

THE

BIRMINGHAM TOWNSHIP

COMPREHENSIVE

PLAN

2015

Birmingham Township Comprehensive Plan, 2015

TABLE OF CONTENTS

Introduction

PAGE

Introduction-1

Chapter One: Background/Planning Process

Chapter One-1-3

Chapter Two: Existing Conditions

Section 1: Introduction

Chapter Two-1

Section 2: Existing Land Use

Chapter Two-2-3

Section 3: Pattern of Change

Chapter Two-4

Section 4: Natural Resources

Chapter Two-5-9

Section 5: Cultural, Historic and Landscape Resources

Chapter Two-10-13

Section 6: Results of the 2013 Resident Survey

Chapter Two-14

Section 7: Population, Housing and Employment

Chapter Two-14-16

Section 8: Holding Capacity

Chapter Two-16

Section 9: Circulation

Chapter Two-16-19

Section 10: Community Facilities

Chapter Two-19-21

Chapter Three: Management Plan

Section 1: Introduction

Chapter Three-1-2

Section 2: Goals, Objectives and Policies

Chapter Three-2-4

Section 3: Land Use Plan

Chapter Three-5-10

Section 4: Circulation Plan

Chapter Three-11-13

Section 5: Housing Plan

Chapter Three-13-16

Section 6: Community Facilities Plan

Chapter Three-16-18

Section 7: Cultural, Historic and Landscape
Resources Conservation Plan

Chapter Three-18-20

Section 8: Utilities Plan

Chapter Three-20-21

Section 9: Environmental Protection Plan

Chapter Three-21-26

Chapter Four: Implementation Plan – First Three Years

Chapter Four-1-5

Appendix

Table 1: Birmingham Township Resident Survey 2013

Appendix-1

Table 2: From US Census, 2010

Appendix-2

Table 3: Housing Units

Appendix-2

Maps and Figures: See attached

Location of Birmingham Township

Figure 1

Existing Land Use

Figure 2

Land Development 2000-2013

Figure 3

Composite Constraints

Figure 4

Holding Capacity

Figure 5

Road Functional Classification

Figure 6

Central Water Availability

Figure 7

Central Sewer Service Area

Figure 8

Land Use Plan

Figure 9

Recommended Road Functional Classification

Figure 10

Introduction

The Comprehensive Plan for Birmingham Township has the potential to provide an effective planning tool that will support day-to-day decisions about future management of Birmingham Township, so that the Township Supervisors have a basis for those decisions, and at the same time move the township in a desirable direction that residents choose.

The process began in 2013 with a review of the 2000 Comprehensive Plan and a survey of resident's preferences in terms of what the township provides, today and should provide in the future. The Planning Commission accepted the responsibility for assembling the survey, collecting results and assessing the current state of the township.

Chapter One describes the planning process and Chapter Two describes the current state of Birmingham Township. Chapter Three provides the plan elements (component of the whole plan) and basis for those elements in the following sections: *The Land Use* section provides a description of existing land use patterns and their implications for future development. *The Pattern of Change* section presents an analysis of the minimal recent development activity in the township. *The Natural Resources* section provides a summary of environmental factors that are capable of affecting the location and intensity of the available land-limited future development. *Cultural, Historic and Landscape Resources* documents other environmental factors, some man-made, that are germane to the fact that development is nearly complete in Birmingham Township. *The Population, Housing and Employment* section reviews selected socio-economic characteristics of residents and employers, and data on housing development. Included are population and housing forecasts. *The Holding Capacity* section describes the supply of vacant or otherwise easily developable parcels of land in the municipality. *The Circulation* section assesses existing conditions regarding traffic and transportation, while the *Community Facilities* section analyzes services and facilities serving the township.

The descriptions in the *Cultural, Historic, and Landscape Resources* section are excerpts from Chapter 3 of Appendix 1 of the 2000 Birmingham Township Comprehensive Plan. This appendix includes a compelling description of the township's history. That Appendix 1 is also appended to this 2015 Comprehensive Plan and used as a reference.

This plan supports five broad Birmingham Township goals. These are:

- Maintain the rural-suburban atmosphere, consistent with the remaining opportunity for development and/or redevelopment
- Preserve historic resources and open space
- Protect environmentally sensitive areas
- Maintain necessary public services while maintaining a low tax rate
- Prepare for and comply with mandates, especially those for sewage and storm water management

Growth Trends and Issues

Birmingham Township is a geographically small municipality of only 6.4 square miles (4,000 acres) located in southern Chester County, generally between US route 202 on the east and Brandywine Creek on the west (Figure 1). The township lies on the north side of the Delaware County line at a distance of about four miles from the county seat in West Chester.

European settlement of the township began in 1684 when the first Quaker settlers moved into the area, although the formal establishment of the township did not occur until 1789, after the end of the Revolutionary War. It was the first township in Chester County.

The township was predominantly rural in character until the 1980s, although the township has, in fact, experienced rapid growth rates in three of the past five decades. In 1960, Birmingham Township had only 453 inhabitants, the smallest number of people residing in any township in Chester County. By 1970 the population had almost doubled to 834 and almost doubled again to 1,584 persons by 1980. Between 1980 and 1990, largely because of the development of the Radley Run subdivision, the population increased by 1,052 to 2636.

As of the year 2000, the population had increased by an additional 1,585 persons to 4,221 inhabitants, or by sixty percent in just ten years. The township's rapid population growth in percentages and in absolute numbers in the decade of the 1990s is generally attributed to continuing development of single-family detached dwellings in many locations in the municipality and the approval and construction of two large Planned Residential Developments (PRDs), both of which are located between US Route 202 and South New Street/Birmingham Road in the eastern part of the township. However, the township population decreased to 4,208 in the period from 2000 to 2010 (US Census).

By 2000 only two large tracts of land were still undeveloped. In the last fourteen years both of those large undeveloped tracts were preserved as permanent open space.

The township possesses essential resources and special characteristics. These include the many historic structures and sites located in the township dating back to the late seventeenth century and constitute, most importantly, much of the ground over which was fought the Battle of Brandywine in 1777. A large part of the battlefield area is included in a Historic District encompassing most of the village of Dilworthtown, located along the southern boundary of the township, and a wide corridor along Birmingham Road extending to the township's northern border with East Bradford Township. The battlefield area also extends in the east-west direction along either side of Meetinghouse Road in the central part of the municipality. In addition to the historic resources contained within the Historic District and the Meetinghouse Road corridor, there are many other significant historic buildings and sites along Brandywine Creek and along Wylie Road and Brintons Bridge Road in the south-central and southwestern part of the township.

The south-central part of the township is especially scenic and contains the last few plots of open space in parcels greater than 10 acres. In contrast, the area of the township north of Street Road (PA Route 926) in the township is dominated by the Radley Run development of large-lot, single-family detached dwellings that was built out in the 1980s. The area east of South New Street is occupied by Birmingham Hunt and The Knolls at Birmingham, two PRDs that were built in the 1990s.

The protection of historic resources and the preservation of the attractive scenic character of the south-central area of the township, especially the core of the area along Meetinghouse and Wylie Roads, were recognized as being of great importance to current residents of the township. Efforts to preserve the Brandywine Battlefield in the Meetinghouse Road corridor have been pursued cooperatively by local citizens, private conservation organizations, and township, county, state, and federal governments over the last 20 years. With funding from the four levels of government and conservation trusts, a conservation easement was acquired on a 100-acre property in the corridor and another 100-acre property in that corridor was purchased. Both of these effectively prevent development of these privately-held parcels. The Brandywine Battlefield preservation effort targets the remaining lands in the corridor for conservation easement acquisition (Figure 9).

In fact, the most important issue in the township at the present time may be the community's need and desire to retain an identity as a historic and semi-rural place, even while recognizing that substantial growth has taken place over the last forty years. To a large extent, maintaining the current collective identity of the township as an open, historic and agricultural landscape is dependent on preserving at least the core of the south-central of the township, including the Birmingham Road corridor. Real progress has been made in that respect and most of the work is completed.

Based on the recent resident survey to which 10% of township households responded, the only other issues that are significant to most adult residents is maintaining a quiet attractive environment and protection of environmentally-sensitive natural features.

Birmingham Township last prepared a comprehensive plan in 2000. The Comprehensive Plan document from that period, more than fourteen years old, did not reflect the fact that essentially no land is left for development of more than minor subdivisions.

The 2015 Comprehensive Plan

The purpose in preparing a new Comprehensive Plan is fourfold:

First, the data for the township has been focused in areas of need for BT and brought up to date. Chapter Two includes surveys of natural and cultural features, the current land-use pattern, the road system, and the systems of public services and utilities analyses and projections of population and housing, and an examination of the rate and types of change in the township over the last fourteen years.

Second, the Plan identifies the fact that the township is almost completely "built-out" and the unusual nature of the demographics of the township (example: median age of the adult population is 52).

Third, the Plan specifies the goals, policies, and individual elements that will form the basis for maintaining the character of the municipality identified as important to the residents.

Fourth, the Plan lays forth a specific implementation strategy and program to aid Birmingham Township in achieving the goals of the Plan.

Because of the importance of Birmingham Township's historic landscape and the significant historic resources extant in the community, the *2000 Comprehensive Plan* included an enhanced cultural resource component. Appendix 1 of the *2000 Comprehensive Plan* is the *Cultural Resources Plan* for Birmingham Township, with excerpts from it forming parts of Chapter Two (Section 5) and Chapter Three (Section 7) in the main body of the Plan. While the 2015 Comprehensive Plan uses that information, the *Cultural Resources Plan* is not included as part of the Plan. It is retained as a stand-alone document and retitled "Birmingham Township Cultural Resources". It includes some plan elements that are already completed and some that are no longer intended in BT's Comprehensive Plan.

Chapter One: Background/Planning Process

A Comprehensive Plan for Birmingham Township has the potential to provide an effective planning tool that will support day-to-day decisions about future management of Birmingham Township, so that the Township Supervisors may be thoroughly rational and consistent, and at the same time move the township in a desirable direction that residents choose.

A Comprehensive Plan for Birmingham Township should relate to the Chester County Comprehensive Plan, but at the same time must reflect the unique characteristics and setting of the municipality and the point of view of its residents. The Comprehensive Plan must also be responsive to the requirements of the Commonwealth of Pennsylvania's Municipalities Planning Code (MPC) as to content and the procedure for the preparation and adoption of municipal comprehensive plans.

The Comprehensive Planning Process

The process began in 2013 with a review of the 2000 Comprehensive Plan and a survey of resident's preferences in terms of what the township provides, today and should provide in the future.

The Planning Commission accepted responsibility for assembling the survey, collecting results and assessing the current state of the township. The Planning Commission members developed the future elements of the Comprehensive Plan. Outreach to BT commissions and volunteer organizations and BT residents continued through the planning process. The planning team has had several critical roles to play, including:

- Insuring the inclusion of the desires of township residents
 - The response to the resident survey was revealing in that there is a clear majority opinion on what Birmingham Township should remain and what needs to be done to meet resident needs.
- Assisting with meeting MPC requirements, supported by the PC attorney, Frone Crawford, Esq.
- Participating in public meetings regarding the plan as it was developing
- Publicizing the Plan, encouraging community participation and media coverage, and encouraging attendance at specific Public Information Meetings.

Public Work Meetings were held during the course of the Plan preparation, under the auspices of the Planning Commission. The first Public Information Meeting held was an introduction to the process being undertaken and an opportunity for the Planning Commission to present the range of issues and choices to be examined in the overall Comprehensive Plan preparation process. Most of the remainder of Public Work Meetings focused on the direction the community would take in the coming years, based upon the resident surveys. The second and final Public Information Meeting took place when a Preliminary Draft of the Comprehensive Plan chapter was under review by the planning team prior to presentation to the Board of Supervisors.

A Public Hearing was held on the completed Draft Comprehensive Plan for adoption action by the Board of Supervisors of Birmingham Township. The Public Hearing formal review process rounded out the community participation program, including the two aforementioned Public Information Meetings. Between the two public hearings, the draft CP was sent to the Chester County Planning Commission and the six contiguous townships and the UCFSD for review and comment.

