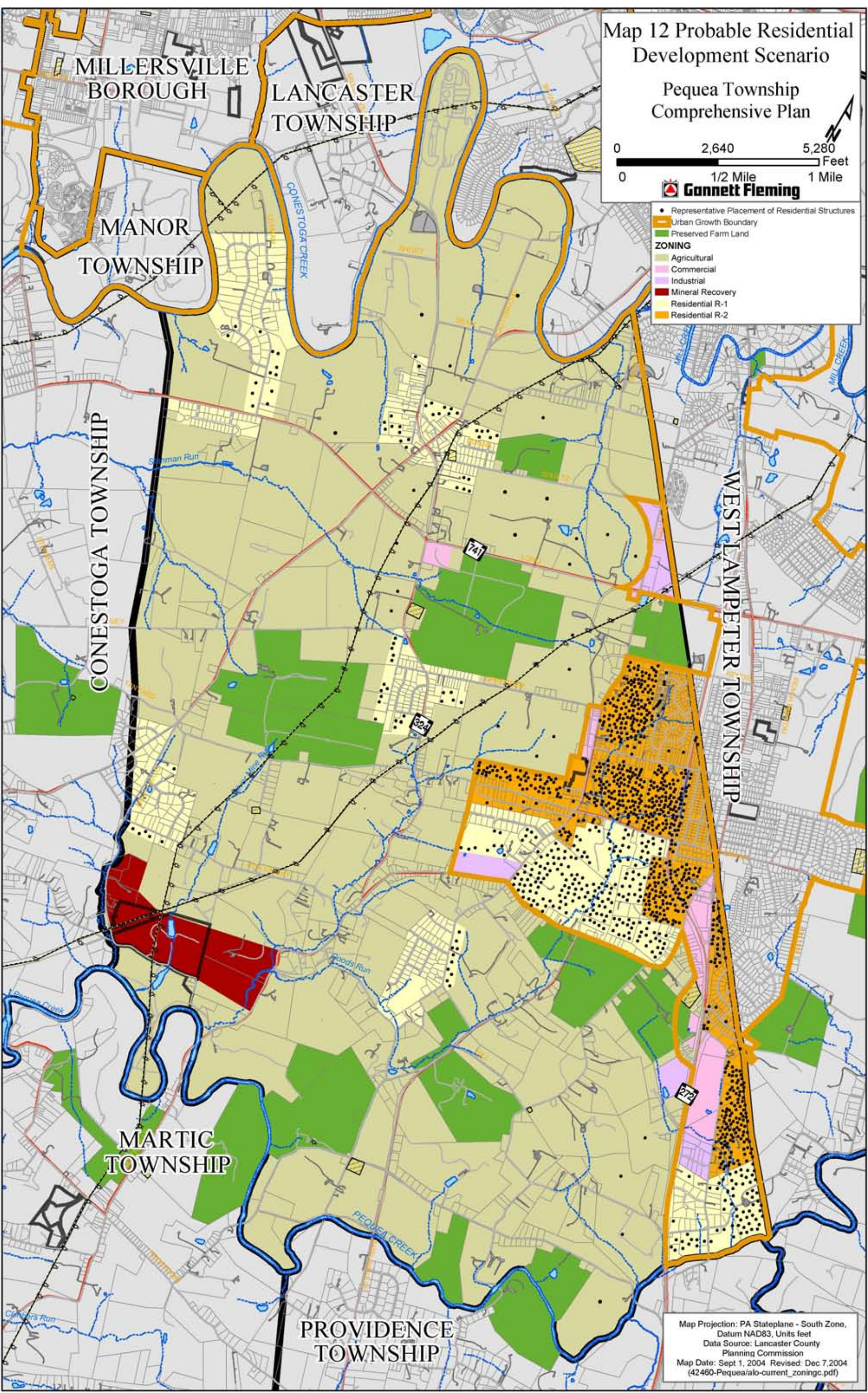
Map Projection: PA Stateplane - South Zone,
 Datum NAD83, Units feet
 Data Source: Lancaster County
 Planning Commission
 Map Date: December 7, 2004
 (42460-Pequea/alo-map11_max_future.pdf)

Map 12 Probable Residential Development Scenario

Pequea Township Comprehensive Plan



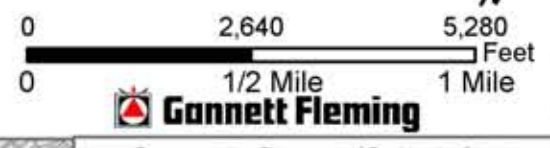
- Representative Placement of Residential Structures
 - Urban Growth Boundary
 - Preserved Farm Land
- ZONING**
- Agricultural
 - Commercial
 - Industrial
 - Mineral Recovery
 - Residential R-1
 - Residential R-2



Map Projection: PA Stateplane - South Zone,
Datum NAD83, Units feet
Data Source: Lancaster County
Planning Commission
Map Date: Sept 1, 2004 Revised: Dec 7, 2004
(42460-Pequea/alo-current_zoningc.pdf)

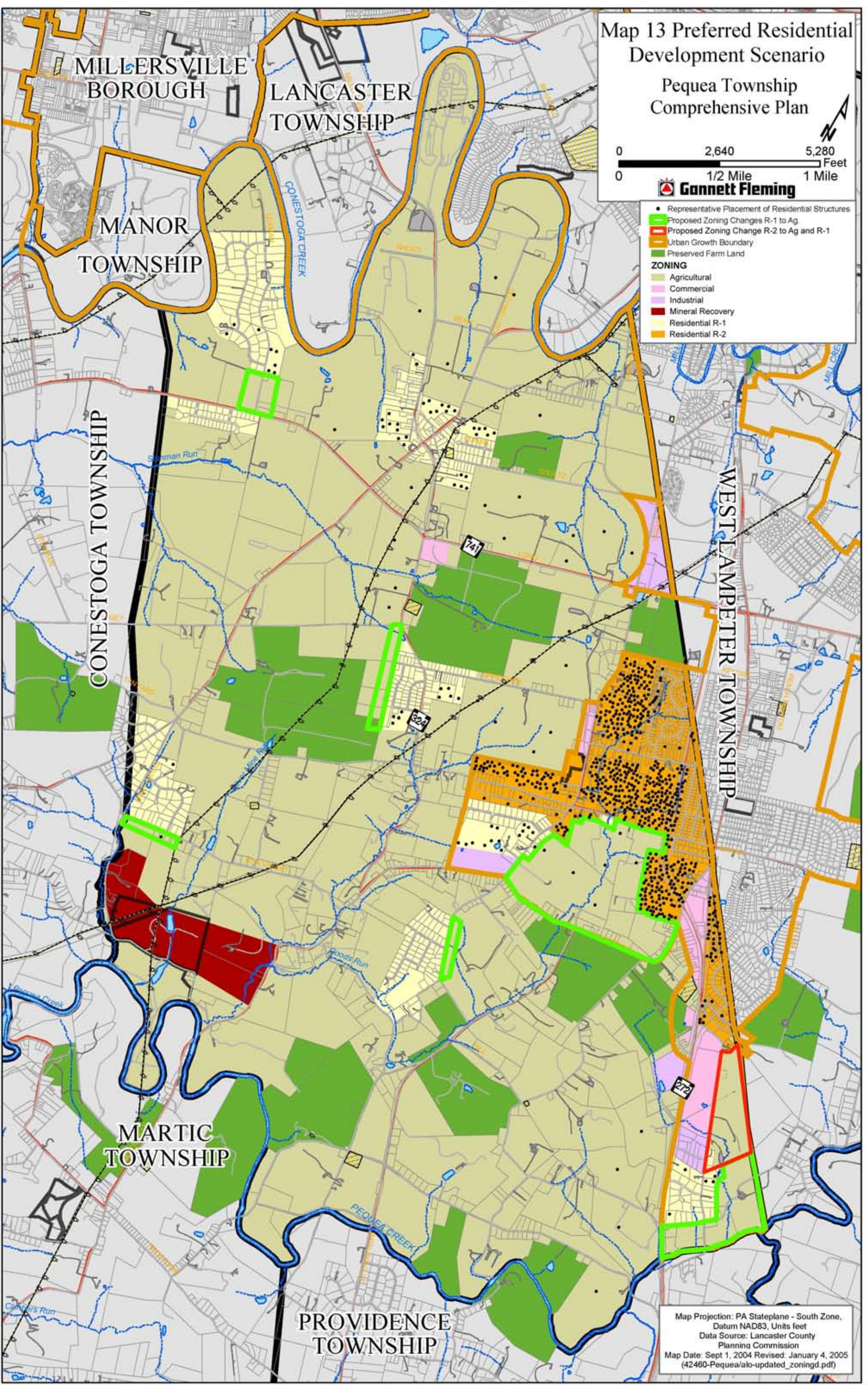
Map 13 Preferred Residential Development Scenario

Pequea Township Comprehensive Plan



Gannett Fleming

- Representative Placement of Residential Structures
 - Proposed Zoning Changes R-1 to Ag
 - Proposed Zoning Change R-2 to Ag and R-1
 - Urban Growth Boundary
 - Preserved Farm Land
- ZONING**
- Agricultural
 - Commercial
 - Industrial
 - Mineral Recovery
 - Residential R-1
 - Residential R-2



Map Projection: PA Stateplane - South Zone,
Datum NAD83, Units feet
Data Source: Lancaster County
Planning Commission
Map Date: Sept 1, 2004 Revised: January 4, 2005
(42460-Pequea/alo-updated_zoningd.pdf)

MILLERSVILLE
BOROUGH

LANCASTER
TOWNSHIP

MANOR
TOWNSHIP

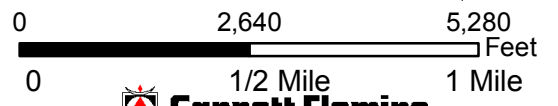
CONESTOGA TOWNSHIP

MARTIC
TOWNSHIP

PROVIDENCE
TOWNSHIP

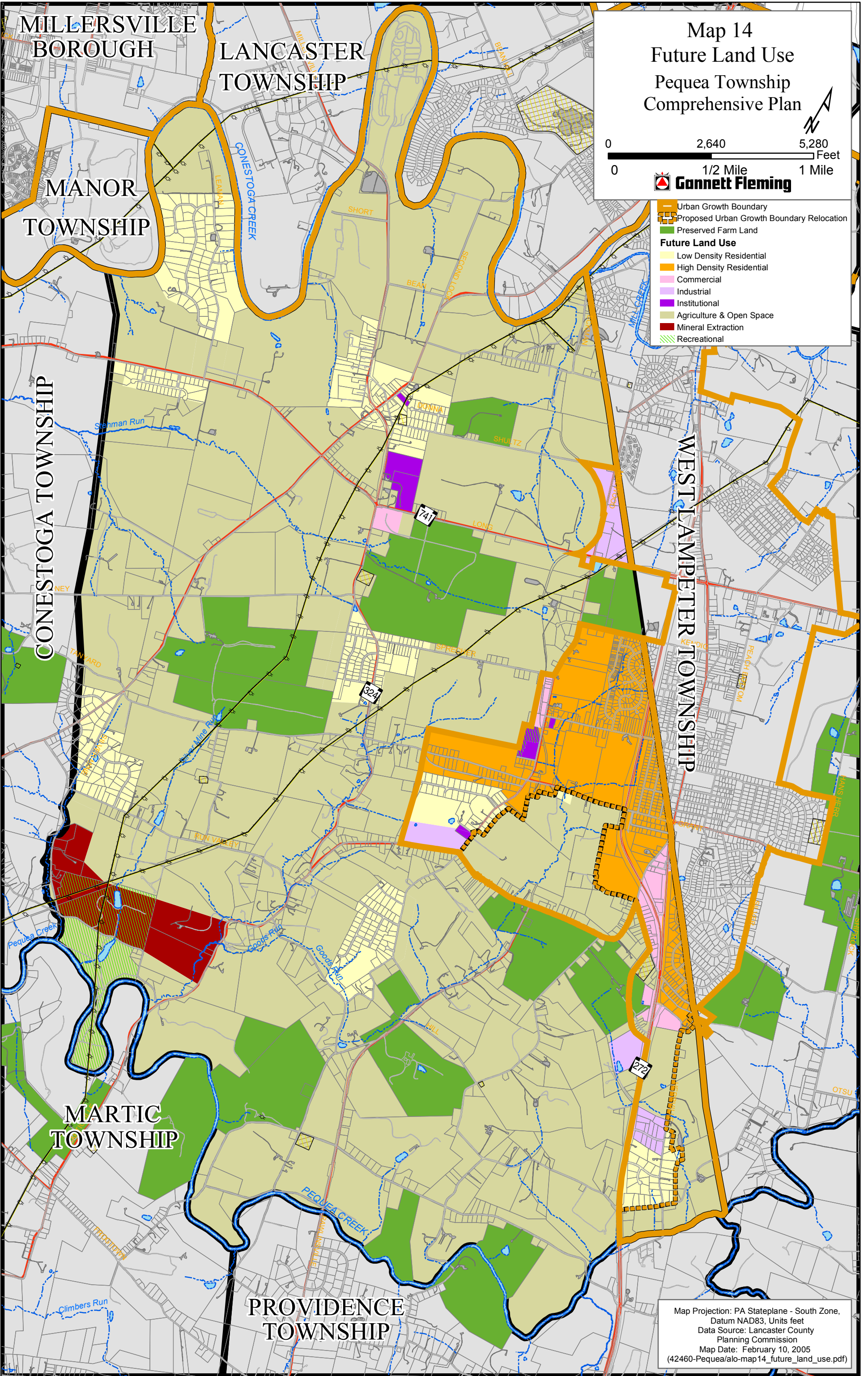
WEST LAMPETER TOWNSHIP

Map 14 Future Land Use Pequea Township Comprehensive Plan



Gannett Fleming

- Urban Growth Boundary
- Proposed Urban Growth Boundary Relocation
- Preserved Farm Land
- Future Land Use**
- Low Density Residential
- High Density Residential
- Commercial
- Industrial
- Institutional
- Agriculture & Open Space
- Mineral Extraction
- Recreational