SECTION 1: INTRODUCTION

The purpose of this chapter is to analyze existing conditions in Birmingham Township. In particular, this chapter seeks to develop a clear understanding of both the resident's input from an extensive effort to capture that input, the township's physical, demographic, social, and economic conditions, based on current circumstances and historical development. This analysis is intended to enable the municipal government and township residents to identify potential problems, to determine future needs, to develop necessary policies and strategies to respond more effectively to future events, and meet the preferences of the majority of township residents.

The material in Chapter Two is based on resident response to a year-long survey, a series of background studies produced during the planning process, and the 2000 planning process. The chapter consists of nine sections in addition to this introduction: Existing Land Use; Pattern of Change; Natural Resources; Cultural, Historic, and Landscape Resources; Summary of Resident Survey Results; Population, Housing and Employment; Holding Capacity; Circulation; and Community Facilities.

The *Land Use* section provides a description of existing land use patterns and their implications for future development. The *Pattern of Change* section presents an analysis of the minimal recent development activity in the township. The *Natural Resources* section provides a summary of environmental factors that are capable of affecting the location and intensity of the available land-limited future development. *Cultural, Historic and Landscape Resources* documents other environmental factors, some man-made, that are germane to the fact that development is nearly complete in Birmingham Township. The *Population, Housing and Employment* section reviews selected socio-economic characteristics of residents and employers, and data on housing development. Included are population and housing forecasts. The *Holding Capacity* section describes the supply of vacant or otherwise easily developable parcels of land in the municipality. The *Circulation* section assesses existing conditions regarding traffic and transportation, while the *Community Facilities* section analyzes services and facilities serving the township.

Much of the information concerning the subjects covered in this chapter is contained within maps associated with its individual sections.

The descriptions in the *Cultural, Historic, and Landscape Resources* section are excerpts from Chapter 3 of Appendix I of the 2000 Birmingham Township Comprehensive Plan. This appendix includes a compelling description of the township's history. That Appendix 1 is referenced in this 2015 Comprehensive Plan.

SECTION 2: EXISTING LAND USE

Using aerial photography, relevant planning documents, and focused field reconnaissance, a generalized full-color map of current land use in the township has been updated from the Birmingham Township Comprehensive Plan 2000 (CP) (Figure 2 by the township engineering firm, VanDemark and Lynch, LLC). The inventory includes the traditional full range of suburban land used, such as single-family detached and attached residential, commercial, institutional, recreational, utilities, dedicated open space and major categories of non-urban uses, such as agriculture and woodlands.

The purpose of the land use survey is to document and assess the pattern and intensity of utilization of land in Birmingham Township. Based on this assessment, it is possible to evaluate the direction that future development may be expected to take in light of existing conditions. The remaining amount of land available for future development is very small. The remaining tracts of land exist as small parcels spread throughout the township of two to ten acres with little subdivision possible.

Residential Use

More than forty years ago, Birmingham Township was agricultural, with the principal exception being the mix of commercial activities found at the crossroads village of Dilworthtown and along the US 202 corridor. Today, about three-quarters of the land not in dedicated open space is in single-family detached residential use, with about ten percent in agriculture. Single-family detached residential use is widespread across the township frequently interspersed with deed-restricted permanently undevelopable lands (*Permanent Open Space* on the Existing Land Use map). The only areas where the mix of single-family detached residential use and permanent open space does not predominate are as follows:

- Eastern tier of the township, including the US Route 202 corridor, Dilworthtown, and the two Planned Residential Developments (PRDs), Birmingham Hunt and The Knolls of Birmingham;
- Radley Run Golf Course and adjoining Sullivan Farm (now permanent open space).
- Brandywine Creek corridor, consisting mainly of floodplain lands west of Creek Road;
- Meeting House Road corridor;
- Birmingham Hill (now permanent open space)

In contrast to the predominant portion of acreage occupied by single-family detached residential use, other residential uses are confined to the two PRDs on the township's eastern side (7.5% of township area). The PRDs include some small-lot single detached housing units, as well as single-family attached (twins and townhouses) units.

Commercial Use

Retail commerce and commercial services for the most part are confined to the US Route 202 corridor and Dilworthtown. US Route 202 is virtually lined with highway-oriented retail uses as it passes through the township, including numerous automobile dealerships. In contrast, Dilworthtown has retained several historic structures has a regionally-known restaurant and a newly restored small office building at the crossroads of Old Wilmington Pike, Brintons Bridge Road, Birmingham Road, and Oakland Road.

Beyond the US Route 202 corridor and Dilworthtown, retail commerce and commercial services are completely limited to a fencing supply company at the intersection of PA Route 926 (Street Road) and Creek Road. Office uses are essentially confined to the west side of US Route 202, near the intersection

Chapter Two: Existing Conditions

of Brintons Bridge Road. There is also one office use at the “Five Points” intersection of Birmingham Road and Brintons Bridge Road.

Institutional Use

Public institutional use in Birmingham Township is limited to the Township Municipal Building, on PA Route 926 (Street Road) and the triangular-shaped, 46-acre Sandy Hollow property between Birmingham Road and South New Street.

Permanent Open Space

The permanent open space land use category includes the aforementioned publicly-controlled, 46-acre Sandy Hollow property and more than 1,000 acres of deed-restricted lands; part of residential land development approvals made over the last twenty-five years, and eased parcels in trust to the Brandywine Conservancy, the National Land Use Trust, and Point Lookout Wildlife and Water Preserve Foundation. These deed-restricted lands, while privately-held, are permanently prohibited from development.

Utilities

The only significantly-sized utility in the township is the municipal sewage treatment plant, located between the Hunt PRD development and the US Route 202 commercial area. There is a PECO utility right of way running north-south along the western edge of the township which includes electricity transmission lines and, in one section at the southern end of that utility corridor, a Columbia Gas Transmission Company a natural gas transmission line. There is also a pipeline (no longer used), running on a roughly north-east to southwest through the southeast end of the township and owned by Shell Appalachia.

Agriculture, Woodlands, and Vacant Land

Open areas are concentrated mostly in a few places. Many of the parcels are used for agriculture, including horse farms. Open areas include:

- Meetinghouse Road corridor, including about 100 acres in small plots of permanently open space;
- Brandywine Creek corridor, consisting entirely of floodplain lands west of Creek Road;
- 100-acre “outparcel” piece of the township located on the State of Delaware line (eased to the Point Lookout Wildlife and Water Preserve Foundation as permanent open space).
- Smaller, but still highly-significant, woodlands and vacant land are found throughout the township, especially at its southern end. Most of this land is eased as permanent open space and cannot be developed.

Circulation

State, township, and private roadways comprise the circulation land use component of the community.

SECTION 3: PATTERN OF CHANGE

Land development, mostly in the form of single-family residential units on large- and medium-sized lots, occurred steadily from 1980 to 2000. The pattern of construction for this type of single-family residential use was widespread. Additional development, in the form of two large Planned Residential Developments (PRDs) in the eastern portion of the township, commercial development along both sides of US Route 202, and a new Township Building on PA Route 926 (Street Road), also occurred over the period 1980-2000 (Figure 3). Almost all of this development took place before 2000 except for some commercial development listed below.

Taken together, the new development constituted a total of about 1,200 acres of land (30 percent of the total township area) that was converted from agriculture, woodlands, and vacant land to suburban uses over the twenty-year period ending in 2000. In general terms, about 1,000 new housing units were built on about 1,000 acres, making the average rate of land consumption per residential unit around one acre. This acreage excluded more than 500 acres of deed-restricted lands as part of residential land development approvals made over the period.

Single-family residential units accounted for a large proportion of the recent development in the township. In 1980, there were 492 housing units in the township, according to the US Census, of which 462 (94%) were single-family detached units. By 1990, 374 total units were added, virtually all of them single-family detached units. Based upon past examination of aerial photography, relevant planning documents, and focused field reconnaissance, some 385 new single-family detached units are estimated to have been built in the township from 1990 to 2000. During the decade 2000-2010 about 40 new single family detached units were built. Thus, the total number of single-family detached units had increased by about 800 (165%) over the thirty years ending in 2000 and have increased by only 5% in the latest period, 2000-2013.

The largest development of single-family detached houses over the period was Radley Run, begun in the 1970s, but constructed mostly through the 1980s north of PA Route 926 (Street Road). The other single-family detached housing developments were much smaller than Radley Run and spread widely, but the cumulative effect was to build out a large proportion of the municipality. The two PRDs ('The Hunt' and 'The Knolls') were built in the 1990s between US Route 202 and South New Street/ Birmingham Road in the eastern part of the township. Each development is 180 units. The Knolls consists of 144 single-family attached units (108 townhouses and 36 twin units) and 36 small-lot single-family detached units. The Hunt comprises about 90 small-lot single-family detached units and a similar number of single-family attached (townhouse) units.

Retail commercial development along US Route 202 from 1980 to 2000 consisted primarily of several new auto dealerships, but also included a boat sales facility, a hotel, a gas pumps/'mini-mart' operation, and an office building. Since 2000, the Shops at Dilworthtown Center was constructed partly in Thornbury Township and in the southeastern most corner of the township and two additional car dealerships were added, completing the development of all but one 3-acre parcel of the township's commercial district. The Birmingham Township Municipal Building, on Street Road (PA Route 926), was built in 1986 and enlarged in 1997.

SECTION 4: NATURAL RESOURCES

The natural characteristics of the landscape in the township have been an important factor in its historical pattern of development. Areas of significant physical constraint – floodplains, wetlands, and steep slopes – have generally been less likely to be subject to development. These natural determinants continue to be constraints to development. Other factors, such as the presence of soils especially favorable to agriculture or hydric soils or woodlands, have also been influential in use and growth patterns in Birmingham Township.

Several analysis maps were prepared in 2000 delineating these resources. This series of interrelated, interpretive maps has permitted the identification of areas requiring preservation, and areas requiring conservation. Areas requiring preservation include creeks, streams, floodplains, and other lands that are generally undevelopable due to physical characteristics or statutory regulations. Areas in need of conservation include fragile environmental areas such as wetlands, steep slopes, woodlands, and prime agricultural lands. These valuable resources should be protected or conserved due to the environmentally and economically-sensitive nature of these areas and to their importance to the community. Natural resource information illustrated the relative level of development constraints affecting various areas of Birmingham Township and was summarized into a Composite Constraints map. This map has been updated by VanDemark and Lynch, LLC. for this Comprehensive Plan (Figure 4).

Other factors should be kept in mind when considering the issues of resource protection. First, areas in need of conservation also include a variety of man-made factors, discussed in Section 5 of this chapter. These resources include historic sites and scenic features. Second, for areas not requiring special efforts toward preservation or conservation, there remain other relevant factors that make lands more or less suitable for development. These factors include the availability of water and sewer service (or prospect of their availability), road accessibility, and other issues. In view of these constraints, the total of all of these developable lands is less than 100 acres.

Hydrology

Birmingham Township is bounded by Brandywine Creek on the west and nearly all lands in the township drain to it. A series of tributaries, generally perpendicular to the creek, flow through the township. The most important of these streams are:

- Radley Run, beginning near Dilworthtown and flowing in a northerly direction out of the township and into Thornbury Township, and then turning west back into Birmingham Township, eventually reaching Brandywine Creek close to the PA Route 926 (Street Road) bridge;
- Harvey's Run, roughly parallel to PA Route 926, originating just west of the Township Building;
- Renwick Run, midway between Street Road and Meetinghouse Road;
- Wylie Run North, generally alongside Wylie Road;
- Wylie Run South, tributary to Wylie Run North and, for the most part, midway between Wylie Road and Brintons Bridge Road;
- Brinton Run, originating near Dilworthtown and forming part of the southern boundary of the township.

In consideration of future development in the township, these drainage patterns are significant in the analysis of storm water runoff. Other hydrologic characteristics contribute strongly to delineating areas that are available for development and those that are constrained for development. Of major concern are flood prone zones adjacent to bodies of water, and wetlands. Development in floodplains is hazardous to

Chapter Two: Existing Conditions

life and property, not only for prospective development sites but in existing developed areas downstream that may be subjected to unexpected changes in stream channel location or in flood heights and velocities. The 100-Year Floodplain areas shown in the Composite Constraints map (Figure 4) have been identified by the Federal Emergency Management Agency (FEMA) under the National Flood Insurance Program.

The most extensive floodplains occur in lowland areas, such as alongside Brandywine Creek, where watercourse gradients are less and landscape profiles are wider than on hillsides. Along Birmingham Township's frontage on Brandywine Creek, floodplains are up to a quarter of a mile, reaching up and over Creek Road. Brandywine Creek floods with great frequency, often inundating Creek Road.

Floodplains for the streams (Radley Run, Harvey's Run, Renwick Run, Wylie Run, Brinton Run, and others) tend to be relatively narrow. Floodplain soils are generally found adjacent to the stream network. These soils historically have been eroded, transported, and deposited by floodwaters and generally indicate an area susceptible to flooding. These and other flood-prone areas are shown on the Flood Hazard Boundary Maps for Birmingham Township, as published by FEMA.

Wetlands are among our most valuable resource areas because they control flooding, improve water quality, and support a wide variety of animal and plant species. Wetlands are characterized generally by a high water table, poor drainage, and some degree of surface ponding during the year. Most hydric soils qualify as wetlands if they support predominantly hydrophytic vegetation. Wetlands are regulated by the U.S. Army Corps of Engineers and the Pennsylvania Department of Environmental Protection. Essentially, no development activity may occur in a wetland area without a permit. The permit process requires an investigation of development alternatives. Mitigation may be required if development is to proceed; creation of new wetlands may be required to replace those disturbed or destroyed by development activity.

Although no comprehensive inventory of wetlands in Birmingham Township currently exists, the National Wetlands Inventory (NWI) undertaken in the 1980s by the United States Fish and Wildlife Service and the (then) Pennsylvania Department of Environmental Resources delineated wetlands in the township. These wetlands include surface water bodies, most floodplains, and other areas, generally along streams, identified by means of aerial photography.

According to the NWI, there are two types of wetlands in Birmingham Township, Palustrine (swamps and small ponds) and Riverine (perennial or intermittent creeks or streams). Some of the NWI's qualifying palustrine wetlands in the township are farm ponds, in which surface water has been impounded for use in agriculture.

Most hydric soils also qualify as wetlands. A hydric soil is one that in its undrained condition is flooded, ponded, or saturated long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation.

Geology and Soils

Bedrock underlying Birmingham Township determines its soil types and groundwater bearing capabilities. The predominant rock formations of the township are Wissahickon Formation and Hybrid Granite Gneiss, with an east-west fault line running between Wylie Road and Meetinghouse Road dividing the municipality into the two major mineral groupings. The metamorphic formations were produced from

Chapter Two: Existing Conditions

sediments under great heat and pressure about the same time as the formation of the Appalachian Mountains. The igneous intrusions were formed from the solidification of molten materials. Rock formations such as these are typically hard, moderately resistant to erosion, and tend to form a rolling upland.

The Wissahickon Formation is characterized by mica phase, schist, and gneiss which are typically blue-gray and gray. Small pockets of gabbro, characterized by amphibolite and hornblende gneiss typically dark gray to black, can be found in the formation. Portions of the township underlain by this type of rock formation demonstrate some relief, but tend to be less rolling than areas underlain by gneiss. The deep weathering of the Wissahickon Formation tends to improve percolation, but may present foundation problems. Water yields are good, ranging from 10 to 30 gallons per minute. Groundwater from this formation tends to have a high purity and softness.

The Hybrid Granite Gneiss is typically hard rocks that have a strong resistance to erosion. The parts of the township that are underlain by this rock formation are generally rolling uplands with varying amounts of relief. This rock type is overlain by either the Glenelg-Manor or Glenelg-Neshaminy soil associations. Because of the hard dense character of this rock formation, water yields tend to be rather low, with yields averaging between 5 and 10 gallons per minute.

Other mineral formations, including pyroxene-bearing Mafic Gneiss and Setters Quartzite, occur within the southern half of the township.

Soils information is a vital component of any natural resource evaluation because soil characteristics indicate the inherent suitability of an area for development, agriculture, or other land uses. The principal source of soils data for the township is the Chester County Soil Survey (2007).

In general, soils are a very complex mixture of various amounts of weathered rock, minerals, organic matter, water, and air. Through the action of climate, plants and animals on these geologic materials, soils are formed over long periods of times.

The general soil areas in a locality are called soil associations. Each soil association shown in the Soil Survey of Chester and Delaware Counties is a unique natural landscape, consisting of one or more major soils and some minor soils that occur together and have similar origin. In each association the major and minor soils occur in a distinctive pattern, and each association is named after its major component soils. The Soil Survey's General Soils Map provides a broad perspective of the soils' characteristics in the study area and can form the basis for determining general future land use designations, but the map does not show the type of soil found at a specific site. For information on soils found at a specific location, the detailed photo-map sheets in the Soil Survey of Chester and Delaware Counties must be consulted.

All soils within soils associations have been analyzed with respect to their suitability for residential, commercial, industrial, or other development. The characteristics of the soil in any given location are, in themselves, prime determinants of what that land is best suited for under what conditions. The main characteristics considered are soil depth, degree of slope, internal drainage, freedom from flooding, type of parent material, and stoniness. When these same soil characteristics are analyzed in conjunction with the related features of a site – slope, vegetation, geology, etc. – an even more complete picture emerges of what would be appropriate uses.

Except for the floodplain and wetland areas, the dominant soil types in Birmingham Township are Glenelf channery silt loam, Manor loam, Congaree silt loam, and Chester silt loam. Collectively, these soils are characterized by silty and channery soils on grayish-brown schist and gneiss. Most achieve the highest ratings in the United States Department of Agriculture's capability classifications for agriculture. The USDA calls those soils possessing the greatest production capability for crops "prime agricultural soils," comprising Important Farmlands and Additional Farmlands of Statewide Importance, as defined by the agency. Birmingham Township has about 2,600 acres or 65% of its area classified as important farmlands and about 675 acres in agricultural soils of statewide importance, according to USDA.

Soils with only 0 to 3 percent slope, minimal stoniness, and low susceptibility to erosion provide ideal conditions for agriculture. However, many of the same features that make this soil ideal for farming also are conducive to residential and commercial development.

Suitability for On-Lot Sewage Disposal

Soils have a natural assimilative capacity, meaning that the physical and chemical attributes of the soil allow for the removal of nutrients and infectious disease organisms from solutions passing through them. The efficiency in which this is accomplished depends upon five factors: slope, soils infiltrative capacity, soil depth, soil texture, and soil moisture conditions.

- Slope influences retention time, or the length of the time that a solution remains in the soil before it enters either the ground or surface water systems. An increase in slope can result in a rapid lateral movement of water through the soil providing insufficient time for improvement of water quality. The water, still rich in nutrients and pathogenic organisms, is then added to the surface or ground water system, causing bacterial pollution and nutrient buildup.
- Infiltrative capacity is the ability of solutions to enter the soil column from the surface. For reconditioning of water to take place, the solution must filter into and through the soil column.
- Soil depth, like slope, influences retention time and can be a limiting factor to the proper renovation of sewage effluent. Shallow soils offer little retention time for water renovation before the solution leaves the soil column. Bacteria laden and nutrient rich effluent may enter the ground water as a pollutant.
- Soil texture refers to soil particle alignment and particle size, which can influence the degree and rate of renovation of effluent. A second element of soil texture that must be considered is the percentage of large rock fragments within the soil. Stoniness can be so extensive that there would be insufficient soil surface area for the adequate reconditioning of effluent.
- Soil moisture is an important factor in the renovation of waste water, with permeability being a measure of the ability of water to move through a soil. The rate of movement through a saturated soil is referred to as the percolation rate. Soils with restricted permeability can cause ponding of effluent at or near the surface resulting in a health hazard.
- A seasonally high water table is the periodic saturation of soil to a level near the surface (eight to thirty-six inches) as the result of slow permeability. High and seasonally high water table conditions result in holding effluent at or near the surface. In addition, excessive rainfall can result in the flow of the effluent directly into a stream system.

Chapter Two: Existing Conditions

Since Chester-Glenelg soil associations are moderately deep and moderately well drained, they are generally suitable for on-lot sewage disposal systems. Nonetheless, some portions of the township have soil limitations for subsurface disposal systems. Included are lands unsuitable for on-lot sewage disposal because they are in floodplains or have hydric soils, and lands that are severely limited for on-lot sewage disposal on account of a seasonal high-water table.

Topography

Birmingham Township is characterized by generally undulating hills, but between one-fifth and one-quarter of its land area is steeply-sloped or very steeply-sloped. These heavily inclined portions of the township are often in the vicinity of stream courses (Figure 4).

The township has about 720 acres of land (18%) that are steeply sloping, with slopes from fifteen to twenty-five percent. The pattern of steeply-sloped areas shows a close association with the Radley Run, Harvey's Run, Renwick Run, Wylie Run, Brinton Run streams. Very steep slopes, more than twenty-five percent, occupy about 160 acres (4%) and are mostly confined to limited areas near ridges and in bands alongside the Brandywine Creek floodplain and some creek tributaries, where these streams have eroded deep channels.

Vegetation and Wildlife

Dense hardwood forests once covered the township, but land clearance for farming, commercial purposes, and other development has eliminated much of this virgin woodland. Today, the remaining woodlands consist mostly of second and third growth mixed deciduous forest. These areas generally are associated with the wetter, low-lying areas of the township along creeks and streams and adjoining steeply-sloped areas.

Many species of plants and animals may be found in the township's three main types of habitat – open field or pasture, forest, and wetlands. (Wetlands include streams, springs, ponds, and meadows). Although some species have adapted to more than one habitat, other flora and fauna have adapted to very specific needs and conditions, and are critically dependent upon particular habitat types. Generally speaking, man-made features are considered disruptive to natural habitats, but some, such as farm fields, pasture, hedgerows, and treelines, offer important food and cover sources.

Composite Constraints

The preceding natural resource information was combined and synthesized to illustrate the relative level of development constraints affecting various areas of Birmingham Township (Figure 4). Areas with very severe constraints are generally precluded from future development due to flooding, while very steep slopes and wetlands pose severe constraints for most development. These areas may be most suitable, for farming, recreational use, and wildlife habitat. Areas of prime agricultural soils or slopes between fifteen and twenty-five percent have moderate constraints for development. The balance of the township has only slight development limitations.

The effect of the prominence of prime agricultural soils in Birmingham Township has been strongly felt in the delineation of the [Composite Constraints](#) map. Most of the extent of the township ends up indicated on this map as having moderate constraints, reflecting the fact that sixty-five percent of the area of the municipality is classified as having prime agricultural soils.

SECTION 5: CULTURAL, HISTORIC, AND LANDSCAPE RESOURCES

Natural Landscape

The natural landscape of Birmingham Township has been instrumental in shaping the township's settlement patterns, transportation corridors, economic livelihood, and community character. The most significant landscape features include the following elements:

Brandywine Creek: Brandywine Creek, which forms the western boundary of the township, is the most significant landscape feature giving shape to the township's natural character.

Brandywine Bluffs: Bordering the floodplain of the Brandywine Creek are steep, rocky bluffs. These bluffs are steepest along the northern and southern thirds of the creek within the township.

Topography: Birmingham Township is located in the rolling hills of southern Chester County. The geological divide described in Section 4 of this chapter has been significant in the historic pattern of development in the township. The northerly Wissahickon Formation weathers into undulating hills of medium relief and uplands of these hills have been generally good for agricultural uses. The granite gneiss of the geology of the southern half of the township is highly resistant to weathering and this part of the community is formed of steeply-sloped hills and ridges etched by stream corridors.

East-West Stream Tributaries: The tributaries to Brandywine Creek described in Section 4 form stream corridors into the landscape, creating sloped stream valleys.

Piedmont Plant Communities: The native plant communities of southern Chester County are typical of those of the Piedmont Province of southeastern Pennsylvania and are significant because they are a primary determinant of the character of the landscape.

Settlement Pattern and Historic Resources

Property Lines: The slow pace of historical change in Birmingham Township is evident in the development of the township's property lines. The township's earliest property lines were established with initial settlement of the lands in the 1680s, and along these property lines, the townships earliest roads were also established. Birmingham Township's property lines today have preserved almost all of the property lines from the late nineteenth century.

Road System: Birmingham Township's road system was established in the early settlement period of its history and has been maintained largely intact since that time. The road system has changed remarkably little, with only the loss of some farm lanes and some road connections. While roads have been paved, they remain narrow in width, with modest improvements to road cuts and horizontal and vertical grades.