Map Projection: PA Stateplane - South Zone,
Datum NAD83, Units feet
Data Source: Lancaster County
Planning Commission
Map Date: February 10, 2005
(42460-Pequea/alo-map14_future_land_use.pdf)

Appendix

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Model Buffer Ordinance A-1

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 Ordinance A-16

Working Draft - Pequea Township On-Lot and Community Sewage
Disposal System Ordinance A-24

Figure 2-6 Groundwater Quality – Nitrates, from the 1990 Pequea Township Comprehensive
Plan

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Model Buffer Ordinance

This model ordinance is available online at The Stormwater Manager's Resource Center, www.stormwatercenter.net. Clarifications and alternatives are highlighted in italicized text.

Section I. Background

Whereas, buffers adjacent to stream systems and coastal areas provide numerous environmental protection and resource management benefits which can include the following:

- a) restoring and maintaining the chemical, physical and biological integrity of the water resources
- b) removing pollutants delivered in urban stormwater
- c) reducing erosion and controlling sedimentation
- d) stabilizing stream banks
- e) providing infiltration of stormwater runoff
- f) maintaining base flow of streams
- g) contributing the organic matter that is a source of food and energy for the aquatic ecosystem
- i) providing riparian wildlife habitat
- j) furnishing scenic value and recreational opportunity

It is the desire of the (Jurisdiction) to protect and maintain the native vegetation in riparian and wetland areas by implementing specifications for the establishment, protection and maintenance of vegetated along all stream systems and/or coastal zones within our jurisdictional authority.

Section II. Intent

The purpose of this ordinance is to establish minimal acceptable requirements for the design of buffers to protect the streams, wetlands and floodplains of (Jurisdiction); to protect the water quality of watercourses, reservoirs, lakes, and other significant water resources within (Jurisdiction); to protect (Jurisdiction's) riparian and aquatic ecosystems; and to provide for the environmentally sound use of (Jurisdiction's) land resources.

Section III. Definitions

Active Channel: The area of the stream channel that is subject to frequent flows (approximately once per one and a half years), and that includes the portion of the channel below where the floodplain flattens.

Best Management Practices (BMPs): Conservation practices or management measures which control soil loss and reduce water quality degradation caused by nutrients, animal wastes, toxins, sediment, and runoff.

Buffer: A vegetated area, including trees, shrubs and herbaceous vegetation, which exists or is established to protect a stream system, lake, reservoir or coastal estuarine area. Alteration of this natural area is strictly limited.

Development: 1) The improvement of property for any purpose involving building; 2) Subdivision, or the division of a tract or parcel of land in to 2 or more parcels; 3) the combination of any two or more lots, tracts, or parcels of property for any purpose; 4) the preparation of land for any of the above purposes.

Non-Tidal Wetland: Those areas not influenced by tidal fluctuations that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

The definition of "non-tidal wetland" here is adapted from the definition of "wetland" used by the US EPA and the Army Corps of Engineers. Other definitions will also be acceptable. See the Croton-on-Hudson Wetlands and Watercourses ordinance for an example.

Non-point Source Pollution: Pollution which is generated by various land use activities rather than from an identifiable or discrete source, and is conveyed to waterways through natural processes, such as rainfall, storm runoff, or ground water seepage rather than direct discharge.

One Hundred Year Floodplain: The area of land adjacent to a stream that is subject to inundation during a storm event that has a recurrence interval of one hundred (100) years.

Pollution: Any contamination or alteration of the physical, chemical, or biological properties of any waters that will render the waters harmful or detrimental to: public health, safety or welfare; domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; livestock, wild animals, or birds; fish or other aquatic life.

Stream Channel: Part of a water course either naturally or artificially created which contains an intermittent or perennial base flow of groundwater origin. Base flows of groundwater origin can be distinguished by any of the following physical indicators:

- 1) Hydrophytic vegetation, hydric soil or other hydrologic indicators in the area(s) where groundwater enters the stream channel, in the vicinity of the stream headwaters, channel bed or channel banks
- 2) Flowing water not directly related to a storm event
- 3) Historical records of a local high groundwater table, such as well and stream gauge records.

Stream Order: A classification system for streams based on stream hierarchy. The smaller the stream, the lower its numerical classification. For example, a first order stream does not have tributaries and normally originates from springs and/or seeps. At the confluence of two first order streams, a second order stream begins, and so on. (See Figure 1)

Stream System: A stream channel together with one or both of the following:

- 1) 100-year floodplain and/or

2) Hydrologically-related non-tidal wetlands

Streams: Perennial and intermittent watercourses identified through site inspection and USGS maps. Perennial streams are those which are depicted on a USGS map with a solid blue line. Intermittent streams are those which are depicted on a USGS map with a dotted blue line.

Defining the term "stream" is perhaps the most contentious issue in the definition of stream buffers. This term determines the origin, and the length of the stream buffer. While some jurisdictions restrict the buffer to perennial or "blue line" streams, others include both perennial and intermittent streams in the stream buffer program. Some communities do not rely on USGS maps, and instead prepare local maps of all stream systems that require a buffer.

Water Pollution Hazard: A land use or activity that causes a relatively high risk of potential water pollution.

Section IV. Applications

A) This ordinance shall apply to all proposed development except for that development which meets waiver or variance criteria as outlined in Section IX of this regulation.

B) This ordinance shall apply to all timber harvesting activities, except those timber harvesting operations which are implementing a forest management plan which has been deemed to be in compliance with the regulations of the buffer ordinance and has received approval from (*state forestry agency*).

C) This ordinance shall apply to all surface mining operations except that the design standards shall not apply to active surface mining operations which are operating in compliance with an approved (*state or federal agency*) surface mining permit.

D) The ordinance shall not apply to agricultural operations that are covered by an approved NRCS conservation plan that includes the application of best management practices.

Communities should carefully consider whether or not to exempt agricultural operations from the buffer ordinance, because buffer regulations may take land out of production and impose a financial burden on family farms. Many communities exempt agricultural operations if they have an approved NRCS conservation plan. In some regions, agricultural buffers may be funded through the Conservation Reserve Program (CRP). Consult the Conservation Technology Information Center (CTIC) at www.ctic.perdue.edu.

Livestock operations near and around streams may be regulated by communities. Livestock can significantly degrade the stream system, and accelerate streambank erosion. The King County Livestock Management Ordinance is one example of a local livestock ordinance. For more information, contact the King County Department of Development and Environmental Services at (206) 296-6602.

E) Except as provided in Section IX, this ordinance shall apply to all parcels of land, structures and activities which are causing or contributing to:

1) Pollution, including non-point pollution, of the waters of the jurisdiction adopting this ordinance.

2) Erosion or sedimentation of stream channels

3) Degradation of aquatic or riparian habitat

Section V. Plan Requirements

A) In accordance with section IV of this ordinance, a plan approved by the appropriate agency is required for all development, forest harvesting operations, surface mining operations, and agricultural operations.

B) The plan shall set forth an informative, conceptual and schematic representation of the proposed activity by means of maps, graphs, charts, or other written or drawn documents so as to enable the agency an opportunity to make a reasonably informed decision regarding the proposed activity.

C) The plan shall contain the following information:

The ordinance can identify the scale of maps to be included with the analyses in items 2) through 7). A 1"=50' to 1"=100' scale will generally provide sufficient detail.

1) a location or vicinity map

2) field delineated and surveyed streams, springs, seeps, bodies of water, and wetlands (include a minimum of two hundred (200) feet into adjacent properties).

3) Field delineated and surveyed forest buffers

4) Limits of the ultimate one hundred year floodplain

The limits of the ultimate floodplain (i.e., the floodplain under "built-out" conditions) may not be available in all locations.

5) hydric soils mapped in accordance with the NRCS soil survey of the site area

6) steep slopes greater than fifteen (15) percent for areas adjacent to and within two hundred (200) feet of streams, wetlands, or other waterbodies.

The ordinance may also explicitly define how slopes are measured. For example, the buffer may be divided into sections of a specific width (e.g., twenty five feet) and the slope for each segment reported. Alternatively, slopes can be reported in segments divided by breaks in slope.

7) a narrative of the species and distribution of existing vegetation within the buffer

D) The buffer plan shall be submitted in conjunction with the required grading plan for any development, and the forest buffer should be clearly delineated on the final grading plan.

E) Permanent boundary markers, in the form of signage approved by (Natural Resources or Planning Agency), shall be installed prior to final approval of the required clearing and grading plan. Signs shall be placed at the edge of the Middle Zone (See Section VI.E).

Section VI. Design Standards for Forest Buffers

A) A forest buffer for a stream system shall consist of a forested strip of land extending along both sides of a stream and its adjacent wetlands, floodplains or slopes. The forest buffer width shall be adjusted to include contiguous sensitive areas, such as steep slopes or erodible soils,

where development or disturbance may adversely affect water quality, streams, wetlands, or other waterbodies.

B) The forest buffer shall begin at the edge of the stream bank of the active channel.

C) The required width for all forest buffers (i.e., the base width) shall be a minimum of one hundred feet, with the requirement to expand the buffer depending on: 1) stream order; 2) percent slope; 3) 100-year floodplain; 4) wetlands or critical areas.

The width of the stream buffer varies from twenty feet to up to 200 feet in ordinances throughout the United States (Heraty, 1993). The width chosen by a jurisdiction will depend on the sensitivity and characteristics of the resource being protected and political realities in the community.

1) In third order and higher streams, add twenty five feet to the base width.

2) Forest Buffer width shall be modified if there are steep slopes which are within a close proximity to the stream and drain into the stream system. In those cases, the forest buffer width can be adjusted.

Several methods may be used to adjust buffer width for steep slopes. Two examples include:

Method A:

Percent Slope	Width of Buffer
15%-17%	add 10 feet
18%-20%	add 30 feet
21%-23%	add 50 feet
24%-25%	add 60 feet

Method B:

Percent Slope	Type of Stream Use	
	Water Contact Recreational Use	Sensitive Stream Habitat
0 to 14%	no change	add 50 feet
15 to 25%	add 25 feet	add 75 feet
Greater than 25%	add 50 feet	add 100 feet

3) Forest buffers shall be extended to encompass the entire 100 year floodplain and a zone with minimum width of 25 feet beyond the edge of the floodplain.

4) When wetland or critical areas extend beyond the edge of the required buffer width, the buffer shall be adjusted so that the buffer consists of the extent of the wetland plus a 25 foot zone extending beyond the wetland edge.

D) Water Pollution Hazards

The following land uses and/or activities are designated as potential water pollution hazards, and must be set back from any stream or waterbody by the distance indicated below:

- 1) storage of hazardous substances (150 feet)
- 2) above or below ground petroleum storage facilities (150 feet)
- 3) drainfields from on-site sewage disposal and treatment system (i.e., septic systems-- 100 feet)
- 4) raised septic systems (250 feet)
- 5) solid waste landfills or junkyards (300 feet)
- 6) confined animal feedlot operations (250 feet)
- 7) subsurface discharges from a wastewater treatment plant (100 feet)
- 8) land application of biosolids (100 feet)

For surface water supplies, the setbacks should be doubled.