Farmsteads: Birmingham Township was a stable, slowly-changing agricultural community for three hundred years, from its settlement in the third quarter of the seventeenth century until the substantial suburban development in the 1980s. In the township, farmsteads were evenly distributed throughout the municipality and are generally located close to the historic roads, in proximity to springs, and with access to agricultural fields on uplands.

Chapter Two: Existing Conditions

Agricultural Landscape: In general, the late eighteenth and nineteenth century agricultural landscape in Birmingham Township was significantly more open than the township's landscape today. Historic nineteenth century photographs of the region show open fields with long vistas. Farmsteads, farm fields, fence lines, and some roadways were plainly visible. Woodlands were generally restricted to designated woodlots and to the steep slopes of the deeper stream valleys. The number and extent of hedgerows between fields were limited.

With intensified suburban development since the 1980s, the historic agricultural landscape of Birmingham Township has been mostly lost. Former farm fields have been divided and filled in with new housing. Non-native horticultural plantings have been introduced within the suburban developments. Natural woodlands have grown up along edges, in stream valleys, on steep slopes, and within preserved open spaces.

These woodlands will be difficult to maintain. Deer grazing has eliminated new growth in the last ten years. Woods density will gradually reduce since growing trees will not be replaced. If the area were strictly forest, natural processes would reduce the deer herd size by restricting food supply. In our mixed forest landscape, residential lawns and shrubbery may be sufficient to maintain deer herd size preventing the replenishment of trees. If this occurs, eventually the landscape will be grass fields with invasive species like stiltgrass predominating.

With development, the formerly open agricultural landscape has been closed in. The spatial character of the landscape is smaller in scale, and the opportunities for long, sweeping vistas are few. However, because of the preservation of the township's historic road system, a semi-rural flavor remains. The use of clustered subdivision design over the past twenty years has preserved open space along road corridors, streams, and edges of developments. The change from an open agricultural landscape to a wooded suburban landscape is the most dramatic change that the township has seen since its settlement three hundred years ago.

Community Centers: Birmingham Township has three historic community centers. Dilworthtown, located at the intersection of Old Wilmington Pike and Brintons Bridge Road, is a small eighteenth and nineteenth century crossroads hamlet and commercial center, historically providing inns, taverns, shops, and services catering to the commercial needs of travelers as well as the local agricultural community. This historic hamlet is substantially intact today. Lenape was a crossroads hamlet located at the PA Route 52 crossing of the Brandywine Creek in the northwest corner of the township and was the location of two mills and up to seven associated dwellings, but this hamlet has lost any sense of community due to intensive through traffic and building loss.

The township's third community has been known as Birmingham and is located on Birmingham Road in the vicinity of Meetinghouse and Wylie Roads. Birmingham is a different kind of community center, since it was organized around the Quaker meetinghouses. The heart of Birmingham is the Birmingham Friends Meetinghouse, but it also includes the Lafayette Cemetery, Octagonal Schoolhouse, Orthodox Meetinghouse and cemetery, and Orthodox Friends School.

Industry: Industry in Birmingham Township has been limited to those activities that supported the agricultural community of the region. Small-scale services required by farmers, such as blacksmiths, leatherworkers, shoemakers, and tailors were located in Dilworthtown and other nearby crossroad hamlets. The primary industry in the township during the eighteenth and nineteenth centuries was powered by water-powered mills along Brandywine Creek and the lower reaches of its tributaries.

Chapter Two: Existing Conditions

Eight mill sites are reported to have been located along Brandywine Creek in Birmingham Township. Of the mill buildings that once existed, only the mill at Brintons Bridge remains. Other mill locations are important archeological sites. In addition, remnants of mill ponds, mill races, and road traces at most of the former mill sites remain as significant landscape features.

Battle of Brandywine

Birmingham Township is nationally significant as the location of the Battle of Brandywine. While the full area of the battlefield extends well beyond the township's boundaries, the battlefield's core area – the center of the most intense fighting – lies mostly within Birmingham Township. Before the increase in suburban development pressure in the mid-1980s, public knowledge about the Battle of Brandywine was limited and preservation activities were minimal.

With suburbanization, however, the township's agricultural landscape evolved, eroding the expanse of the battlefield. Since the mid-1980s, battlefield preservation efforts have been aggressively pursued, led by a partnership of public and private entities, concluding in the preservation of the O'Dell farm located within the Birmingham Meetinghouse corridor and an easement on the Sullivan Property, restricting future development. Other smaller easements have been obtained resulting in more than 300 acres of preserved open space in the central battlefield area.

Key Issues Related to Historic Resources

In the thirty years from 1970 to 2000, Birmingham Township had experienced more change than it had in the previous three hundred years. In the last ten years this process has ended and the township's transition from an agricultural landscape to a low density suburban landscape is complete. The township's focus has recently been on managing its resources, including the battlefield preservation.

Changes in Landscape: With each period of its historical development, Birmingham Township's cultural landscape has been changed, sometimes minimally and sometimes dramatically. Between the 1930s and 1960s, the change to contour farming saw the removal of fence lines that may have gone back to the Battle of Brandywine.

Battlefield Preservation: Preservation of the landscape over which the Battle of Brandywine was fought is currently the most critical preservation issue in Birmingham Township. While it may be difficult today for contemporary inhabitants of this region to appreciate its importance, the Brandywine Battlefield is a unique, historic resource. Still, owing to the vast extent of the battlefield landscape, it is not possible to preserve it in its entirety. Much of the battlefield has been permanently altered and lost. In addition to battlefield preservation, the Township has an extensive Historic Preservation District, registered with and approved by the Pennsylvania Historic and Museum Commission (PHMC). BT also regulates under its Zoning Ordinance additional historic resources which are not located in the Historic District areas. Note this CP references Appendix 1 of the Comprehensive Plan 2000 titled *Birmingham Township Cultural Resources Plan*.

Density of Suburbanization: Though Birmingham Township has a limited number of properties remaining that have the capacity for modest development, some minor subdivision is likely to occur yielding up to 50 new homes in total. It will manifest itself as an increase in residential density on smaller lots, as properties change hands and are subdivided to their legal minimum. New residences might be constructed on marginal sites, frequently lands with steep slopes.

Chapter Two: Existing Conditions

Traffic: With new development continuing in the vicinity of Birmingham Township, traffic volumes on the township road system may increase. PA Route 926 (Street Road) has accommodated higher numbers of vehicles, as has Brintons Bridge Road and Birmingham Road. Traffic will likely increase on other roadways as well and, with traffic escalation, pressures may be exerted to make changes to the roads to increase their capacity and enhance safety. Such changes are likely to include signalization, widening, straightening, modifications to road profiles, and the addition of turning lanes. While changes may be necessary, they may adversely affect the character of the roads and landscape. PA DOT budgets and priorities make it unlikely that many, if any of these changes will be made.

Resource Management Mechanisms: Birmingham Township has sophisticated historic preservation planning mechanisms in place and has received a great deal of attention with respect to its historic resources due to the Brandywine Battlefield National Historic Landmark designation. Nevertheless, these mechanisms, specifically the historic district and design guidelines, apply to only a portion of the township. Other resources and landscape areas may need to be considered for appropriate treatments.

Use of Historic Resources: The large majority of Birmingham Township's historic resources are residential buildings, many associated with historic farmsteads that continue to be used as single-family residences. Other historic buildings originally used for other purposes, such as schoolhouses, mills, shops, stores, and meetinghouses, have been converted to single-family residential use. These current single-family residential uses are generally owner-occupied, affluent, and stable, and they help preserve the township's historic buildings and character. Were it not for this owner preserved approach, many of BT's historic resources would have disappeared long ago.

Economic Viability: In the early- and mid-twentieth century, the economic viability of Birmingham Township's agricultural landscape declined. With late-twentieth-century suburbanization, a new form of economic use has arisen. Suburbanization provides a strong, viable, stable economic use for most of the township's building resources. As discussed above, single family, owner-occupied, residential use is a desirable long-term use for historic buildings in areas experiencing change. The level of affluence in Birmingham bodes well for the continued appropriate treatment of historic buildings.

Landscape Context: In considering the preservation of historic and cultural resources and their appropriate settings, landscape context should be borne in mind in addition to the treatment of buildings and building fabric. Landscape context can be assessed through the identification of the area of significance associated with a resource. The area of significance of a resource is the landscape area, including outbuildings and landscape features, closely associated with a principal building.

Battlefield Interpretation: Birmingham Township and its residents are fortunate to have been the recipients of local, state, and federal assistance for the protection of open space related to the Battle of Brandywine. With the increasing interest and attention that has been paid to battlefields in general and Revolutionary War sites in particular, it is possible that public interest in the interpretation of the battlefield will increase over time.

SECTION 6: RESULTS OF THE 2013 RESIDENTS SURVEY

The highest priority the Planning Commission had in developing a new Comprehensive Plan was to accurately reflect the input and preferences of the residents of Birmingham Township. The Planning Commission developed a simple three-question survey document and conducted telephone and e-mail interviews in addition to placing the survey on the Birmingham Township web site. The original goal was to survey 10% of all households in Birmingham Township. When the survey ended in early 2014, between 9 and 10 % of all households had responded to the survey. There is a good reason for confidence in the results of this survey since the results did not change after about 3% of residents had responded through to the almost 10% at the close of the survey period.

The three questions were:

- What do you like about Birmingham Township and want us not to lose?
- What would you like to see improved or added to Birmingham Township in the next five years (if anything)?
- Is something in your answer above important enough to you that you would accept an increase in Birmingham Township taxes by 25 % (say about \$100 per year)?

The results are shown in Table 1.

Fully three quarters of respondents wanted to keep open space and about half wanted nothing more. It is abundantly clear that the majority of residents “like Birmingham Township the way it is.” The theme for most responses was ‘do not change’. The improvement requests rose only to 15% for historic preservation and parks. The next nearest request was for walking trails at about 11% of respondents. More than half of responses said that they would not want a tax increase of \$100 per year for any improvement.

SECTION 7: POPULATION, HOUSING, AND EMPLOYMENT

Population forecasts are considered an essential part of planning for future growth in that they can be translated into approximations of the future need for housing, community facilities, and other forms of development. This forecast process for Birmingham Township has been greatly simplified by the fact that the township is essentially built out. The forecast maximum is bounded by the number of potential housing units that can be constructed and size of families living in the township. With the current population at 4200, a forecast of 4000 to 4600 seems reasonable. This range is based on occupation of all residences in BT, construction of 50 new homes and an increase in average family size. It seems unlikely that all three of these assumptions would be realized.

Population Trends for Birmingham Township & Vicinity (see Tables 2 and 3)

In the past editions of the CP, population growth trends in Chester County and townships surrounding Birmingham have been presented. Given the very different condition of the surrounding townships, this is no longer appropriate. Section 7 of this chapter describes the remaining holding capacity of Birmingham Township as minimal, thus precluding a forecast of significant population growth.

Although population growth is projected for Chester County, the impact on BT is likely to be limited to increased traffic volumes on nearby roads.

Age Characteristics

The median age of adults in the township is 52. This age has increased by 11 years in the last thirty years. Current township real estate turnover indicates that this trend will likely continue for the next two decades. The population of Birmingham Township has been aging (Table 2).

According to the Bureau of the Census statistics, the medium age for all Birmingham Township residents (including minors) rose more than fourteen percent from 1980 to 1990, increasing from 34.0 years to 38.8 years. By 2000, the median age for township residents was 41.1 years. In 1980, 30.3 percent of the township's population was school-aged, but by 1990 this figure had dropped to 24.3 percent. In contrast, the percentage of township residents forty-five or older comprised 41.4 percent of the population by 2000, versus 35.3 percent in 1990 and 28.1 percent in 1980.

In the last 10 years, the school age population in the township has stabilized at about 1,100. That number is expected to remain constant for the next 10 years.

Income and Housing Values

Median income in Birmingham Township is \$172,000 per household (American Community Survey 2009-2013) and median house value is between \$600,000 and \$900,000 (using 2014 Zillow data). This pair of data is both the reason for and the result of township residents somewhat advanced median age and the prediction that the median age will continue rising for some time. Affording a residence in Birmingham Township usually can be correlated with a fairly long period of employment, say 20 years. At that point the buyer is in her/his 40's. The low rate of real estate turnover in Birmingham Township reinforces that demographic.

Housing

The current housing mix (84% single family detached homes and 16% single family attached homes) is unlikely to change given the limited amount of land available for development and construction. The likely number of 50 additional homes has been based on a study of remaining developable and redevelopable land.

Employment

Employment in Birmingham Township is located primarily in the eastern section of the township along route 202 and in the Village of Dilworthtown. Earlier estimates by the Delaware Valley Regional Planning Commission place the total employment at about 300. In view of the number of commercial establishments along 202 and the size of the hospitality operation at Dilworthtown, a better estimate is probably three times that. A very small portion of those employees are Birmingham Township residents, probably fewer than 40. The current mix of businesses includes:

- Five auto dealerships
- Four restaurants
- Two banks
- Several office buildings
- Patio and stone supply yard
- Boat and RV sales dealership
- Hotel

Chapter Two: Existing Conditions

- Tire and repair operation
- Drug store
- Birmingham Township's police and office staff

At this writing there is one 3 acre commercial vacant lot for sale. It is located on route 202.

SECTION 8: HOLDING CAPACITY

The analysis of population and projection in Section 7 is intended, in part, to provide some rough estimates of the demand for land for new residential and commercial uses over the planning period. These estimates of demand for land may be compared to the supply or *holding capacity* of vacant or otherwise easily-developable parcels in the community.

A Holding Capacity map has been prepared (Figure 5), indicating *developable* and *redevelopable* land. Developable land refers to areas generally unencumbered by existing development, whereas redevelopable land indicates areas deemed generally susceptible to change in use. Very little of Birmingham's land is redevelopable for reasons of lot size and deed restrictions. Developable and redevelopable land areas were determined primarily on the basis of the survey of existing land use (see Section 2 of the chapter); although a number of other factors were also considered, in particular:

- Land constrained for development on account of the presence of floodplains, wetlands, or steep slopes; and
- Areas deemed not developable on account of deed restrictions.

As established by the holding capacity analysis, there are less than 100 total acres (400 acres if the flood plain along the Brandywine Creek, wetlands and steep slopes are included) of developable and redevelopable land in Birmingham Township, about 2% of the area of the township. Presuming that the total area of developable or re-developable land will be built upon in the future under regulations similar to those prevailing for single-family detached dwelling construction at the present time, some 50 units might be accommodated on these lands.

This holding capacity analysis suggests that less than an additional 40 homes could be constructed on available sites and about 140 additional people can thus be accommodated in the township. Supply of new dwelling units in the township, holding capacity analysis says, may be very much constrained by a lack of land that is available to be developed.

The holding capacity analysis also implies that the township has approached a level of development that may be thought of as a "built-out". The era of developments on large tracts of land has come to an end in Birmingham Township.

SECTION 9: CIRCULATION

A region's transportation system has a direct influence on the location and intensity of development. For Birmingham Township, the establishment of early area transportation routes and improvements to the road network serving the municipality over the years have been important determinants for growth.

One of the region's most important four-lane highways, US Route 202 (Wilmington Pike), crosses the eastern end of the township, providing superb regional access to this locale and spurring development in

Chapter Two: Existing Conditions

Birmingham Township and municipalities to the north, south, and east. Birmingham Township is also traversed by PA Route 926 (Street Road), an important two-lane east-west highway connecting municipalities on the west side of the Brandywine Creek to the US Route 202 corridor and to points to the east. Birmingham Township has two bridges across Brandywine Creek, one on PA Route 926 and the other part of PA Route 52 (Lenape Road), which cuts through the northwest corner of the township and connects to West Chester Borough. Another state road, (Creek Road), snakes along the bluffs that mark the easterly edge of the floodplain of Brandywine Creek.

Apart from these highways, the most important road in the township is Birmingham Road, a north-south route that intersects with PA Route 926 and extends into adjacent municipalities. Brintons Bridge Road formerly possessed a bridge over Brandywine Creek, but in its present role remains an important east-west route in the southern part of the community.

There are, as well, a handful of other historic roadways that still serve the township, even after a couple of centuries of use. These include Meetinghouse road, Wylie Road, South New Street, Old Wilmington Pike, and Webb Road. To the local network many minor streets have been added that have been constructed over the last few decades in conjunction with new residential developments; although one such street, Country Club Road, has a more important role in terms of local circulation than the others.

This circulation analysis provides a description of the basic road network for Birmingham Township. The jurisdictional and functional classifications of the various segments of the road network and traffic demands on major roads are of particular concern. The analysis focuses on those roadways that provide for continuity of travel within and through the township as opposed to subdivision streets that have the primary purpose of providing access to residences.

Functional Classification

Road systems comprise a hierarchy of highways and streets that perform different functions. The major classifications are expressway, arterial, collector, distributors and local roads. Expressways are limited-access highways designed to move large volumes of through traffic at high speeds. At each succeeding level in the hierarchy, traffic volumes and speeds decrease, average trip lengths become shorter, and there is increased access to abutting properties.

The most recent road functional classification (Figure 6) for the township was researched by VanDemark and Lynch, LLC. Roadways in Birmingham Township were classified as follows:

| Roadway | Functional Classification |
|---|----------------------------------|
| US Route 202 | Major Arterial |
| PA Route 926 (Street Road) | Minor Arterial |
| Route 52 (Lenape Road) | Major Collector |
| Birmingham Road | Minor Collector |
| Creek Road | Minor Collector |
| Brintons Bridge Road | Primary Distributor |
| Country Club Road | Primary Distributor |
| South New Street (north of Birmingham Road) | Primary Distributor |

VanDemark and Lynch, LLC recommends reclassification of these roadways as noted in Figure 10.

Jurisdictional Classification

Most of the major roads in Birmingham Township are State Highways (Figure 10). In addition to US Route 202 (Wilmington Pike), PA Route 926 (Street Road), PA Route 52 (Lenape road), and Creek Road, the following routes are under the jurisdiction of the Commonwealth of Pennsylvania and are controlled and maintained by the Pennsylvania Department of Transportation (PennDOT):

- Birmingham Road
- Brintons Bridge Road
- Wylie Road

With the exception of a few private roads, all other roadways in the municipality are under the jurisdiction of Birmingham Township. In total, there are roughly fourteen miles of Township Roads and twenty-five miles of State Highways in the township. Birmingham Township receives a stipend from the Commonwealth of Pennsylvania for roadway maintenance.

Traffic Volumes

Average Daily Traffic (ADT) counts that have been compiled in 2012 by the Delaware Valley Regional Planning Commission are also shown on Figure 6. The highest volumes of traffic in the township, by far, are experienced on the four-lane US 202, with ADTs in the order of 41,000 vehicles per day which has been unchanged since the mid-1990s. In contrast, PA Route 926 (Street Road), a two-lane road, had ADTs about one-quarter those of US Route 202. PA Route 52 had ADTs in the 7,000 to 8,000 range in the mid-1990's and has grown to 11,000 in 2012, and Birmingham Road and Creek Road have ADTs in the order of 2,000 to 3,000 vehicles per day and have changed very little.

With the recent development around Birmingham Township and south-central Chester County in general, a reasonable expectation might be that traffic volumes in and around the township would be growing. The Delaware Valley Regional Planning Commission numbers for certain routes seem to reflect traffic growth, although not necessarily substantial increases, and a growth trend for roadways generally is not apparent. For example, counts for US Route 202 are substantially the same for 1986, 1992 and 1996.

Roadway Improvements

PennDOT had a major upgrade planned for US Route 202 from West Chester to the Delaware State Line, including widening to six lanes and grade-separated interchanges at selected intersections. It seems unlikely this will be accomplished in the next ten years. PennDOT also has plans to replace the PA Route 926 Bridge over Brandywine Creek. PENN DOT has announced that bridge replacement will begin in 2015 or 2016.

There have been no recent roadway improvements by PennDOT on PA Route 926 (Street Road) and Creek Road.

Significant improvements in the roads in and around the township are unlikely. Development in adjacent townships is likely to increase traffic load in the five points intersection at Dilworthtown and on Route 926. This possibility needs attention by Birmingham Township so that reasonable input to PADOT can be provided.

The Chester County Public Transportation Plan has been adopted as an element of Landscapes2, the County Comprehensive Plan. The reality of population spread over the county, with a limited number of

Chapter Two: Existing Conditions

supportable concentrations of commuters, is the underlying condition that establishes goals for the next twenty-five years.

In summary for improvements important to Birmingham Township, the best that can be expected is:

1. Increased parking at train stations on Route 30
2. Improved/more frequent bus service along Route 202
3. Organized van pools in a not yet determined arrangement

Notes 2 and 3 apply primarily, and likely, only to Route 202 connections between the Borough of West Chester and one or more points in New Castle County (Wilmington for instance) DE.

SECTION 10: COMMUNITY FACILITIES

Township and Other Public and Private Facilities

Birmingham Township has a Township Building, on Street Road, to house municipal administrative functions, including the township police. The township also owns a piece of open ground, the triangular-shaped, 46-acre Sandy Hollow property between Birmingham road and South New Street. Birmingham Township received funding under the Chester County Heritage Park and Open Space Municipal Grant Program to implement improvements to Sandy Hollow Park, including a six-foot-wide trail around the perimeter of the tract, a small parking lot, and a scenic lookout.

Birmingham Township has its own police force, consisting of a chief and two full-time officers as well as five part-time officers. Firefighting services for Birmingham Township residents and businesses are provided by two volunteer companies, the West Chester Fire Department, with three fire stations in and near West Chester Borough, and the Concordville Fire and Protective Association, on US Route 1 (Baltimore Pike) near US Route 322 (Conchester Road) in Concord Township, Delaware County. The latter company also provides ambulance and paramedic services to Birmingham Township. In addition, the Good Fellowship Ambulance Club, Inc., based in West Chester, provides services to the township, with their primary coverage area being north of PA Route 926.

Most of the township is within the West Chester zip codes area, with its post office in West Chester Borough. Only a very small portion of the township, basically south of the Brinton Run stream course, is within the Chadds Ford zip code, but its post office is less than one-half-mile from the southern edge of Birmingham Township, on US Route 1 (Baltimore Pike). Some residents use the limited-service Pocopson post office on Pocopson Road to purchase stamps or mail items. The nearest public library is in central West Chester and a major Chester County Library is in Exton.

Private institutions in the township include the Birmingham Meeting and cemetery on Birmingham Road, Radley Run Country Club, and the common-use swimming pool area and community center building of the Knolls PRD development.

Residences and businesses in the township receive trash collection and recycling services through private contractors.

Schools

Birmingham Township forms part of the Unionville-Chadds Ford School District, which also includes Pennsbury, Pocopson, East Marlborough, Newlin, and West Marlborough Townships in Chester County and Chadds Ford Township in Delaware County. There are no district facilities within the Birmingham Township, with the closest schools being Chadds Ford Elementary, off US Route 1 (Baltimore Pike) in Pennsbury Township and Pocopson Elementary on Route 926. The middle and high schools are on Unionville Road in East Marlborough Township. Total enrollment is about 4,000.

Water Service

Water supply for Birmingham Township consists of both central (“piped”) water and on-site wells. Central water service is provided mostly by Aqua PA (AP), except for the extreme southwestern corner of the township, which is served by the Chester Water Authority (CWA), now owned by Aqua PA. The service area (Figure 7) includes almost half of the municipality, with a broad swath of unserved area in the center of BT and at the southeast corner.

AP operates a very large, integrated regional system that utilizes numerous surface water and groundwater sources. AP operates 37 wells and withdraws water from Pickering Creek (near Phoenixville), Brandywine Creek, Crum Creek, Chester Creek, Ridley Creek, Schuylkill River, and Susquehanna River. Birmingham Township customers may receive water from a variety of sources within the system at various times of the day, month, or year. According to AP, there is sufficient capacity in their system to serve the future needs of the township.

At properties where AP-supplied water is not available or not utilized, on-site wells provide the water source. No major problem with contaminated well water has arisen in Birmingham Township; however, well-water quality analyses are made only on a voluntary, individual-user basis.

Sewer Service

Wastewater disposal in Birmingham Township consists of publically owned sanitary sewerage systems and private, on-lot systems. Most properties are served by independent, on-lot systems (Figure 8).