A community should carefully consider which activities or land uses should be designated as potential water pollution hazards. The list of potential hazards shown above is not exhaustive, and others may need to be added depending on the major pollutants of concern and the uses of water.

E) The forest buffer shall be composed of three distinct zones, with each zone having its own set of allowable uses and vegetative targets as specified in this ordinance. (See Figure 2).

Although a three-zone buffer system is highly recommended, the widths and specific uses allowed in each zone may vary between jurisdictions.

1) Zone 1 Streamside Zone

- a) The function of the streamside zone is to protect the physical and ecological integrity of the stream ecosystem.
- b) The streamside zone will begin at the edge of the stream bank of the active channel and extend a minimum of 25 feet from the top of the bank.
- c) Allowable uses within this zone are highly restricted to:
 - i) flood control structures
 - ii) utility rights of way
 - iii) footpaths
 - iv) road crossings, where permitted.
- d) The vegetative target for the streamside zone is undisturbed native vegetation.

2) Zone 2 Middle Zone

- a) The function of the middle zone is to protect key components of the stream and to provide distance between upland development and the streamside zone.
- b) The middle zone will begin at the outer edge of the streamside zone and extend a minimum of 50 plus any additional buffer width as specified in Section VI C.
- c) Allowable uses within the middle zone are restricted to:
 - i) Biking or hiking paths
 - ii) Stormwater management facilities, with the approval of (*Local agency responsible for stormwater*).
 - iii) Recreational uses as approved by (*Planning Agency*).
 - iv) Limited tree clearing with approval from (*Forestry agency or Planning Agency*).

d) The vegetative target for the middle zone is mature native vegetation adapted to the region.

3) Zone 3 Outer Zone

a) The function of the outer zone is to prevent encroachment into the forest buffer and to filter runoff from residential and commercial development.

b) The outer zone will begin at the outward edge of the middle zone and provide a minimum width of 25 feet between Zone 2 and the nearest permanent structure.

c) There shall be no septic systems, permanent structures or impervious cover, with the exception of paths, within the outer zone.

d) The vegetative target for the outer zone may vary, although the planting of native vegetation should be encouraged to increase the total width of the buffer.

Section VII. Buffer Management and Maintenance

A) The forest buffer, including wetlands and floodplains, shall be managed to enhance and maximize the unique value of these resources. Management includes specific limitations on alteration of the natural conditions of these resources. The following practices and activities are restricted within Zones 1 and 2 of the forest buffer, except with approval by (*Forestry, Planning or Natural Resources Agency*):

1) Clearing of existing vegetation.

2) Soil disturbance by grading, stripping, or other practices.

3) Filling or dumping.

4) Drainage by ditching, underdrains, or other systems

5) Use, storage, or application of pesticides, except for the spot spraying of noxious weeds or non-native species consistent with recommendations of (*Forestry Agency*).

6) Housing, grazing, or other maintenance of livestock.

7) Storage or operation of motorized vehicles, except for maintenance and emergency use approved by (*Forestry, Planning or Natural Resources Agency*).

B) The following structures, practices, and activities are permitted in the forest buffer, with specific design or maintenance features, subject to the review of (*Forestry, Planning or Natural Resources Agency*):

1) Roads, bridges, paths, and utilities:

a) An analysis needs to be conducted to ensure that no economically feasible alternative is available.

b) The right of way should be the minimum width needed to allow for maintenance access and installation.

c) The angle of the crossing shall be perpendicular to the stream or buffer in order to minimize clearing requirements

d) The minimum number of road crossings should be used within each subdivision, and no more than one fairway crossing is allowed for every 1,000 feet of buffer.

2) Stormwater management:

e) An analysis needs to be conducted to ensure that no economically feasible alternative is available, and that the project is either necessary for flood control, or significantly improves the water quality or habitat in the stream.

f) In new developments, on-site and non-structural alternatives will be preferred over larger facilities within the stream buffer.

g) When constructing stormwater management facilities (i.e., BMPs), the area cleared will be limited to the area required for construction, and adequate maintenance access, as outlined in the most recent edition of (*Refer to Stormwater Manual*).

Rather than place specific stormwater BMP design criteria in an ordinance, it is often preferable to reference a manual. Therefore, specific design information can change over time without going through the formal process needed to change ordinance language.

The Maryland Stormwater Design Manual is one example of an up-to-date stormwater design manual. For more information, go to www.mde.state.md.us. Under topics, choose "Stormwater Design Manual".

h) Material dredged or otherwise removed from a BMP shall be stored outside the buffer.

3) Stream restoration projects, facilities and activities approved by (*Forestry, Planning or Natural Resources Agency*) are permitted within the forest buffer.

4) Water quality monitoring and stream gauging are permitted within the forest buffer, as approved by (*Forestry, Planning or Natural Resources Agency*).

5) Individual trees within the forest buffer may be removed which are in danger of falling, causing damage to dwellings or other structures, or causing blockage of the stream.

6) Other timber cutting techniques approved by the agency may be undertaken within the forest buffer under the advice and guidance of (*State or Federal Forestry Agency*), if necessary to preserve the forest from extensive pest infestation, disease infestation, or threat from fire.

C) All plats prepared for recording and all right-of-way plats shall clearly:

1) Show the extent of any forest buffer on the subject property by metes and bounds

2) Label the forest buffer

3) Provide a note to reference any forest buffer stating: "There shall be no clearing, grading, construction or disturbance of vegetation except as permitted by the agency."

4) Provide a note to reference any protective covenants governing all forest buffers areas stating: "Any forest buffer shown hereon is subject to protective covenants which may be found in the land records and which restrict disturbance and use of these areas."

D) All forest buffer areas shall be maintained through a declaration of protective covenant, which is required to be submitted for approval by (*Planning Board or Agency*). The covenant shall be recorded in the land records and shall run with the land and continue in perpetuity.

This protective covenant can be kept either by the local government agency responsible for management of environmental resources, or by an approved non-profit organization. An example conservation easement is included later in this section.

E) All lease agreements must contain a notation regarding the presence and location of protective covenants for forest buffer areas, and which shall contain information on the management and maintenance requirements for the forest buffer for the new property owner.

F) An offer of dedication of a forest buffer area to the agency shall not be interpreted to mean that this automatically conveys to the general public the right of access to this area.

G) (*Responsible Individual or Group*) shall inspect the buffer annually and immediately following severe storms for evidence of sediment deposition, erosion, or concentrated flow channels and corrective actions taken to ensure the integrity and functions of the forest buffer.

A local ordinance will need to designate the individual or group responsible for buffer maintenance. Often, the responsible party will be identified in any protective covenants associated with the property.

H) Forest buffer areas may be allowed to grow into their vegetative target state naturally, but methods to enhance the successional process such as active reforestation may be used when deemed necessary by (*Natural Resources or Forestry Agency*) to ensure the preservation and propagation of the buffer area. Forest buffer areas may also be enhanced through reforestation or other growth techniques as a form of mitigation for achieving buffer preservation requirements.

Section VIII Enforcement Procedures

A) (Director of *Responsible Agency*) is authorized and empowered to enforce the requirements of this ordinance in accordance with the procedures of this section.

B) If, upon inspection or investigation, the director or his/her designee is of the opinion that any person has violated any provision of this ordinance, he/she shall with reasonable promptness issue a correction notice to the person. Each such notice shall be in writing and shall describe the nature of the violation, including a reference to the provision within this ordinance which has been violated. In addition, the notice shall set a reasonable time for the abatement and correction of the violation.

C) If it is determined that the violation or violations continue after the time fixed for abatement and correction has expired, the director shall issue a citation by certified mail to the person who is in violation. Each such notice shall be in writing and shall describe the nature of the violation, including a reference to the provision within this ordinance which has been violated, and what penalty, if any, is proposed to be assessed. The person charged has thirty (30) days within which

to contest the citation or proposed assessment of penalty and to file a request for a hearing with the director or his designee. At the conclusion of this hearing, the director or his designee will issue a final order, subject to appeal to the appropriate authority. If, within thirty (30) days from the receipt of the citation issued by the director, the person fails to contest the citation or proposed assessment of penalty, the citation or proposed assessment of penalty shall be deemed the final order of the director.

D) Any person who violates any provision of this ordinance may be liable for any cost or expenses incurred as a result thereof by the agency.

E) Penalties which may be assessed for those deemed to be in violation may include:

- 1) A civil penalty not to exceed one thousand dollars (\$1,000.00) for each violation with each day's continuance considered a separate violation.
- 2) A criminal penalty in the form of a fine of not more than one thousand dollars (\$1,000.00) for each violation or imprisonment for not more than ninety (90) days, or both. Every day that such violations shall continue will be considered a separate offense.
- 3) Anyone who knowingly makes any false statements in any application, record, plat, or plan required by this ordinance shall upon conviction be punished by a fine of not more than one thousand dollars (\$1,000.00) for each violation or imprisonment for not more than thirty (30) days, or both.

Specific penalties will vary between communities, and should reflect realistically enforceable penalties given the political realities of a jurisdiction.

F) In addition to any other sanctions listed in this ordinance, a person who fails to comply with the provisions of this buffer ordinance shall be liable to the agency in a civil action for damages in an amount equal to twice the cost of restoring the buffer. Damages that are recovered in accordance with this action shall be used for the restoration of buffer systems or for the administration of programs for the protection and restoration of water quality, streams, wetlands, and floodplains.

Section IX Waivers/Variations

A) This ordinance shall apply to all proposed development except for that development which prior to the effective date of this ordinance:

- 1) Is covered by a valid, unexpired plat in accordance with development regulations
- 2) Is covered by a current, executed public works agreement
- 3) Is covered by a valid, unexpired building permit
- 4) Has been accepted to apply for a building permit
- 5) Has been granted a waiver in accordance with current development regulations.

B) The director of the agency may grant a variance for the following:

- 1) Those projects or activities where it can be demonstrated that strict compliance with the ordinance would result in practical difficulty or financial hardship
- 2) Those projects or activities serving a public need where no feasible alternative is available.
- 3) The repair and maintenance of public improvements where avoidance and minimization of adverse impacts to nontidal wetlands and associated aquatic ecosystems have been addressed
- 4) For those developments which have had buffers applied in conformance with previously issued requirements.

C) Waivers for development may also be granted in two additional forms, if deemed appropriate by the director:

- 1) The buffer width made be relaxed and the buffer permitted to become narrower at some points as long as the average width of the buffer meets the minimum requirement. This averaging of the buffer may be used to allow for the presence of an existing structure or to recover a lost lot, as long as the streamside zone (Zone I) is not disturbed by the narrowing, and no new structures are built within the one hundred (100) year floodplain.
- 2) (*Planning Agency*) may offer credit for additional density elsewhere on the site in compensation for the loss of developable land due to the requirements of this ordinance. This compensation may increase the total number of dwelling units on the site up to the amount permitted under the base zoning.

D) The applicant shall submit a written request for a variance to the director of the agency. The application shall include specific reasons justifying the variance and any other information necessary to evaluate the proposed variance request. The agency may require an alternatives analysis that clearly demonstrates that no other feasible alternatives exist and that minimal impact will occur as a result of the project or development.

E) In granting a request for a variance, the director of the agency may require site design, landscape planting, fencing, the placement of signs, and the establishment of water quality best management practices in order to reduce adverse impacts on water quality, streams, wetlands, and floodplains.

Section X. Conflict With Other Regulations

Where the standards and management requirements of this buffer ordinance are in conflict with other laws, regulations, and policies regarding streams, steep slopes, erodible soils, wetlands, floodplains, timber harvesting, land disturbance activities or other environmental protective measures, the more restrictive shall apply.

References

Heraty, M. 1993. Riparian buffer programs: a guide to developing and implementing a riparian buffer program as an urban best management practice. Metropolitan Washington Council of Governments. US EPA Office of Wetlands, Oceans and Watersheds. Washington, DC.

Schueler, T. 1995. Site planning for urban stream protection. Metropolitan Washington Council of Governments. US EPA Office of Wetlands, Oceans and Watersheds. Washington, DC.

Welsch, D. 1991. Riparian forest buffers. US Department of Agriculture, Forest Service. Forest Resources Management. FS Pub. No. NA-PR-07-91. Radnor, PA.

SUMMARY OF PADEP OPEN BURNING MODEL ORDINANCE PROVISIONS

Model ordinance follows summary.

SECTION I. Title

Title of ordinance.

SECTION II. Authority

Explains by what authority the ordinance is enacted.

SECTION III. Policy

Explains why the ordinance is enacted. (To protect the citizens from air pollution and nuisances caused by open burning.)

SECTION IV. Definitions

Provides the definitions for certain terms which are used in the ordinance.

SECTION V. Regulations

States that there will be no open burning of material except for certain exceptions which are listed forthwith.

SECTION VI. Enforcement Orders

Explains who has the power to enforce the ordinance. Discusses the different types of enforcement orders which are available to the municipality and how these orders are implemented.

SECTION VII. Responsibility of Owners and Operators

Explains the scope of the enforcing agent's authority with respect to owners and operators of an alleged open burning source. States how a municipality may collect or recover the costs involved in enforcing an order.

SECTION VIII. Criminal Penalties

Explains what the criminal penalties are for any person who violates any provision of this ordinance or any order of the municipality issued pursuant to this ordinance.

SECTION IX. Civil Penalties

Explains the procedures by which a municipality may assess a civil penalty for the violation of a provision of this ordinance or any order issued pursuant to this ordinance.

SECTION X. Unlawful Conduct

Explains what constitutes unlawful conduct.

SECTION XI. Public Nuisances

Explains what constitutes a public nuisance, when it must be abated, how the municipality may recover the expenses of abatement, and who is liable for the costs of abatement.

SECTION XII. Repealer

Statement repealing any previous ordinance and any other ordinance which conflicts, in whole or in part, with this ordinance.

SECTION XIII. Validity

Statement asserting the validity of this ordinance.

SECTION XIV. Effective Date

Statement of when the ordinance takes effect.

ATTACHMENT A

A list of the air basins in Pennsylvania and the counties found in each air basin.

PADEP MODEL AIR POLLUTION CONTROL ORDINANCE

Open Burning

An ordinance of (municipality), _____ County, Commonwealth of Pennsylvania for the prevention and control of air pollution; defining certain terms used herein; providing for regulations, exceptions, enforcement orders, responsibility of owners and operators, penalties, unlawful conduct, public nuisances, repealing previous ordinance (number), and validity.

SECTION I. Title

This ordinance shall be known and may be cited as the (municipality) Air Pollution Control Ordinance of (year).

SECTION II. Authority

The (Council-Board) of the (municipality), under, and by virtue of and pursuant to the authority granted by (enabling authority/code) do hereby enact and ordain this ordinance.

SECTION III. Policy

Whereas the (Council-Board) of (municipality) has determined that air pollution from open burning may be detrimental to the health, comfort, living conditions, welfare, and safety of the citizens of (municipality), it is hereby declared to be the policy of (municipality) to safeguard the citizens of (municipality) from such air pollution.

SECTION IV. Definitions

The following words, terms, and phrases, when used in this ordinance, unless the context clearly indicates otherwise, shall have the following meanings ascribed to them:

- (1) Air basin – A geographic area of this Commonwealth as delimited in attachment A.
- (2) Air curtain destructor – A mechanical device which forcefully projects a curtain of air across a pit in which open burning is being conducted so that combustion efficiency is increased and smoke and other particulate matter are contained.
- (3) Burning – The act of consuming by fire; to flame, char, scorch, or blaze. As used in this ordinance, smoldering shall have the same meaning as burning and any smoldering shall be deemed a burning.
- (4) Clearing and grubbing wastes – Trees, shrubs, and other native vegetation which are cleared from land during or prior to the process of construction. The term does not include demolition wastes and dirt laden roots.

(5) Composting – The process by which organic solid waste is biologically decomposed under controlled anaerobic or aerobic conditions to yield a humus-like product.

(6) Council-Board – Borough Council, Township Board of Supervisors.

(7) Domestic refuse – Waste which is generated from the normal occupancy of a structure occupied solely as a dwelling by two families or less. The term does not include appliances, carpets, demolition waste (insulation, shingles, siding, etc.), furniture, mattresses or box springs, paint, putrescible waste, solvents, tires, or treated wood.

(8) Municipality – A city, incorporated town, township, borough, county, municipal authority, or other public body created under State law having jurisdiction over the disposal of sewage, industrial wastes, or other wastes.

(9) Open burning – A fire, the air contaminants from which are emitted directly into the outdoor atmosphere and not directed thereto through a flue.

(10) Person – Any individual, public or private corporation for profit or not for profit, association, partnership, firm, trust, estate, department, board, bureau or agency of the Commonwealth or the Federal Government, political subdivision, municipality, district, authority, or any other legal entity whatsoever which is recognized by law as the subject of rights and duties.

(11) Yard waste – Leaves, grass clippings, garden residue, tree trimmings, chipped shrubbery, and other vegetative material.

SECTION V. Regulations

After (the effective date) no person may permit the open burning of material with the exception of the following:

(1) A fire set to prevent or abate a fire hazard, when approved by the Department of Environmental Protection's Regional Air Quality Program office and set by or under the supervision of a public officer.

(2) Any fire set for the purpose of instructing personnel in fire fighting, when approved by the Department of Environmental Protection's Regional Air Quality Program office.

(3) A fire set for the prevention and control of disease or pests, when approved by the Department of Environmental Protection's Regional Air Quality Program office.

(4) A fire set for the purpose of burning clearing and grubbing waste. If within an air basin an air curtain destructor must be used and must be approved by the Department of Environmental Protection's Regional Air Quality Program office.

(5) A fire set in conjunction with the production of agricultural commodities in their unmanufactured state on the premises of the farm operation.

(6) A fire set for the purpose of burning that amount of domestic refuse generated from one dwelling, when the fire is on the premises of a structure occupied solely as a dwelling by two families or less and when the refuse results from the normal occupancy of said structure.

(7) A fire set for the purpose of burning that amount of yard waste generated from the premises of a structure occupied solely as a dwelling by two families or less (except where composting is mandatory), when the fire is on the premises of said structure.

(8) A fire set solely for cooking food.

(9) A fire set solely for recreational or ceremonial purposes.

[Note to the municipality: Municipal ordinances may not be less stringent than the regulations of the Department of Environmental Protection. Municipal ordinances may be more stringent than the regulations. If the municipality wishes to ban open burning of domestic refuse and/or yard waste, delete items 6 and 7 above from the municipal ordinance. If the municipality wishes to totally ban all open burning, simply enact a municipal ordinance which bans all open burning.]

SECTION VI. Enforcement Orders

(1) The (municipality) (supervisor, codes officer, zoning officer, or any other duly authorized agent) shall have the power and duty to enforce the provisions of this ordinance.

(2) The (municipality) may issue such orders as are necessary to aid in the enforcement of the provisions of this ordinance. These orders shall include, but shall not be limited to: orders requiring persons to cease unlawful open burning which, in the course of its occurrence, is in violation of any provision of this ordinance; orders to take corrective action or to abate a public nuisance; orders requiring the testing, sampling, or monitoring of any open burning; or orders requiring production of information. Such an order may be issued if the (municipality) finds that any condition existing in or on the facility or source involved is causing or contributing to open burning or if the (municipality) finds that any person is in violation of any provision of this ordinance.

(3) The (municipality) may, in its order, require compliance with such conditions as are necessary to prevent or abate open burning or effect the purposes of this ordinance.

(4) An order issued under this section shall take effect upon notice, unless the order specifies otherwise. An appeal to the (quasi judicial body) of the (municipality's) order shall not act as a supersedeas, provided, however, that, upon application and for cause shown, the (quasi judicial body) may issue such a supersedeas under rules established by the (quasi judicial body).

(5) The authority of the (municipality) to issue an order under this section is in addition to any remedy or penalty which may be imposed pursuant to this ordinance. The failure to comply with any such order is hereby declared to be a public nuisance.

SECTION VII. Responsibility of Owners and Operators

(1) Whenever the (enforcing officer) finds that open burning is occurring in the (municipality), other than those exceptions noted in Section V above, the (enforcing officer) may order the owner or operator to take corrective action in a manner satisfactory to the (municipality), or the (enforcing officer) may order the owner or operator to allow access to the land by the (enforcing officer) or a third party to take such action.

(2) For purposes of collecting or recovering the costs involved in taking corrective action or pursuing a cost recovery action pursuant to an order or recovering the cost of litigation, oversight, monitoring, sampling, testing, and investigation related to a corrective action, the (municipality) may collect the amount in the same manner as civil penalties are assessed and collected following the process for assessment and collection of a civil penalty contained in Section IX of this ordinance.

SECTION VIII. Criminal Penalties

Any person who violates any provision of this ordinance or any order of the (municipality) issued pursuant to this ordinance commits a summary offense and shall, upon conviction, be sentenced to pay a fine of not less than one hundred dollars (\$100.00) nor more than two thousand five hundred dollars (\$2,500.00) for each separate offense and, in default of the payment of such fine, may be sentenced to imprisonment for ninety (90) days for each separate offense. Employees of the (municipality) authorized to conduct inspections or investigations are hereby declared to be law enforcement officers authorized to issue or file citations for summary violations under this ordinance, and the (municipal) Counsel is hereby authorized to prosecute these offenses. For purposes of this section, a summary offense may be prosecuted before any district justice in this (municipality). There is no accelerated rehabilitative disposition authorized for a summary offense.

SECTION IX. Civil Penalties

(1) In addition to proceeding under any other remedy available at law or in equity for a violation of a provision of this ordinance or any order issued pursuant to this ordinance, the (municipality) may assess a civil penalty for the violation. The penalty may be assessed whether or not the violation was willful. The civil penalty so assessed shall not exceed ten thousand dollars (\$10,000.00) per day for each violation. In determining the amount of the penalty, the (municipality) shall consider the willfulness of the violation; damage to air, soil, water, or other natural resources of the (municipality) or their uses; financial benefit to the person in consequence of the violation; deterrence of future violations; cost to the (municipality); the size of the source or facility; the compliance history of the source; the severity and duration of the violation; degree of cooperation in resolving the violation; the speed with which compliance is

ultimately achieved; whether the violation was voluntarily reported; other factors unique to the owners or operators of the source or facility; and other relevant factors.

[Note to the municipality: The allowable amounts for the penalty increase in 1995 to \$15,000.00 per day for each violation and in 1996 and thereafter to \$25,000.00 per day for each violation. The municipality may want to write these amounts into its ordinance as appropriate.]

(2) When the (municipality) proposes to assess a civil penalty, it shall inform the person of the proposed amount of the penalty. The person charged with the penalty shall then have thirty (30) days to pay the proposed penalty in full; or if the person wishes to contest the amount of the penalty or the fact of the violation to the extent not already established, the person shall forward the proposed amount of the penalty to the (quasi judicial body) within the thirty (30) day period for placement in an escrow account with the State Treasurer or any Commonwealth bank or post an appeal bond to the (quasi judicial body) within thirty (30) days in the amount of the proposed penalty, provided that such bond is executed by a surety licensed to do business in the Commonwealth and is satisfactory to the (municipality). If, through administrative or final judicial review of the proposed penalty, it is determined that no violation occurred or that the amount of the penalty shall be reduced, the (quasi judicial body) shall, within thirty (30) days, remit the appropriate amount to the person with any interest accumulated by the escrow deposit. Failure to forward the money or the appeal bond at the time of the appeal shall result in a waiver of all legal rights to contest the violation or the amount of the civil penalty unless the appellant alleges financial inability to prepay the penalty or to post the appeal bond. The (quasi judicial body) shall conduct a hearing to consider the appellant's alleged inability to pay within thirty (30) days of the date of the appeal. The (quasi judicial body) may waive the requirement to prepay the civil penalty or to post an appeal bond if the appellant demonstrates and the (quasi judicial body) finds that the appellant is financially unable to pay. The (quasi judicial body) shall issue an order within thirty (30) days of the date of the hearing to consider the appellant's alleged inability to pay. The amount assessed after administrative hearing or after waiver of administrative hearing shall be payable to the (municipality) and shall be collectible in any manner provided by law for the collection of debts, including the collection of interest on the penalty amount computed in accordance with section 6621(a)(2) of the Internal Revenue Code of 1986 (Public Law 99-514, 26 U.S.C. § 1 et seq.) from the date of assessment of the penalty. If any person liable to pay any such penalty neglects or refuses to pay the same after demand, the amount, together with interest and any costs that may accrue, shall constitute a debt of such person, as may be appropriate, to the (municipality). The debt shall constitute a lien on all property owned by said person when a notice of lien incorporating a description of the property of the person subject to the action is duly filed with the prothonotary of the court of common pleas where the property is located. The prothonotary shall promptly enter upon the civil judgment or order docket, at no cost to the (municipality), the name and address of the person, as may be appropriate, and the amount of the lien as set forth in the notice of lien. Upon entry by the prothonotary, the lien shall attach to the revenues and all real and personal property of the person, whether or not the person is solvent. The notice of lien, filed pursuant to this Section, which affects the property of the person shall create a lien with priority over all subsequent claims or liens which are filed against the person, but it shall not affect any valid lien, right, or interest in the property filed in accordance with established procedure prior to the filing of a notice of lien under this section.