The publically owned sewerage systems are limited in geographic area, but involve three different systems for sewage treatment.

The largest area of service includes the Planned Residential Developments (PRDs) at the eastern end of the township. Sewage from the 360 residential units in the Hunt and the Knolls developments flows to a township-operated sewage treatment plant along Radley Run, between the PRDs and the commercial properties along the west side of US Route 202. The service area for this plant includes a handful of properties between Faucett Drive and US Route 202 in the “V”-shaped area at the north end of Old Wilmington Pike and most but not all of the commercial properties along route 202. The present permitted hydraulic capacity of the plant is 150,000 gallons per day (gpd), with about two-thirds of the capacity currently utilized. BT’s Act 537 Plan Update of 1999 acknowledged that flows up to 167,500 gpd could be accommodated with some equipment upgrades and re-rating of capacity. In 2015, an upgrade to BT’s owned plant will be performed to reduce nitrates thus meeting stricter discharge limits. The capacity of the plant will remain at 150,000gpd.

Chapter Two: Existing Conditions

At the north end of the township, there are six dwelling units on Regimental Drive and all (15) of the homes on General Howe Drive that are tied into the municipal sewage collection and treatment system of the adjoining municipality, East Bradford.

Eight Radley Run homes in BT are connected to the Radley Run Country Club sewage treatment plant as are eleven homes in East Bradford Township.

SECTION 1: INTRODUCTION

The Management Plan is intended as a guide for maintaining the character of Birmingham Township. Two years of background research and analysis, monthly meetings with the Birmingham Township Planning Commission, focused surveys, and Public Information Meetings described in Chapter One, form the basis for the Plan. It reflects not only a comprehensive set of goals and policies for the relatively small amount of development potential remaining in BT, but also attempts to embody shared community wants and aspirations.

The Management Plan is composed of several elements pertaining to land use, circulation, housing, community facilities, utilities, conservation, and environmental protection. Prior to discussion of the elements, Section 2 presents a summary of goals, objectives, policies upon which the Plan has been structured. The remainder of the chapter develops the components of the recommendations for BT.

The Management Plan represents a guide to be followed by BT, other public and quasi-public organizations, citizens, and by private developers in the order to address important issues and problems related to the township's overall condition. Many of these problems and issues are interrelated, so that effective resolution to one cannot take place without simultaneous efforts to resolve others.

An especially significant aspect of the Management Plan is the close coordination and mutual-reliance between the Land Use Plan (Section 3) and Circulation Plan (Section 4). The character of the land use concepts outlined in Section 3 is closely tied to the circumstances of the road network and existing land use as described in Chapter Two.

The Land Use Plan is also closely linked to the Cultural, Historic, and Landscape Resources Conservation Plan (Section 7). The community's expressed desire to retain an identity as a historic place and the importance of Birmingham Township's historic landscape and its resources have strongly influenced the shape of the Land Use Plan.

Other mandatory planning processes, such as requirements for municipalities to execute Act 537 sewage facilities plans, are fundamental in the presentation of the various elements of the Management Plan.

The Management Plan is focused on the location, character, and timing of future actions to maintain and enhance the character of BT. In particular, the Plan propose future development, while limited by the nearly "built out" status of BT, be directed to locations and in a manner that allows continuing the essential services and aesthetics now available in BT.

The incremental processes of change and improvement are also primary concerns of the Plan with reference to natural resource protection and open space conservation.

Under Pennsylvania statutory law, the right of approval for subdivision and land development is (with limited exceptions) exercised by municipalities, and not, for example, by counties, as is often in some neighboring states.

Under Pennsylvania case law, all municipalities must provide land development opportunities for all reasonable uses. The alternative to this providing growth opportunities through joint municipal planning and zoning provisions, whereby two or more municipalities can, through shared efforts and actions, produce joint development activities. While BT may want to consider opportunities

for intermunicipal planning and pursue them in the coming years, the absence of land for development in BT precludes any significant activity of this sort.

SECTION 2: GOALS, OBJECTIVES AND POLICIES

Summary of goals:

This plan supports five broad Birmingham Township goals. These are:

- Maintain the rural-suburban atmosphere, consistent with the remaining opportunity for development or re-development
- Preserve historic resources and open space
- Protect environmentally sensitive areas
- Maintain necessary public services while maintain a low tax rate
- Prepare for and comply with mandates, especially those for sewage and stormwater management

A. Development Pattern

Goal: Preserve and enhance the characteristics that make BT what it is.

Goal: Ensure that development occurs in ways that minimize environmental degradation.

Goal: Conserve open areas and significant historic landscapes.

Goal: Maintain historic properties and view sheds as listed in BT inventory of historic assets.

Objective: Inspect historic resources regularly and enforce preservation agreements.

Goal: Preserve tax base to maintain relatively low township tax rate in BT.

Goal: Reduce or eliminate deviations from agreements included in development agreements.

Initially, deal with commercial lots and lots with retention basins and other storm water management facilities. Do this with an inventory of the conditions required in original approvals for development and/or improvement. Then expand the list to include all restricted properties.

B. Economic Base

Goal: Maintain conditions encouraging economically healthy commercial establishments.

Goal: Ensure that existing commercial facilities along Route 202 corridor are not degraded or fall into disrepair.

Goal: Support rehabilitation and/or redevelopment of commercial properties before they become obsolete or degraded.

Goal: Ensure that rehabilitation and/or redevelopment of stressed or underdeveloped properties are aesthetically attractive.

C. Circulation

Goal: Achieve the safest and most pleasant circulation system that is compatible with the character of BT and the realities of transportation systems.

Objective: preserve the rural aesthetics of the internal township circulation system (roads). This will include the roads for which the township is responsible and, to the extent possible those state roads that BT can influence.

Objective: establish/maintain communication with PA DOT to represent resident needs and views and provide timely information to residents.

Goal: Be recognized by PA DOT as an important influence in decisions impacting BT.

Objective: Secure emergency thru traffic routes that minimize inconvenience to BT residents. This includes preparation for the proposed bridge improvements on route 926.

Goal: Provide community focused recreational trails.

Objective: Connect Sandy Hollow with Birmingham Hill without drawing unwanted attention to BT as a tourist destination.

Objective: Provide for passive recreation alongside the Brandywine Creek. This is primarily a walking path but may include a canoe launch site. At issue will be protecting wet lands and avoiding aggravating flooding conditions in a flood prone area.

D. Community Services

Provide public services and utilities that meet resident needs in a cost effective and environmentally safe manner.

- Police
- Fire protection
- Municipal open space/parks
- Ambulance services
- Gas
- Electricity, service interruptions
- Potable water supply
- Sewage treatment
- Cable TV
- Township Building
- Schools
- Library
- Trash removal

E. Housing

Goal: Maintain the quality and character of existing neighborhoods recognizing that BT is essentially “built out” with the remaining 400 acres of undeveloped land severely constrained by steep slopes, flood plains and wet lands (see A above).

F. Resource Protection

Chapter Three: Management Plan

Goal: Protect and enhance environmentally sensitive and culturally significant areas of BT.

Goal: Ensure the reliable operation of the on-site sewage treatment systems that are the predominant form of waste treatment in BT.

Goal: Manage storm water run-off to meet legal requirements and to minimize both soil erosion and deposition of surface materials that could contaminate waterways.

G. Aesthetics

Goal: Protect BT's appearance as a rural-suburban location.

Objective: Review BT ordinances and the work that has already been done to determine that we have the maximum protection, consistent with the PA MPC.

H. Identity

Goal: Connect residents to activities in BT, especially those that are part of the management of BT. This includes emergency alerts and educational programs like on-site septic system maintenance.

Collect e- mail addresses from residents who want to be on the BT e-mail list.

Drive viewership for the BT web site. Form a habit in residents that fosters routine viewing of that BT web site.

Consider a use of social media for all or part of a resident notification tool.

Goal: Reaffirm the identity of BT in the minds of residents without calling unwanted attention to BT as a tourist destination.

I. Planning

Goal: Prepare BT for challenges presented by both developments in surrounding municipalities and regulations passed down to BT from county, state and federal regulations. One example of this is pending and actual storm water management regulations.

Goal: The township will review and adopt energy conservation efforts where applicable, appropriate and practical.

Goal: insure that all zoning and subdivision ordinances are useful, necessary and no more onerous for residents than necessary to meet the purpose of those ordinances.

Goal: have "state of the art" ordinances for zoning and subdivision consistent with the PA Municipal Planning Code (MPC).

Goal: Have standards in place to maintain the well-functioning and visually appealing character of the Rt. 202 commercial corridor.

Goal: Maintain the Comprehensive Plan over the plan period before the next edition and manage BT in a way consistent with this plan. This can include the updating of the township Official Map.

SECTION 3: LAND USE PLAN

The Land Use Plan (Figure 9) ties together all the elements that make up the Birmingham Township Comprehensive Plan. It thus becomes the primary reference against which land use decisions, as well as decisions on major public expenditures, can be measured for the next ten to twenty years. The Land Use Plan is concerned with the proposed location, intensity, and amount of different uses. It strives to be in harmony with trends affecting economic development in the township and its environs, the county, and the region while mirroring the values, needs and expectations of the residents of Birmingham Township.

However, there is very little developable land left in the township, so the plan will be a relatively simple approach that attempts to maintain the character and quality of the land uses while allowing the few small remaining parcels to develop harmoniously with the existing land uses in BT.

Plan Element¹: Have a short version of this plan available to residents and other interested parties.

The Land Use Plan, as well as the other specific elements of the Management Plan, is oriented toward planned development of Birmingham Township through 2025, and reflects little to no population and local employment growth, a sustainable land-use mix, conservation of natural and cultural resources, and efficient utilization of the existing local road network and servicing systems. The Management Plan is based upon a 2025 township population of around 4000 to 4600 persons, and an increase of fewer than 50 housing units above the present inventory.

General Description

The Land Use Plan incorporates an extensive system of open space throughout the township, consisting of the following elements:

1. Environmental resource protection, natural area retention and conservation, including stream courses, floodplains, wetlands, steep slopes and woodlands;
2. Historic resource protection, including conservation easements on the targeted battlefield properties and identified sites and other historic resources;
3. One connecting trail (Sandy Hollow to Birmingham Hill);
4. Recreational lands, including parks, public and civic space, and the existing Radley Run golf course;
5. Deed-restricted permanently undeveloped lands, part of the land development approvals, customarily managed by Home Owner Associations;
6. A limited amount of agricultural lands.

Plan Element: Develop a list of all development restricted properties in BT with a list of the restrictions.

For BT, a Land Use Plan is largely a matter of recording and abiding completed set-asides and protecting the last 100 acres of developable small plots for appropriate land use. Note that this figure is net of flood

¹ The **Plan Element** is “a component of the whole action plan.”

Chapter Three: Management Plan

plain and steep slopes. The 100 acres exists as lots that can be subdivided to add one or two houses but not tracts as large as 20 acres. BT's open space forms a framework for Land Use. Based as it is on existing natural features such as floodplains associated with Brandywine Creek and its tributary stream courses, the system can be said to be established already. For example, in many instances floodplain, wetlands, and steep slope regulations administered by the Township and by the Pennsylvania Department of Environmental Protection, U.S. Army Corps of Engineers, and the U.S. Environmental Protection Agency, already prohibit or restrain development in these areas. The Land Use Plan incorporates these significant natural resource areas, including woodlands, together with conserved historic battlefields, deed-restricted permanent undeveloped lands, greenways, and recreational lands to create the open space system for the community.

The permanent open space is intended to serve several purposes: 1) to conserve areas of environmentally-sensitive and culturally-valuable resources; 2) to provide for private open space and recreational space needs of the residents of residential developments; 3) to preserve views along historic road corridors; 4) to provide appropriate buffers between high-volume traffic arteries and residential areas; 5) to provide appropriate buffers, where possible, between areas of incompatible land use; and 6) to maintain and enhance wildlife habitat.

Natural feature corridors, combined with projected linear buffers are an important feature of the Land Use Plan. As well as the primary mechanism to protect township natural resources, these areas may offer additional long-term benefits to the community, such as the control of potential stormwater flood damage and maintenance of stable groundwater levels.

Plan Element: Review all new subdivision or permit applications with a view to maintain buffers between differing land uses.

Regulations governing land development are extremely important in helping to ensure the protection of environmentally-sensitive and culturally-valuable lands and in creating important buffers. Zoning alternatives such as residential clustering, which concentrates a tract's potential development on a small portion of the overall property, leave the remaining area as permanent open space. This approach has been used widely in BT.

Residential Uses

The housing element of the Birmingham Township Growth Management Plan (see Section 5 of this chapter) explains in detail the intended locations for residential use, incorporating a gradation of densities. At the time of this writing less than 400 acres of potentially developable land remain in BT and of that most (3/4) is composed of wetlands, steep slopes and other constrained pieces of land.

In general, low density development is proposed for most of the areas of the township intended to be residential, reflecting the present generally single-family detached dwelling character of the township and reinforcing this quality into the future. The possibility of minor subdivisions exists on as few as 20 parcels. These are primarily lots having one single family home on them with the possibility to add one more home.

Plan Element: Where minor subdivisions are proposed, consider the impact on open space and historic landscape preservation.

There are no remaining open tracts available for large-scale residential development in the township. Residential “infill” will be a factor over the planning period. “Infill” describes the sensitive integration of new dwellings into the township’s existing fabric and encompasses the addition of compatible residential development on vacant, undeveloped, and under-developed parcels.

Commercial Uses

The Township Management Plan directs most consumer-oriented retail activity to the US Route 202 corridor. The Plan **recommends that this commercial area be protected from becoming failed commercial or derelict property.** This, in part, will require that agreements with property owners be scrupulously enforced unless special exceptions or new conditional use applications are approved.

Anticipating that some of the existing commercial facilities may face obsolescence or redevelopment on non-intensively used properties, prepare to protect the appearance and value of the Route 202 corridor.

If US Route 202 is widened and improved over the next few years, this part of the township will increasingly become well situated in terms of its regional access. It is not anticipated that this will occur in the plan period. Development of parcels in the corridor for office uses, taking advantage of this access, may occur over the planning period.

Plan Element: Maintain standards for building placement, height, and bulk, and for parking, landscaping, and lighting should be in place to promote a well-functioning and visually-appealing character for the corridor. Review the possibility for design standards for commercial structures and appropriateness of zoning ordinances in the 202 corridor.

Institutional Uses

Land area designated for institutional use in the Land Use Plan is currently in that use, including the Birmingham Township Municipal Building on PA Route 926 (Street Road), the Birmingham Meeting and cemetery on Birmingham Road. These uses are projected to remain in their current locations through the planning period, with any facility expansions occurring with the existing sites.

Recreational Uses

Given that only small parcels of land remain available for any kind of development including for recreational use and the fact that the existing Sandy Hollow and Birmingham Hill already exceed the standard for recreational space in a township of BT’s size and population, no additional facilities are planned or, indeed, possible.

Dilworthtown

Dilworthtown is a unique place in Birmingham Township that still largely reflects its 18th century roots and also played a key role in the Battle of the Brandywine. An historic crossroads village on the road between West Chester and Wilmington, Dilworthtown was bypassed when US Route 202 was built as the new Wilmington Pike. Remaining on Old Wilmington Pike, Dilworthtown has retained several historic structures and, at the crossroads of Old Wilmington Pike, Brinton’s Bridge Road, Birmingham Road and Oakland Road, still possesses a village ambiance. Dilworthtown has a regionally-known restaurant,

specialty dining establishments, office building and residences, together comprising a character that is unmatched in the community.

Dilworthtown's special identity is something that Birmingham Township would like to keep. An important goal of the Plan is to protect the qualities of Dilworthtown that make it a unique place in the community. The Land Use Plan incorporates a *VP-Village Preservation* area for Dilworthtown. Dilworthtown and its immediate vicinity represent a district village environment within the community, which should be preserved through the planning period.

Plan Element: Protect the qualities of Dilworthtown that make it a unique place in the community.

Old Wilmington Pike is proposed to remain the "Main Street" for Dilworthtown. It is important to maintain the character of this main street and the five points intersection it forms with three other streets. This five point intersection dates to colonial times.

The existing substandard roadway geometry at the main intersection in Dilworthtown is likely to become an increasing problem over the planning period. The prospect of increased traffic passing through Dilworthtown means that its "five-point" intersection, where Brintons Bridge Road, Old Wilmington Pike, Birmingham Road, and Oakland Road all converge, may no longer be able to perform in a safe manner. This is a complex intersection already, and higher traffic volumes may overwhelm it. Residential and commercial development in Birmingham Township and its vicinity has resulted in increased traffic passing through the village, and, as development continues over the planning period, these traffic volumes will increase.

The close proximity of Dilworthtown to the US Route 202 corridor represents a particularly strong challenge to the continuity of a village character at this location. This highway may be widened to six lanes over the coming years although this is unlikely. Physically, US Route 202 will encroach on the edges of Dilworthtown in the vicinity of Brinton's Bridge Road. Functionally, the widened and improved highway could attract more traffic to it on intersecting and parallel roads such as Brinton's Bridge Road, Old Wilmington Pike, Birmingham Road and Oakland Road.

As a follow-up to the township-wide comprehensive planning effort, BT should study Dilworthtown and its vicinity, looking at the implications of expected traffic volumes and prospective highway improvements and land developments in the area on the village and ways that it can retain its character. Such a more-focused village plan could be developed in association with adjoining Chadds Ford Township and should include the participation of Dilworthtown residents and business operators.

Plan Element: Work with adjoining Chadds Ford Township to protect the Village to the extent possible.

Fiscal Impacts of the Land Use Plan

Remaining development, for example, should have limited effects on the extent of the roadway network, snow plowing, road maintenance, and road improvements. In a similar vein, a concentration of commercial uses in a designated area such as the US Route 202 corridor made the extension of central sewer and water system service networks and the expansion of central sewage treatment facilities more economically feasible.

Chapter Three: Management Plan

It is unlikely that any significant fiscal impact will occur from development in BT or surrounding townships. The most likely fiscal impact is from regulations promulgated at higher levels of government that create expensive obligations for BT.

Plan Element: Be aware of forthcoming federal and state mandates for sewer and storm water management.

Relationship of the Land Use Plan to Local and County Plans

A total of six municipalities border the township, including East Bradford Township to the north, Pocopson Township to the northwest, Pennsbury Township to the southwest, Chadds Ford Township to the south, Thornbury Township to the east, and Westtown Township to the northeast. Five of the townships are in Chester County and Chadds Ford Township is in Delaware County.

The issues will be: compatible zoning in land adjacent to BT, traffic generation and accommodation, and stormwater management.

Plan Element: Continuous contact on planned development and timely input are the path recommended here.

Chadds Ford Township

Chadds Ford Township was formerly known as Birmingham Township (Delaware County), but changed its name in the mid-1990's, presumably to eliminate the confusion that arose with adjacent townships, albeit in counties, having the same name. Land uses in the northern part of Chadds Ford Township are similar to those in abutting areas of Birmingham Township, with low density residential uses and open space associated with natural features such as stream courses and steeply-sloped lands predominating. Commercial areas continue from the Birmingham Township side into Chadds Ford Township on the US Route 202 corridor. Zoning is R-1 residential in all parts of Chadds Ford Township that abut Birmingham Township, except for a PRD residential classification along Webb Road and the commercial designations on either side of US Route 202.

Chadds Ford Township is presently considering development on Route 202 and adjacent to BT near Dilworthtown. That development could include commercial (offices and a small hotel as well as retail space) and a forty-lot residential development on Oakland Road. If Birmingham Township wishes to follow-up to its township-wide comprehensive planning work by studying the Dilworthtown village area more closely, then Chadds Ford Township should be invited to participate, since the village area straddles the two townships.

Pennsbury Township

Pennsbury Township adjoins Birmingham Township, but the Brandywine Creek intervenes and road connections between the two municipalities must be made via other townships. Brandywine Creek's extensive floodplain effectively widens the separation of Pennsbury Township from Birmingham Township. West of Brandywine Creek, land use in Pennsbury Township consists generally of low intensity residential use and open space associated with stream courses. Zoning is R-1 and R-2 residential in the vicinity of Brandywine Creek, indicating areas with lot sizes of at least two (2) acres. Pennsbury Township's Comprehensive Plan was last updated in 1981.

Chapter Three: Management Plan

Pocopson Township

Pocopson Township is also separated from Birmingham Township by the Brandywine Creek, but both PA Route 926 (Creek road) and PA Route 52 (Lenape Road) bridge the creek, joining the municipalities. Pocopson Township has its highest intensities of land use located in the area along Pocopson Road, between Route 926 and Route 52. This area is at the eastern end of the municipality, just across Brandywine Creek from Birmingham Township.

Recommended uses for this part of Pocopson Township include an area designated for a mixed-use “traditional village”. The new Pocopson Elementary School is presently in operation and already over-filled. While the uses proposed for the eastern tier of Pocopson Township are not identical with uses for the Birmingham Township side of the municipal line, they are compatible in that the Brandywine Creek corridor effectively buffers Birmingham Township’s residents, especially those in the Radley Run area.

Existing zoning in Pocopson Township includes the strip of Flood District along Brandywine Creek, a very narrow band of CI Neighborhood Commercial along the east side of Pocopson Road and a small area with similar designation near the PA Route 52 bridge, and a LI Limited Industrial area generally west of Pocopson Road. As pointed out in the preceding paragraph, the Brandywine Creek corridor effectively buffers Birmingham Township from these commercially-and industrially-zoned areas.

East Bradford Township

The Radley Run development crosses the municipal line into East Bradford Township. The Radley Run portions of East Bradford are zoned R-2 and R-3 residential, while the area west of Creek Road is zoned R-1 residential. The mix of low density residential and conservation uses proposed in the East Bradford Township Comprehensive Plan (2004) for its southern tier is a good match (zoned R-2 and R-3) for existing and proposed uses on the Birmingham Township side of the boundary.

Westtown Township

Westtown Township presents specific potential development issues to the northeast side of BT. Before 2020, it is likely that a large condominium community will be constructed on Route 926 and Route 202. Traffic issues with an already busy intersection of these two roads will be a challenge to be managed.

Thornbury Township

Thornbury Township to the east of BT will also present a set of issues related to development, particularly commercial development on Route 202. Here some level of coordination on design standards and zoning ordinances between BT and Thornbury is desirable.

Chester County

Birmingham Township is located within the Rural, Suburban and Natural Landscape designations of the “Landscapes2”, the 2009 County Comprehensive Plan, along with clearly identifying that the Township’s goals of maintain the rural-suburban atmosphere, preserving historic resources and open space, and protecting environmentally sensitive areas, are consistent witht goals and objectives of the

“Landscapes2”. Dilworthtown is designated for continuation of its present village character in the Birmingham Township Management Plan’s recommendations.

SECTION 4: CIRCULATION PLAN

The road system of the township consists of the following elements:

1. A multi-lane regional highway, US Route 202, which crosses the eastern end of the township;
2. Two highways, Street Road (PA Route 926) and PA Route 52, that bridge Brandywine Creek and connect communities to the west of US Route 202 and West Chester Borough, respectively;
3. Two north-south roads, Birmingham Road and Creek Road (once listed as PA Route 100), that intersect with Street Road and extend through Birmingham Township into adjacent municipalities;
4. Three east-west roads: Meetinghouse Road, Wylie Road and Brintons Bridge Road – that run between Birmingham Road and Creek Road;
5. Two north-south roads, South New Street and Old Wilmington Pike, in the eastern end of the township;
6. Country Club Road, connecting Birmingham Road and Creek Road in the northern part of the municipality, running through the Radley Run Country Club and residences;
7. Minor streets constructed in conjunction with residential developments.

The Circulation Plan proposes to upgrade the safety, convenience and efficiency of the road system of the township. Of the seven elements cited above, possible improvements involve the first five.

US Route 202 Improvements

It is unlikely that the Pennsylvania Department of Transportation (PennDOT) will improve this road in the 10-15 year time horizon of this Comprehensive Plan. In the past PennDOT has proposed to upgrade US Route 202 from a four-lane road with periodic signalized intersections to a six-lane road with some intersections configured as grade separated interchanges. Improved signalized intersections at Brinton’s Bridge Road and at Old Wilmington Pike were part of PennDOT’s plan and a grade separated interchange is proposed to be built at Street Road, just to the east of the township.