[Note to the municipality: The penalties and remedies available to the municipality are those set forth in the Air Pollution Control Act (APCA), as amended, 35 P.S. 4012, Sections 9, 9.1, and 12(g). Each municipality may tailor the penalty provisions to reflect the municipality's preferred penalty policy, within the legal limits of the APCA.]

SECTION X. Unlawful Conduct

It shall be unlawful to fail to comply with or to cause or assist in the violation of any of the provisions of this ordinance or to fail to comply with any order or other requirement of the (municipality); or to cause a public nuisance; or to cause air, soil, or water pollution resulting from an open burning incident; or to hinder, obstruct, prevent, or interfere with the (municipality) or its personnel in their performance of any duty hereunder, including denying the (enforcing officer) access to the source or facility; or to violate the provisions of 18 Pa.C.S. § 4903 (relating to false swearing) or 4904 (relating to unsworn falsification to authorities) in regard to papers required to be submitted under this ordinance. The owner or operator of an open burning source shall not allow pollution of the air, water, or other natural resources of the (municipality) to result from the source.

SECTION XI. Public Nuisances

A violation of this ordinance or of any order issued by the (municipality) under this ordinance shall constitute a public nuisance. The (municipality) shall have the authority to order any person causing a public nuisance to abate the public nuisance. In addition, when abating a public nuisance, the (municipality) may recover the expenses of abatement following the process for assessment and collection of a civil penalty contained in Section IX. Whenever the nuisance is maintained or continued contrary to this ordinance or any order issued pursuant to this ordinance, the nuisance may be abatable in the manner provided by this ordinance. Any person who causes the public nuisance shall be liable for the cost of abatement.

SECTION XII. Repealer

Ordinance (no.) previously enacted is hereby repealed. All other ordinances or parts thereof which are in conflict with this ordinance are hereby repealed.

SECTION XIII. Validity

The provisions of this ordinance are severable, and if any section, clause, sentence, part, or provision thereof shall be held illegal, invalid, or unconstitutional by any court of competent jurisdiction, such decision of the court shall not affect or impair the remaining sections, clauses, sentences, parts, or provisions of this ordinance. It is hereby declared to be the intent of the (Council-Board) that this ordinance would have been adopted if such illegal, invalid, or unconstitutional section, clause, sentence, part, or provision had not been included herein.

SECTION XIV. Effective Date

This ordinance shall become effective on the (no.) day of (month) , (year) .

ATTACHMENT A

Air basins of the Commonwealth of Pennsylvania as delimited in 25 Pa. Code 121.1. Definitions.

- 1) Allegheny County air basin – Allegheny County.
- 2) Allentown, Bethlehem, Easton air basin – The following political subdivisions in Lehigh County: City of Allentown, City of Bethlehem, Catasauqua Borough, Coplay Borough, Emmaus Borough, Fountain Hill Borough, Hanover Township, Salisbury Township, South Whitehall Township and Whitehall Township, and the following political subdivisions in Northampton County: Allen Township, Bath Borough, City of Bethlehem, Bethlehem Township, East Allen Township, City of Easton, Freemansburg Borough, Glendon Borough, Hanover Township, Hellertown Borough, Lower Nazareth Township, Lower Saucon Township, Nazareth Borough, North Catasauqua Borough, Northampton Borough, Palmer Township, Stockertown Borough, Tatamy Borough, Upper Nazareth Township, West Easton Borough, and Wilson Borough.
- 3) Erie air basin – The following political subdivisions in Erie County: City of Erie, Harborcreek Township, Lawrence Park Township, Millcreek Township, and Wesleyville Borough.
- 4) Harrisburg air basin – The following political subdivisions in Cumberland County: Camp Hill Borough, East Pennsboro Township, Lemoyne Borough, New Cumberland Borough, West Fairview Borough, Wormleysburg Borough, and the political subdivisions in Dauphin County of the City of Harrisburg, Highspire Borough, Lower Swatara Township, Middletown Borough, Paxtang Borough, Royalton Borough, Steelton Borough, Susquehanna Township, and Swatara Township.
- 5) Johnstown air basin – The political subdivisions in Cambria County of Brownstown Borough, Conemaugh Township, Daisytown Borough, Dale Borough, East Conemaugh Borough, East Taylor Township, Ferndale Borough, Franklin Borough, Geistown Borough, City of Johnstown, Lorain Borough, Lower Yoder Township, Middle Taylor Township, Southmont Borough, Stoneycreek Township, Upper Yoder Township, West Taylor Township, and Westmont Borough.
- 6) Lancaster air basin – The political subdivisions in Lancaster County of East Petersburg Borough, City of Lancaster, Lancaster Township, Manheim Township, and Millersville Borough.
- 7) Lower Beaver Valley air basin – All of Beaver County except for the following political subdivisions: Darlington Borough, Darlington Township, Economy Borough, Frankfort Springs Borough, Franklin Township, Hanover Township, Independence Township, Marion Township, New Sewickley Township, and South Beaver Township.

8) Monongahela Valley air basin – The following political subdivisions in Fayette County: Belle Vernon Borough, Brownsville Borough, Brownsville Township, Fayette City Borough, Jefferson Township, Nowell Borough, and Washington Township; the following political subdivisions in Washington County: Allenport Borough, California Borough, Carroll Township, Charleroi Borough, Coal Center Borough, Donora Borough, Dunlevy Borough, Elco Borough, Fallowfield Township, Finleyville Borough, Long Branch Borough, Monongahela City, New Eagle Borough, North Charleroi Borough, Roscoe Borough, Speers Borough, Stockdale Borough, Twilight Borough, Union Township, and West Brownsville Borough; and the following political subdivisions in Westmoreland County: Monessen City, North Belle Vernon Borough, Rostraver Township, and West Newton Borough.

9) Reading air basin – The political subdivisions in Berks County of Bern Township, Cumru Township, Kenhorst Borough, Laureldale Borough, Leesport Borough, Lower Alsace Township, Mohnton Borough, Mt. Penn Borough, Muhlenberg Township, City of Reading, Shillington Borough, Sinking Spring Borough, Spring Township, St. Lawrence Borough, Temple Borough, West Lawn Borough, West Reading Borough, Wyomissing Borough, and Wyomissing Hills Borough.

10) Scranton, Wilkes-Barre air basin – The political subdivisions in Lackawanna County of Archbald Borough, Blakely Borough, Dickson City Borough, Dunmore Borough, Jessup Borough, Moosic Borough, Old Forge Borough, Olyphant Borough, City of Scranton, Taylor Borough, Throop Borough, and the political subdivisions in Luzerne County of Ashley Borough, Avoca Borough, Courtdale Borough, Dupont Borough, Duryea Borough, Edwardsville Borough, Exeter Borough, Forty Fort Borough, Hanover Township, Hughestown Borough, Jenkins Township, Kingston Borough, Laflin Borough, Larksville Borough, Laurel Run Borough, Luzerne Borough, City of Nanticoke, City of Pittston, Pittston Township, Plains Township, Plymouth Borough, Plymouth Township, Pringle Borough, Sugar Notch Borough, Swoyersville Borough, Warrior Run Borough, West Pittston Borough, West Wyoming Borough, City of Wilkes-Barre, Wilkes-Barre Township, Wyoming Borough, and Yatesville Borough.

11) Southeast Pennsylvania air basin – The counties of Bucks, Chester, Delaware, Montgomery, and Philadelphia.

12) Upper Beaver Valley air basin – The following political subdivisions in Lawrence County: Bessemer Borough, Ellport Borough, Ellwood City Borough, Enon Valley Borough, Little Beaver Township, New Beaver Borough, City of New Castle, North Beaver Township, Shenango Township, South New Castle Borough, Taylor Township, Wampum Borough, and Wayne Township.

13) York air basin – The political subdivisions in York County of Manchester Township, North York Borough, Spring Garden Township, Springettsbury Township, West Manchester Township, West York Borough, and City of York.

Working Draft
Pequea Township On-Lot and Community Sewage Disposal
System Ordinance

TOWNSHIP OF PEQUEA

Lancaster County, Pennsylvania

ORDINANCE NO. _____

AN ORDINANCE TO REESTABLISH REGULATIONS CONCERNING THE LOCATION OF INITIAL AND REPLACEMENT INDIVIDUAL ON-LOT SEWAGE SYSTEMS WITHIN THE TOWNSHIP; ADOPTING THE PROVISIONS OF CHAPTERS 71, 72 AND 73 OF TITLE 25 OF THE PENNSYLVANIA CODE AS THE TOWNSHIP'S REGULATIONS FOR THE INSTALLATION OF AND ISSUANCE OF PERMITS FOR INDIVIDUAL ON-LOT SEWAGE SYSTEMS EXCEPT AS MODIFIED BY THIS ORDINANCE; REQUIRING THAT PERMITS BE OBTAINED PRIOR TO THE INSTALLATION OF AN INDIVIDUAL ON-LOT SEWAGE SYSTEM FOR ALL LOTS WITHIN THE TOWNSHIP REGARDLESS OF THE SIZE OF THE LOT; REQUIRING MAINTENANCE OF ALL INDIVIDUAL ON-LOT AND COMMUNITY SEWAGE DISPOSAL SYSTEMS; REQUIRING THAT REPORTS BE MADE TO THE TOWNSHIP; PROVIDING FOR PENALTIES AND REMEDIES FOR THE VIOLATION OF THIS ORDINANCE; PROVIDING PROCEDURES FOR THE ADMINISTRATION OF THE OLDS PROGRAM; PROVIDING THAT THE TOWNSHIP SHALL NOT WARRANT OR GUARANTEE THE FUNCTIONING OR MAINTENANCE OF ANY INDIVIDUAL ON-LOT SEWAGE SYSTEM INSTALLED PURSUANT TO THE TERMS OF THIS ORDINANCE; AND REQUIRING SEPTAGE HAULERS TO MAKE REPORTS AND PROVIDE INFORMATION TO THE TOWNSHIP.

BE AND IT IS HEREBY ORDAINED AND ENACTED by the Board of Supervisors of the Township of Pequea, Lancaster County, Pennsylvania, as follows:

Section 1) Title. This Ordinance shall be known and may be cited as the "Pequea Township On-Lot and Community Sewage Disposal System Ordinance".

Section 2) Legislative Intent. The Board of Supervisors recognizes that individual on-lot sewage disposal systems constitute a valid and approved manner of conserving the quality of the water and other natural resources of the Township through proper treatment of wastes generated by development within the Township. The use of individual on-lot sewage systems must be

regulated in accordance with the regulations promulgated by the Department of Environmental Protection which pertain to the location and permitted types of on-lot sewage disposal systems. In addition, the Township has determined that should the on-lot sewage system installed by a landowner fail, the water quality and other natural resources of the Township may be polluted. It is especially of concern to the Board that such pollution may occur when a system fails and there is no suitable area on the lot for the installation of a replacement system. Therefore, in order to protect the water quality and other natural resources of the Township, thereby protecting the health and welfare of residents and visitors, the Board of Supervisors desires to require that all landowners provide and set aside areas for the installation of replacement individual on-lot sewage disposal systems.

It is the further intent of the Board of Supervisors to insure that on-lot sewage disposal systems are properly maintained. Failure to maintain on-lot sewage disposal systems results in malfunctions which in turn results in the pollution of the water quality and other natural resources of the Township. On-lot sewage disposal systems should be pumped out on a regular basis, and it is the responsibility of all landowners to insure such maintenance is performed. In order to determine that the on-lot sewage disposal systems within the Township are properly maintained, the Township shall require that all septage haulers servicing on-lot sewage disposal systems within the Township shall file manifests with the Township concerning such service. The septage haulers shall also be required to report any malfunctioning on-lot sewage disposal systems to the Township.

The Board of Supervisors also desires to provide for the proper maintenance of the community disposal systems which have been installed in the Township. Proper maintenance of community sewage disposal systems is essential to preserve and protect the health and welfare of Township residents and to preserve and protect the environment.

Section 3) Adoption of Standards by Reference. A certain document, three (3) copies of which have been and are presently on file in the office of the Secretary of the Township of Pequea, being marked and designated as Chapters 71, 72, and 73 of Title 25 of the Pennsylvania Code, being promulgated by the Department of Environmental Protection of the Commonwealth of Pennsylvania, be and is hereby adopted as the sewage permit application and installation procedure of the Township and each and all of the regulations contained in the said Chapters are hereby adopted by the Township except as modified by this Ordinance. It is the intent of the Board of Supervisors to adopt all subsequent amendments and revisions to the said Chapters as permitted by law and in accordance with the provisions of 1 Pa. C.S. §1937(a). If such an intent is found invalid by a court of competent jurisdiction, it is the intent of the Board to adopt the said Chapters as they existed on the effective date of this Ordinance.

Section 4) Word Usage and Definitions.

1. Word Usage. In the interpretation of this Ordinance, the singular shall include the plural, and the masculine shall include the feminine and the neuter.
2. Definitions. All words and phrases not otherwise defined herein shall have the meaning provided in Section 2 of the Act, 35 P.S. §750.2, Section 71.1 of the

Department's Regulations, 25 Pa. Code §71.1, or Section 73.1 of the Department's Regulations, 25 Pa. Code §73.1.

ACT - The Pennsylvania Sewage Facilities Act, Act of January 24, 1966, P.L. (1965) 1535, No. 537, as amended, 35 P.S. §750.1 et seq.

BOARD - The Board of Supervisors of the Township.

COMMUNITY SEWAGE SYSTEM - Any system, whether publicly or privately owned, for the collection of sewage or industrial wastes of a liquid nature from two or more lots, and the treatment and/or disposal of the sewage or industrial waste on one or more of the lots or at any other site and which shall comply with all applicable regulations of the Department.

DEPARTMENT - The Department of Environmental Protection of the Commonwealth of Pennsylvania or any successor agency.

DEVELOPER - Any person who files a planning module for land development with the Township or who files an application for approval of a subdivision or land development plan proposing the subdivision or development of land within the Township; or who makes application for a permit; or who makes an application for a zoning permit under the Township Zoning Ordinance; or who installs, repairs, modifies, or alters an OLDS or community sewage system serving properties within this Township other than a governmental entity.

INDIVIDUAL ON-LOT SEWAGE DISPOSAL SYSTEM (OLDS) - Any system of piping, tanks, or other facilities serving on a single lot and collecting and disposing of sewage in whole or in part into the soil and any waters of the Commonwealth of Pennsylvania and which is located upon the lot which it serves.

LAND DEVELOPMENT - A land development as defined in the Pennsylvania Municipalities Planning Code, Act of July 31, 1968, P.L. 805, No. 247, as amended and reenacted, 53 P.S. §10101 et seq.

LOT - A parcel of land used or intended to be used as a building site or a separate parcel to be created as a result of approval of a subdivision or land development application or a condominium unit. The term lot shall include parcels equal to or greater than ten (10) acres in size where the lot may be occupied by one or more persons or families.

MALFUNCTION - The condition which occurs when an OLDS or community sewage disposal discharges sewage onto the surface of the ground, into ground waters of the Commonwealth, into surface waters of the Commonwealth, backs up into the building connected to the OLDS or community sewage disposal system or otherwise causes a nuisance hazard to the public health or pollution of ground or surface water or contamination of public or private drinking water wells. An OLDS or community

sewage disposal system shall be considered to be malfunctioning if any of the conditions set forth in this paragraph occur for any length of time during any period of the year.

MANIFEST - A written report made to the Township by a septage hauler providing service to an OLDS or a community sewage system within the Township which at a minimum contains the name and address of the septage hauler, the name of the property owner, the address of the property upon which the OLDS or community sewage system is located, a description of all services performed by the septage hauler, a statement of the depth of scum and sludge in the tank and percentage of scum and sludge, a statement concerning the condition of the tank and inlet and outlet baffles, the location at which any sewage or solids removed from the OLDS or community sewage system will be disposed, a description of the condition of the OLDS or community sewage system, a statement noting whether any malfunctions of the OLDS or community sewage system were observed, and a statement noting all maintenance or repairs to the OLDS or community sewage system performed. The manifest shall expressly state the condition of the baffles, whether the septage hauler informed the landowner that the baffles should be replaced, and whether the septage hauler replaced the deteriorated baffles.

OFFICIAL PLAN - A comprehensive plan for the provision of adequate sewage disposal systems adopted by the Township and approved by the Department in accordance with the Act and with applicable Department regulations.

PERMIT - A permit issued by the Sewage Enforcement Officer after the performance of tests to determine suitability to authorize the initial installation of an OLDS or the repair, replacement or enlargement of an existing OLDS.

PERSON - Any individual, association, partnership, public or private corporation whether for profit or not-for-profit, trust, estate, or other legally recognized entity. Whenever the term "person" is used in connection with any clause providing for the imposition of a fine or penalty or the ordering of the action to comply with the terms of this Ordinance, the term "person" shall include the members of an association, partnership or firm and the officers of any public or private corporation, whether for profit or not-for-profit.

PLANNING MODULE FOR LAND DEVELOPMENT - A revision to the Township Official Plan submitted in connection with the request for approval of a subdivision or land development in accordance with Department regulations.

PLANNING SUBMISSION - A planning module for land development with all components and information required by the Department or, if no planning module for land development is required to be approved by the Township by the Act or regulations of the Department prior to installation of an OLDS or community sewage system, a preliminary subdivision plan, preliminary land development plan, preliminary/final subdivision plan or preliminary/final land development plan prepared in accordance with the applicable subdivision and land development ordinance and the requirements of the Pennsylvania Municipalities Planning Code.

REPLACEMENT LOCATION - A location designated as the future location of an OLDS that shall be installed should the OLDS installed or to be installed fail or otherwise become inoperable and which shall meet all the regulations of the Department and all applicable Township ordinances for an OLDS.

SEPTAGE HAULER - Any person licensed by the Lancaster County Solid Waste Management Authority, the Department or other governmental agency to remove septage or other solids from treatment tanks of OLDS or community sewage disposal systems, holding tanks, privies, aerobic tanks, cesspools, or any other sewage disposal facility within the Township.

SEWAGE - Any substance that contains any of the waste products or excrement or other discharge from the bodies of human beings or animals and any noxious or deleterious substances being harmful or inimical to the public health or to animals or aquatic life or to the use of water for domestic water supply or for recreation or which constitutes pollution under The Clean Streams Law.

SEWAGE ENFORCEMENT OFFICER - The Sewage Enforcement Officer of the Township.

SINGLE AND SEPARATE OWNERSHIP - The ownership of a lot by one or more persons which ownership is separate and distinct from that of any abutting or adjoining lot.

SUBDIVISION - A subdivision as defined by the Pennsylvania Municipalities Planning Code, Act of July 31, 1968, P.L. 805, No. 247, as amended and reenacted, 52 P.S. §10101 et seq.

THE CLEAN STREAMS LAW - Act of June 22, 1937, P.L. 1987, No. 394, as amended, 35 P.S. §691.1 et seq.

TOWNSHIP - The Township of Pequea, Lancaster County, Pennsylvania.

Section 5) Procedure for Review of Planning Modules for Land Development and Subdivision/Land Development Plans. In order to insure compliance with the Official Plan, all developers who request approval of planning modules for land development or who request the review of subdivision plans, and land development plans providing for sewage disposal shall submit a planning submission to the Township for review in accordance with the following requirements:

1. The developer shall submit the planning submission to the Township. The developer shall submit the number of copies of the planning submission required by the Township, which shall at a minimum include complete copies for the Township files, the Board of Supervisors, the Township Planning Commission, the Environmental Advisory Council and the Sewage Enforcement Officer. The Township shall may refer the

planning submission to the Township Planning Commission, the Environmental Advisory Council and the Sewage Enforcement Officer for review of the planning submission to determine compliance with the Official Plan, this Ordinance, and all other applicable Township ordinances and regulations at least sixty (60) days prior to the meeting at which the Board of Supervisors will review the planning submission.

2. It is the responsibility of the developer to submit the planning submission to all other reviewing agencies, including but not limited to the Lancaster County Planning Commission, in accordance with the Department's regulations. It is the responsibility of the developer to pay for the publication of any legal advertisement of the planning submission which may be required by the Department's regulations. Failure of the developer to pay the costs of legal advertisement within fifteen (15) days after receipt of a copy of the newspaper's invoice shall render the planning submission incomplete.

3. The developer shall submit a written report detailing the planning and decision making steps used in the selection of the method of sewage disposal. This narrative description shall address all of the requirements of Section 6 of this Ordinance.

4. Any developer who applies for approval of a planning submission shall submit an Environmental Impact Assessment prepared in accordance with the requirements of Section 12 of this Ordinance to the Township Planning Commission and Environmental Advisory Council with the planning submission unless the planning submission proposes that sewage disposal shall be provided through a community sewage system operated by a governmental entity.

5. The Sewage Enforcement Officer shall decide within ten (10) days from the date of submission whether the planning submission is complete; provided, however, that the failure to return a planning submission to a developer within the ten (10) days period shall not be deemed an acknowledgment by the Township that the application meets the requirements of this Ordinance or the regulations of the Department. The Sewage Enforcement Officer shall prepare a review of the general site suitability and provide guidance to the Township Planning Commission and Board of Supervisors within twenty (20) days of receipt of a complete submission.

Section 6) Planning Policies and Methodology. All developers within the Township shall design sewage disposal systems in accordance with the planning policies and methodology set forth in this Section. The developer shall include a narrative with any planning submission which shall demonstrate the procedure used by the developer in determining the sewage disposal facilities proposed for the development. If the developer is not required to submit a planning submission, the developer shall present information sufficient to demonstrate compliance with this Section with his or her application to the Sewage Enforcement Officer for a permit to install, repair, alter or modify an OLDS.

1. The Township encourages use of OLDS wherever feasible and economical outside of the present and future public sewer service area as defined by the Official Plan of the Township. Developers shall use outside of the public sewer service area planning

policies which foster the non-sewer approach and the conservation of groundwater resources. At a minimum, the developer shall address the following Township policies:

A. Establish OLDS and community sewage disposal system ownership and maintenance responsibilities with the individual lot owner, a homeowners' association, condominium unit owners' association or the developer.

B. Provide water conservation and waste flow reduction by the use of water-saving devices and other state of the art water conservation methods for all new construction and the replacement of any components of existing structures.=0A

C. Recycle wastewater by relying upon OLDS for groundwater recharge via subsurface disposal of treated wastewater.

D. Restrict elevated sand mound systems in accordance with Chapter 73 of the Department's regulations where possible.

E. Restrict subsurface community sewage disposal systems to resolution of sewage related problems of existing structures.

2. The methodology for selecting and evaluating specific OLDS shall be a progressive multi-step process. The developer may consider and evaluate a community sewage system outside of the public sewer areas established by the Official Plan only when individual OLDS are not feasible.

A. Evaluate individual OLDS. The approved individual wastewater treatment systems within the Township are septic tanks, aerobic treatment units, spray irrigation systems and, if no other method is feasible, individual stream discharge systems. These treatment methods may be used with the various effluent treatment and disposal methods outlined below:

(1) Conventional subsurface absorption system. If a site is suitable in accordance with Department regulations for conventional sewage disposal systems such as a septic or aerobic tank with an absorption area (standard trench, seepage bed, subsurface sand filter or elevated sand mounds), the appropriate combination of wastewater treatment and effluent disposal system shall be selected as the most cost-effective OLDS.

(2) Conventional spray irrigation or stream discharge system. If a site is suitable in accordance with Department regulations for a conventional spray irrigation or individual stream discharge system, and if the site is not suitable for a conventional subsurface absorption system, the appropriate combination of wastewater treatment and effluent disposal system shall be selected.

(3) Alternate systems. The developer shall evaluate alternate systems if there are inadequate soils or other concerns on the site that prevent the use of conventional septic systems. These systems shall use technology that has been proven successful. The design of the alternate system shall be approved in accordance with the regulations of the Department and the Act.

(4) Experimental systems. The Township does not encourage experimental systems. A developer may propose the use of an experimental system only in areas where other alternatives are not available. The developer shall submit all documentation required for approval of the experimental system in accordance with the regulations of the Department and the Act. Testing, monitoring and permitting of these systems shall comply with the requirements of the Department.

B. Replacement Location. The developer shall provide a replacement location for each OLDS set forth above unless such OLDS is being installed to address an existing malfunction and no replacement location is available or unless the developer obtains a waiver from the requirement to provide a replacement location in accordance with the provisions of this Ordinance.

C. Examine combined individual and community systems. As a remedial action, a developer may propose the linking of existing, malfunctioning OLDS to a new development to solve the malfunctioning condition.

D. Examine community sewage systems. The developer may evaluate community sewage systems only if it is not feasible to provide for sewage disposal through OLDS. The developer shall provide on-site or off-site wastewater treatment. The developer shall review each collection alternative and shall select an effluent disposal method from the various alternatives. Community sewage systems shall be utilized only for correction of sewage related problems of existing OLDS or community sewage systems unless the community sewage system is operated by a governmental entity in accordance with the Township Official Plan.

3. The developer shall evaluate the construction cost, operation and maintenance costs, and environmental impacts of each method of sewage disposal and shall choose the most appropriate for maintenance of water quality. The developer shall present the evaluation to the Township as part of its planning submission.

Section 7) Sewage Testing Required for all Proposed Lots. After the effective date of Ordinance No. 82 (March 12, 1990), no requests for approvals of planning modules for land development and no revisions or supplements to the Official Plan shall be granted by the Board unless the applicant presents to the Board evidence that each lot or lot to be created contains a suitable location for the installation of an initial OLDS except when such lots or lots to be created are to be served by a community sewage system. All tests required by the Department

and this Ordinance for the location of an OLDS to confirm the suitability of the location shall be performed as approved by the Department.

Section 8) Replacement Location for On-lot Sewage Disposal Systems Required. After the effective date of Ordinance No. 82 (March 12, 1990), a Replacement Location for an OLDS shall be required for all lots or lots to be created which are not serviced or to be serviced by a community sewage system operated by a governmental entity or for which a valid permit for an OLDS has not been issued. The Replacement Location shall comply with the Act and with all regulations issued by the Department as incorporated into this Ordinance concerning OLDS, including isolation distances, and with the terms of this Ordinance and any other applicable Township ordinances.

Section 9) Identification of Replacement Location.

A. Each person who shall apply for a permit under the Township Zoning Ordinance or a permit for an OLDS or who shall request approval of a planning module for land development or the adoption of a revision or supplement to the Official Plan shall demonstrate to the satisfaction of the Sewage Enforcement Officer that a suitable area exists on the lot or on each lot to be created for an initial OLDS and for the Replacement Location. All tests required by the Department and this Ordinance for the location of an OLDS to confirm the suitability of the Replacement Location shall be performed as approved by the Department. Allowance of open land for the Replacement Location without testing performed or observed by the Sewage Enforcement Officer shall not constitute compliance with the requirements of this Section.

B. The developer shall identify the location of the initial OLDS and the Replacement Location as confirmed by the Sewage Enforcement Officer on the plot plans and diagrams submitted as a part of the permit application.

C. If the application has been submitted as a part of an application for approval or review of a planning submission, the developer shall identify the location of each OLDS and each Replacement Location upon the plans. If the application is for subdivision or land development approval, the developer shall include a note on the plans stating that no improvements shall be constructed upon the Replacement Location, and the deed to each lot created as a part of the subdivision or land development shall contain language reflecting this limitation.

D. Any revisions to a permit or plan affecting a Replacement Location which previously has been approved pursuant to the provisions of this Ordinance or Ordinance No. 82 shall be approved by the Board or its authorized representative.

Section 10) Construction of Improvements upon Replacement Location Prohibited. No person shall construct or install any permanent or temporary improvements of any character other than the planting of trees, shrubs, or other plant matter upon the Replacement Location unless the person who desires to construct such improvements shall demonstrate to the satisfaction of the Sewage Enforcement Officer that an alternate Replacement Location which

complies with all applicable regulations of the Department, this Ordinance and all other applicable Township ordinances exists upon the lot. If such an alternate Replacement Location shall be identified, the alternate Replacement Location may be considered to be the Replacement Location required by this Ordinance and shall be designated as the Replacement Location. The newly designated Replacement Location shall thereafter be considered the Replacement Location for the purposes of this Ordinance.

Section 11) Relief from Requirement of Designation of Replacement Location. If any lot held in single and separate ownership as of the effective date of Ordinance No. 82 of the Township (March 12, 1990) shall not contain land suitable for a Replacement Location, the applicant for a permit under the Township Zoning Ordinance or an installation permit for an OLDS may request that the Board grant an exception to the requirement of providing a Replacement Location. Applicants for relief under this Section shall submit a written application setting forth the information required by this Section and shall include the application fee established by resolution or ordinance of the Board of Supervisors. The applicant for such an exception shall present credible evidence to the Board demonstrating (i) that the lot was held in single and separate ownership on the effective date of Ordinance No. 82; (ii) the size of the lot; (iii) inability of the applicant to acquire adjacent land or the unsuitability of adjacent land which might be able to be acquired; and (iv) the testing conducted to determine that the lot is not suitable to provide a Replacement Location. At all times the burden to present credible evidence and the burden of persuasion shall be upon the applicant for an exception from the terms of this Ordinance.

Section 12) Environmental Impact Assessment. After the effective date of Ordinance No. 82 (March 12, 1990), the Board shall not consider any requests for approvals or reviews of planning submissions unless the applicant presents to the Board data sufficient to determine the impact upon the environment of the proposed development. The Board shall use this information in assessing the planning submission and any request for approval of a planning module for the land development and any requested revision or supplement to the Official Plan. Each applicant shall submit the following information to the Board for review by the Board, the Township Engineer, the Township Planning Commission, Sewage Enforcement Officer, the Township Environmental Advisory Council and/or such other persons as the Board may determine:

1. A location map showing the entire tract and its relation to the surrounding area, drawn on a scale of one thousand (1,000) feet to the inch.=0A
2. A plan of the entire tract with the information required by this Section noted thereon which shall be at a scale of ten (10) feet, twenty (20) feet, thirty (30) feet, forty (40) feet, fifty (50) feet, sixty (60) feet, eighty (80) feet or one hundred (100) feet to the inch.
3. Types of soils based upon the United States Department of Agriculture Soil Survey for Lancaster County.
4. Identification of all wells within a one-quarter mile radius which have been tested for nitrogen-nitrate contamination and the results of such tests.

5. All information necessary to enable the Township to determine whether the geology of the area proposed for the use of OLDS is conducive to nitrate-nitrogen ground water contamination.

6. Sufficient elevations and/or contours to determine the general slope and natural drainage of the land. Contours shall ordinarily be shown at intervals of five (5) feet but may be at lesser intervals in the case of relatively level tracts.

7. Data to which contour elevations refer. Where practicable, such data shall refer to known established elevations.

8. The location of all existing floodplains, wetlands, watercourses, railroads, areas of subsidence, wooded area (marking all wooded area to be cleared), bridges, culverts, and other significant natural features on the tract and with two hundred (200) feet of the tract.

9. Identification of all high quality or exceptional value watersheds established under Department regulations and policies promulgated under The Clean Streams Law.

10. The location of all streets, adjoining tracts and buildings within two hundred (200) feet of the tract.

11. Plans for the treatment and disposal of sewage and for the provision of a domestic water supply. The plan shall reflect a 100 foot well arc.=0A

12. Location of all proposed land uses, including but not limited to residential uses by types.

13. Size and intensity of use data, including the number of residential and nonresidential lots, lot sizes, and the number and type of dwelling units.

14. Data relevant to the occurrence of flooding, subsidence, land slides, and other geological hazards within and adjacent to the tract.

15. A detailed description of the methods which will be used to promote storm water management and control of storm water drainage. This information shall include calculations for storm water run-off as required by the applicable subdivision and land development ordinance.

16. Proposed utilities including water lines or wells, storm sewers, electric and other facilities indicating the size or capacity of each.

17. A preliminary erosion and sedimentation control plan pursuant to the rules and regulations of the Department.

18. Where slopes in excess of ten percent (10%) occur within the tract, a preliminary grading plan indicating the general location and magnitude of the proposed cuts and fills.

Section 13) Permit Required for All Lots. The landowner and any contractor performing work upon an OLDS shall obtain a permit from the Sewage Enforcement Officer in accordance with the Act, the regulations of the Department, and this Ordinance prior to the installation, alteration, modification, repair or replacement of any OLDS. This requirement shall apply to all lots within the Township regardless of the size of the lot and regardless of the familial relationship of the person seeking to install the OLDS to the property owner. The Sewage Enforcement Officer shall not issue a permit for an OLDS until a suitable Replacement Location has been established or until the applicant presents the Sewage Enforcement Officer with a written determination by the Board of Supervisors granting relief from the designation of a Replacement Location in accordance with Section 11 of this Ordinance or unless such permit is requested to repair a malfunction of an existing OLDS.

Section 14) Permit Requirements and Procedures. All landowners, developers and contractors who desire to install, repair, modify or alter an OLDS in the Township shall obtain a permit from the Sewage Enforcement Officer prior to the commencement of such work. All work performed under any permit shall comply with the following regulations:

1. The holder of a permit and the contractor performing work under such permit shall notify the Sewage Enforcement Officer at least three working days before commencing installation, repair, modification or alteration of the OLDS in order that one or more inspections in addition to the final inspection required by the Department may be scheduled and performed by the Sewage Enforcement Officer.

2. Any OLDS permit providing for the installation or repair of a septic tank shall require that the septic tank contain septic solid retainers of the type as specified by the Department's regulations. This is to obtain the highest quality effluent.

3. If construction or installation of the OLDS and of any building or structure for which such OLDS is to be installed has not commenced within three years after the issuance of the permit for such OLDS, the permit shall expire. The landowner and/or contractor shall obtain a new permit prior to commencement of the installation, repair, modification, replacement or alteration of the OLDS.

Section 15) Proper Operation and Maintenance of OLDS Required. All persons who own a lot upon which an OLDS is installed or who occupy a lot on which an OLDS is installed shall properly use and maintain such OLDS. Proper maintenance of an OLDS shall include, at a minimum:

1. Retention of a septage hauler to inspect the OLDS at least once during each period of three (3) calendar years in accordance with the schedule established by this Section, and, if the inspection demonstrates that the treatment tank is filled with solids (sludge and/or scum) in excess of twenty-five (25%) percent the liquid depth of the tank,

or if the occupant of the property uses a garbage disposal or takes such other action which provides increased usage of the system, to remove septage at that time. In addition, the property owner shall also retain a septage hauler to remove septage whenever an inspection reveals that the treatment tank is filled with solids (sludge and/or scum) in excess of twenty-five (25%) percent of the liquid depth of the tank or when the occupant of the property uses a garbage disposal or takes such other action which provides increased usage of the system, whichever shall require the more frequent removal. It is the responsibility of the property owner to insure that septage is removed from the tank of the OLDS in accordance with the requirements of this Section. No person other than a septage hauler shall be permitted to remove septage from the tank of an OLDS or to otherwise dispose of any septage or any other substance within an OLDS.

A. After the effective date of this Ordinance, the Township shall be divided into three sections. All property owners shall be notified by the Township of the section to which the property is assigned.

B. The owner of a lot containing an OLDS which is located within Section 1 of the Township shall have an inspection of the OLDS and septage removed from the tank of the OLDS as indicated in Section 15(1) above within twelve (12) months from the effective date of this Ordinance. Notwithstanding the foregoing, if a property owner can provide proof to the Township that such OLDS had septage removed from its tank within the twenty-four (24) month period preceding the effective date of this Ordinance, the OLDS will not have to have septage removed within twelve months from the effective date of this Ordinance and the date of the removal of the septage shall be considered the date of initial maintenance for the purpose of Section 15(1)(E) herein.

C. The owner of a lot containing an OLDS which is located within Section 2 of the Township shall have an inspection of the OLDS and septage removed from the tank of the OLDS as indicated in Section 15(1) above within twenty-four (24) months from the effective date of this Ordinance. Notwithstanding the foregoing, if a property owner can provide proof to the Township that such OLDS had septage removed from its tank within the twelve (12) month period preceding the effective date of this Ordinance, the OLDS will not have to have septage removed within twenty-four (24) months from the effective date of this Ordinance and the date of the removal of the septage shall be considered the date of initial maintenance for the purpose of Section 15(1)(E) herein.

D. The owner of a lot containing an OLDS which is located within Section 3 of the Township shall have an inspection of the OLDS and septage removed from the tank of the OLDS as indicated in Section 15(1) above within thirty-six (36) months from the effective date of this Ordinance.

E. The date upon which any OLDS has an inspection and, if necessary, septage removed in accordance with Section 15(1)(B) through (D) herein shall be considered the date of initial maintenance. All property owners shall have an

inspection and, if necessary, septage removed from an OLDS in accordance with this Section within three (3) years from the date of initial maintenance. The property owner shall continue to have an inspection and, as necessary, septage removed from the OLDS within three (3) years from the date of the last inspection as long as the OLDS continues to be used for sewage disposal.

F. For OLDS installed after the effective date of the Ordinance, the property owner must have an inspection and, if necessary, septage removed from the OLDS within three (3) years from the date of final inspection of the OLDS or, in the case of new construction, if the property will not be occupied within one month from the date of final inspection of the OLDS, within three (3) years from the date of the issuance of the certificate of use and occupancy by the Zoning Officer. The property owner shall continue to have inspections and, as necessary, septage removed from the OLDS within three (3) years from the date of the last inspection as long as the OLDS continues to be used for sewage disposal.

2. When the inspection of the septage hauler reveals that the inlet or outlet baffles are in a deteriorated condition, the property owner shall be responsible to immediately replace the deteriorated baffles with sanitary tees. The septage hauler shall inform the property owner of the property owner's responsibility to replace the deteriorated baffles. The manifest submitted by the septage hauler shall expressly state the condition of the baffles, whether the septage hauler informed the landowner that the baffles should be replaced, and whether the septage hauler replaced the deteriorated baffles.

3. Maintenance of surface contouring and other measures consistent with the regulations of the Department to divert storm water away from the treatment facilities and absorption areas and to protect the absorption areas from physical damage.

4. Following any operation and maintenance recommendations of the manufacturer of the OLDS.

5. Discharging only domestic sanitary sewage into an OLDS. The following types of waste shall not be discharged into an OLDS:

A. Industrial waste.

B. Automobile oil, other non-domestic oil, grease, nonbiodegradable soaps, detergents and/or inert materials such as coffee grounds.

C. Toxic or hazardous substances or chemicals including but not limited to pesticides, disinfectants, acids, paints, paint thinners, herbicides, gasoline and other solvents.

D. Clean surface or ground water, including water from roof or cellar drains, springs, basement sump pumps, and french drains.

E. Vehicle wash water and other potentially contaminated or clean run off or storm water.

F. Disposable products such as diapers, tampons, and similar materials.

G. Beauty shop waste other than a single chair beauty shop in conjunction with a residential use.

H. Abattoir or butcher shop waste.

Section 16) Reporting of Malfunctioning OLDS or Community Sewage System. Any person who owns a lot upon which an OLDS or community sewage system is installed, any person who occupies a lot upon which an OLDS or community sewage system is installed and any septage hauler pumping out or otherwise maintaining an OLDS or community sewage system shall report any malfunctioning of such OLDS or community sewage system to the Township. Such report shall be made as soon as possible but in no case later than three (3) days after discovery of the malfunction.

Section 17) Registration of Septage Haulers Required. Each septage hauler who performs maintenance upon an OLDS or community sewage system within the Township, including but not limited to pumping out the OLDS or community sewage system, shall annually register with the Township. Such registration shall include the name, address and telephone number of the hauler, whether the hauler has been licensed by Lancaster County Solid Waste Management Authority, and the location(s) at which the hauler proposes to dispose of septage collected in the Township and shall be valid for the calendar year. A septage hauler may register for the next succeeding calendar year in December of each calendar year. The septage hauler shall pay the annual registration fee imposed by ordinance or resolution of the Board of Supervisors at the time of registration. No person other than a septage hauler who has registered with the Township for the calendar year shall be permitted to remove septage from or maintain any OLDS or community sewage systems in the Township.

Section 18) Reports Required. Each septage hauler who performs maintenance upon an OLDS or community sewage system within the Township, including but not limited to pumping out the OLDS or community sewage system, shall file a manifest with the Township for each OLDS or community sewage system serviced within the Township within three (3) weeks of the date of such maintenance.

Section 19) Proper Operation and Maintenance of Community Sewage Systems Required. All persons who own a lot which is served by a community sewage system shall properly use such community sewage system. The owner of the community sewage system shall properly maintain the community sewage system. Proper maintenance of a community sewage system shall include at a minimum:

1. Inspection of the community sewage system by the Township Sewage Enforcement Officer or by a sewage enforcement officer certified by the Department on a bi-monthly basis. If the inspection is performed by a sewage enforcement officer other

than the Township Sewage Enforcement Officer, the property owner shall submit the inspection report prepared and signed by the sewage enforcement officer to the Township within one month after the date of inspection of the community sewage system. All laboratory analyses required to be submitted by the Department or the Department's regulations shall also be submitted simultaneously to the Township to be reviewed as appropriate by the Sewage Enforcement Officer or his designee.

2. Removal of septage or sludge in accordance with Department regulations and manufacturer specifications.

3. Maintenance of surface contouring and other measures consistent with the regulations of the Department to divert storm water away from the treatment facilities and absorption areas and to protect the absorption areas from physical damage.

4. Following any operation and maintenance recommendations of the manufacturer of the community sewage system.

5. Requiring that all users of the community sewage system discharge only domestic sanitary sewage into the community sewage system. The owner of the community sewage system shall inform all users of the community sewage system that the types of waste described in Section 15(5) of this Ordinance shall not be permitted to be discharged.

Section 20) Duties of Sewage Enforcement Officer. In addition to all other duties of the Sewage Enforcement Officer set forth in this Ordinance, the Sewage Enforcement Officer shall have the power and duty to enforce the provisions of this Ordinance and to investigate any reports of malfunctioning OLDS and community sewage system or evidence that an OLDS or community sewage system may be malfunctioning which the Sewage Enforcement Officer discovers. In performing these duties the Sewage Enforcement Officer shall have the following powers:

1. To conduct routine inspections of properties upon which OLDS or community sewage systems are installed as part of an administrative program to insure compliance with this Ordinance. Any inspections shall be performed in accordance with all applicable statutes and constitutional provisions.

2. To make reports as requested by the Board regarding maintenance of OLDS and community sewage systems in the Township and to suggest actions which may be taken by the Board to insure proper maintenance.

3. To consult with the Township Engineer and the Township Solicitor, as authorized by the Board, to assist in the enforcement of this Ordinance.

Section 21) Penalties. For each violation of the provisions of this Ordinance, the owner, developer, agent or contractor performing construction or maintenance, repair, alteration, or modification of an OLDS or community sewage system; the owner of the lot upon where such violation shall exist; and/or the owner, agent, lessee, or contractor or any other person who

commits, takes part in, or assists in any such violation; or the owner of a lot upon which an OLDS or community sewage system is installed and who fails to maintain such OLDS or community sewage system shall be liable on conviction thereof in a summary proceeding to pay a fine of not less than two hundred (\$200.00) dollars nor more than six hundred (\$600.00) dollars for each offense, together with the costs of prosecution. In default of payment of such fine, such person shall be liable to imprisonment for a period not exceeding thirty (30) days.

Section 22) Remedies. In case any improvement is constructed or any lot maintained in violation of this Ordinance, or any OLDS is installed, repaired, altered or modified prior to obtaining a permit as required by this Ordinance, or any OLDS or community sewage system is not properly maintained or the malfunction of any OLDS or community sewage system is not reported to the Township, in addition to the other remedies provided by law, the Township may commence any appropriate action or proceedings in equity to prevent such unlawful construction of improvements or such unlawful maintenance of such lot or the continued use of such OLDS or community sewage system.

Section 23) Declaration of Nuisance. The following activities are hereby declared to be nuisances:

1. Construction of improvements on the Replacement Location. Such construction renders the Replacement Location useless and therefore jeopardizes the water quality and other natural resources of the Township. This harm to the water quality and other natural resources of the Township is a danger to the health, safety and welfare of the residents of the Township and is hereby declared to be a nuisance and abatable as such in accordance with the provisions of the Second Class Township Code, Act of May 1, 1933, P.L. 103, §702 cl. XII and LI, as amended, 53 P.S. §§65712 and 65751.
2. Installation, alteration or modification of an OLDS without having obtained a permit as required by this Ordinance and the regulations of the Department, or, if a permit was obtained in a manner which violates the terms of the permit.
3. Failure to maintain an OLDS or community sewage system as required by this Ordinance.

All of these actions result in pollution of the waters of the Commonwealth and other natural resources of the Township and constitute a danger to the health, safety and welfare of Township residents. The actual expenses of the Township in the abatement of such nuisances plus an additional twenty-five (25%) percent of such expenses shall be filed as a municipal claim against the property.

Section 24) Waiver of Liability. Although this Ordinance is intended to provide guidelines for the installation and maintenance of a replacement location for OLDS, nothing contained herein shall be interpreted as a guarantee or warranty to applicants or other Township residents that systems installed under the provisions of this Ordinance will function as intended. The Township assumes no responsibility for the location and/or maintenance of OLDS within the Township.

Section 25) Appeals. Appeals from any action of the Sewage Enforcement Officer under this Ordinance shall be made in writing to the Board of Supervisors within fifteen (15) days from the date of the written determination of the Sewage Enforcement Officer. All appeals shall be accompanied by the appeal fee established by resolution or ordinance of the Board of Supervisors.

1. The written appeal shall specify the precise action from which the appeal is taken and shall set forth in concise terms the reason for the appeal and any legal authorities supporting the appeal period.

2. If the appellant desires a hearing before the Board of Supervisors, the appellant must request a hearing in the written appeal.

3. If a hearing is requested in writing, the Board of Supervisors shall conduct the hearing at a regular or special public meeting which occurs not less than fourteen (14) days after receipt of the written appeal. The hearing shall be conducted in accordance with the provisions of the Local Agency Law, 2 Pa. C.S. §551 et seq.

4. The Board of Supervisors shall render a decision on the appeal in accordance with the provisions of the Local Agency Law.

Section 26) Severability. The provisions of this Ordinance are severable, and if any section, sentence, clause, part or provision hereof shall be held to be illegal, invalid or unconstitutional by any court of competent jurisdiction, such decision of the court shall not affect or impair the remaining sections, sentences, clauses, parts or provisions of this Ordinance. It is hereby declared to be the intent of the Board of Supervisors that this Ordinance would have been enacted if such illegal, invalid or unconstitutional section, sentence, clause, part or provision had not been included herein.

Section 27) Repeals. Ordinance No. 82 of the Township of Pequea and all amendments to Ordinance No. 82 are hereby repealed and replaced by this Ordinance. Notwithstanding the foregoing, it is expressly provided that the provisions of Ordinance No. 82, as amended, may continue to be applicable to subdivision and land development plans submitted prior to the effective date of this ordinance to the extent protected by Section 508 of the Pennsylvania Municipalities Planning Code. In the event that any violation has occurred under Ordinance No. 82, as amended, the Township may institute enforcement proceedings pursuant to the provisions of Ordinance No. 82, as amended, and the provisions and penalties set forth in Ordinance No. 82, as amended, shall remain effective as to said violation, including but not limited to any violations which occur after the effective date of this Ordinance relating to development or a subdivision plan governed by Ordinance No. 82 in accordance with Section 508 of the Pennsylvania Municipalities Planning Code.

Section 28) Effective Date. This Ordinance shall take effect and be in force five (5) days after its enactment by the Board of Supervisors of the Township of Pequea as provided by law.

DULY ORDAINED the _____ day of _____, 1995, by the Board of Supervisors of the Township of Pequea, Lancaster County, Pennsylvania, in lawful session duly assembled.

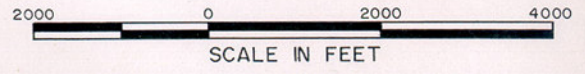
TOWNSHIP OF PEQUEA
Lancaster County, Pennsylvania

Attest: _____
(Assistant) Secretary

By: _____
(Vice) Chairman
Board of Supervisors

[TOWNSHIP SEAL]

NITRATE LEVELS



GANNETT FLEMING ENVIRONMENTAL ENGINEERS, INC.
HARRISBURG, PENNSYLVANIA

LEGEND