Our planning assumption is that throughout the plan period, no improvements will be made.

Other Potential Roadway Improvements

Apart from the major upgrade to US Route 202, the only other significant improvement to roads in Birmingham Township planned by PennDOT is a rebuilding of PA Route 926’s bridge over Brandywine Creek. This is an older, narrow bridge, but the major deficiency is its elevation and the elevation of its approaches. Occasionally, flooding of the creek results in the bridge being temporarily closed. Often, the approaches to the bridge from the Birmingham Township side are inundated with water as a result of creek flooding and high volumes of water from Radley Run. A new bridge here, with a higher deck elevation and raised approaches from the Birmingham Township side, is planned.

This presents temporary but severe redirection of traffic problems for BT and several surrounding townships. In the event that the bridge closure also closes Creek Road north of Route 926, the problem

will be even more severe with traffic detouring through streets such as Birmingham Road, Brintons Bridge Road, General Lafayette Boulevard and Country Club Road.

Plan Element: Well in advance of the start of construction, a plan to route east-west traffic should be developed in coordination with PennDOT and impacted adjacent communities. This should include a separate routing for trucks that restricts trucks to Routes 202 and 1.

In general, the roads in categories 2 through 5 (above) are deficient as contemporary State Highways or even collector roads. These are historic routes that typically exhibit narrow cart ways, lack of shoulders and guard rails, frequent tight turns and steep grades, limited sight distances, acute-angled intersections, and an absence of lighting. To make them over in order to meet modern standards for arterial and collector roadways would entail great expense and major physical changes to the roads themselves and to the properties and landscapes through which they pass. The quality of the historic environment enjoyed by the residents of Birmingham Township and the potential threat to it implied by the construction of road improvements precludes recommending a wide-reaching effort to upgrade these roads in this Circulation Plan. Nonetheless, in situations where basic safety is threatened, limited roadway improvements may be required.

One primary safety issue is the number of intersections where line of sight to enter a crossing street is so limited that turning onto a cross street is difficult. In some cases the restriction is caused by vegetation and in others by placement of the intersection into a deep cut in the surrounding topography.

Plan Element: Add creation of a list of these restricted site intersections to the Roadmaster's responsibility and evaluate the importance, practicality and impact of improving these intersections.

The roads for which BT has responsibility (about 14 miles in total length) are generally well maintained and cleared of hazards. Snow plowing is the primary ongoing maintenance activity noted by residents. This is well done. Traffic control signs seem to be well placed and sufficient.

Plan Element: Continue the excellent snow clearing work and the maintenance of BT roads within budget and avoid adding traffic control signs unless demonstrably required.

Walking Paths (Trails)

This subject has been more debated than most far more impactful subjects in BT. In our resident survey only 11% of residents stated a "want" for walking paths. The lack of interest by the majority of adult residents in BT aside, two issues make formidable barriers to the installation of any trail, let alone a trail system. Those barriers are concerns of a significant number of property owners about the privacy impact of a trail crossing on or near their property and the issue of road crossing safety given the nature of roads (see previous paragraphs) and their spacing throughout BT. Walking paths must frequently cross or parallel roads given BT's arrangement of roads.

Given the difficulty of a plan that surmounts both of these hurdles it seems best to focus on the doable. That consists of two parts: connecting Sandy Hollow and Birmingham Hill, and completing a loop around Birmingham Hill. Over enough time, these two may provide more than ample walking paths without the need to take serious safety risk on state or township roads and without needing to impact the privacy of many township residents. A caution is due here in light of previous experience, that is, paths must be

Chapter Three: Management Plan

professionally surveyed, property owners must freely attach an easement in perpetuity to their deed for the property in question, allowing the easement and the cost to insure and maintain the paths must be estimated and born by the township.

There has been continuing interest by the Birmingham Township Board of Supervisors in some sort of passive recreation and or canoe launch on the Brandywine Creek. Considerable hurdles exist for both of these and serious study of constraints and feasibility appear needed.

Plan Element: Determine the feasibility of a two-part plan, as listed above that meets the conditions stated. Defer any further debate on paths until such time as the plan about these has been fully developed.

Bike Paths

This topic is being pursued by a number of organizations outside of BT with the goal of increasing tourism and recreation in this part of southeastern PA and northern New Castle County. In the BT resident survey, 7% of residents stated a “want” for more bike paths.

In creating a bike path system, the issues are more ones of safety and interference with vehicular (automobile) traffic. Our planning assumption is that only bike paths on state highways are feasible in the BT area and funding to create safe bike paths along state highways is highly unlikely to materialize. On that basis, we are only able to make **a recommendation to maintain the township’s position that we do not see a responsible way to support a bike path system through BT.**

Public Transportation

The Chester County Planning Commission in their development of the Chester County Public Transportation Plan (CCPTP) notes that the Chester County geography and population distribution combined with the varied and geographically spread destinations of most residents presents a challenging situation with respect to providing public transportation. Today in Chester County only about 3% of commuter trips are by public transportation (probably less in BT) and the goal over the next ten to twenty years is to raise that to 5%. The majority of travel will remain by automobile.

Today, three bus routes come near BT but none come into it. Our operating assumption is that this is unlikely to change.

The CCPTP targets improvement of rail station parking, extension of rail lines, addition of at most a dozen new routes, none of which are likely to run through BT, improvements in the rider experience on all modes and encouragement of van pools and use of public transportation by municipalities in their development plans. None of this is likely to have impact on BT. If a bus route is developed traveling north-south on Route 202, parking in the shops of Dilworthtown would be a likely since daily ridership is unlikely to tax the parking capacity of that lot during the work day. Unfortunately, that parking lot is not safely accessible on foot since it involves crossing Route 202.

Plan Element: Keep abreast of the CCPTP as it evolves but expect that BT will not be served by nearby public transportation in the plan period. At some time, determine if there is a destination sufficiently concentrated that some sort of van pool becomes feasible.

SECTION 5: HOUSING PLAN

The goal of the housing element of the Management Plan is to recognize the built out condition of the township while at the same time supporting the other major goals of the Plan.

The number of dwelling units in BT and the characteristics of its housing stock has not changed dramatically in the last fifteen years. In 1980, there were 492 housing units in the township, of which 462 units (94%) were single family detached units. Typically, these houses were on fee-simple lots of one or two acres or larger, although the emerging Radley Run subdivision was a notable exception, with one-acre lots and extensive common open space.

By 2000, the number of dwelling units in the township had increased nearly three-fold to 1,413 units. The majority of the almost 1,000 units erected between 1980 and 2001 were constructed as part of residential subdivisions incorporating deed-restricted common open space areas. About 360 units (39%) of the 1980-2000 units are small lot single family detached and single family attached (twins and townhouses) units built as part of the “Knolls” and “Hunt” developments in the eastern part of the township.

Today, the township offers a wide variety of housing opportunities, from townhouses to small-, medium- and large-lot single family detached units. While much of the housing stock is quite new, its overall character may also be considered “mature,” since there is a good range of housing choice and since there is no prospect of developing large numbers of new housing units in the future. As pointed out in the *Holding Capacity* analysis of Chapter 2, Section 7, construction of new dwelling units over the planning period is likely to be constrained by a limited supply of available land.

Conserving the Existing Housing Stock

The housing element recognized that reinforcement of the character of residential areas within the township is a significant aspect of planning for residential use in Birmingham Township. With the extent of residential construction by 2000, most of the community is essentially “built out.” Most of the parcels still available for development are relatively small in size, ranging up to twenty acres and usually much smaller. Where these latter kinds of sites may be found, they should be developed generally at densities comparable with existing housing, in a form that is compatible with the neighborhood or district character.

Plan Element: Track those few parcels remaining that can be subdivided and establish communication with those few property owners to understand current owner’s intentions.

Areas Available for New Residential Development

The *Holding Capacity* analysis of Chapter 2, Section 7 reveals some parcels potentially usable for new residential development, but this availability is largely illusory. The extensive open acreage between Creek Road (PA Route 100) and Brandywine Creek, for example, is almost entirely in a floodplain, and the Meetinghouse Road corridor properties are primarily deed-restricted against development as part of an effort on the part of four levels of government (municipal, county, state and federal) to preserve lands associated with the Battle of the Brandywine. Figure 5 shows the plots that constitute the entire BT capacity to hold additional homes. The maximum addition appears to be about 40 additional homes.

Housing and Demographics

As described in Chapter 2, housing in Birmingham Township predominantly takes the form of single-family detached units. New residential construction from 1980 to 2000, however, did include a substantial number of small-lot single family detached and single-family attached (twins and townhouses) units. Currently Birmingham Township offers opportunities for current and prospective residents to select among large-lot single family detached dwellings, medium-sized-lot single family detached homes, small-lot single family detached dwellings, and single family attached (twins and townhouse) dwellings.

While Birmingham Township's population has not been growing, it has been aging (see Chapter 2, Section 6). Facilities to support a truly aged population do not exist in BT but are abundant in some of the townships contiguous to BT.

Housing and Open Space

The housing element recognizes the Management Plan's goals and objectives with respect to community services and resource protection. The extensive system of open space throughout the township, portrayed in the Land Use Plan, depended on creation of generous amounts of permanent open space on each tract of land. Opportunities for residential clustering have been available in the township, and have been employed widely while development was occurring in the 1980 to 2000 time period. The benefits of the open space that results are substantial for township residents, and are permanent as well,

Residential Classifications – Low Density

Low density residential development, generally less than one dwelling unit per acre, was proposed for most of the township. This area also includes most of the extant undeveloped acreage in the township. Existing low density residential areas are stable and are projected to remain much as they are through the planning period.

Any development of several units simultaneously is proposed to incorporate generous corridors of open space as part of the land development process. This technique is recommended in order to protect environmentally-sensitive resources, and to continue the provision of a rural suburban appearance.

Residential Classifications – Medium and High Density

Medium and high density residential development, from about two to six dwelling units per acre, incorporates the "Knolls" and "Hunt" developments in the eastern part of the township. These densities of development are consistent with the construction of single-family detached housing types or single-family attached (twin and townhouse) dwellings.

Fair Share and Affordability

The term "fair share" comes from legal decisions that have been made, beginning in the mid-1970s. Courts have held that local government land use regulations must allow for the housing needs of people who may desire to live within a municipality's borders. In that regard, an ordinance may not exclude legitimate uses of land, such as multi-family housing, either by specifically prohibiting the use or by failing to make provisions for the use. Each municipality, then, must do its fair share in accommodating various housing types that may be in demand in a region.

In Pennsylvania, there are no precise measures for determining whether a municipality has provided its fair share. According to the Chester County Planning Commission, approximately fifteen to twenty percent of potential housing units should be other-than-single-family detached units. Similarly, between two and fifteen percent of the land area of a municipality should be available for such units.

The Land Use Plan for Birmingham Township indicates some 300 acres of land (7.5%) of the township designated for medium density residential, high-density residential, village preservation, and mixed uses. These designations support housing types that include single-family attached, multi-family, and specialized (life care, for example) residential structural types.

Of the approximately 1400 dwelling units in the township at the present time, about 400 (28%) are single-family attached or small-lot, single family detached units part of the two PRDs and the Dilworthtown vicinity. The inclusion of the PRD and Dilworthtown-area small-lot, single-family detached units in this computation is in recognition that these units are more affordable, relative to prices for most new single-family detached housing in Chester County. (While the notion of fair share in Pennsylvania court decisions may not have been explicitly linked with “affordability,” any useful analysis of housing opportunities in a region must necessarily gauge housing prices.)

SECTION 6: COMMUNITY FACILITIES PLAN

The goal of the community facilities element of the Management Plan is to provide the complement of facilities and services necessary to serve the residents of the township through the planning period. Public school, park and recreation, community, administration, and emergency service facilities are reviewed in this section. Given the stable population size and slowly increasing age of the population in BT, existing facilities appear adequate.

Schools

The Unionville-Chadds Ford School District, of which the township is a part, has faced steady increases in enrollment, reflecting population increases in the constituent municipalities. Facilities have been expanded and a new elementary school constructed on PA Route 926 in Pocopson Township, just west of Brandywine Creek. Future new facilities for the Unionville-Chadds Ford School District are unlikely to be located in Birmingham Township, as there would appear to be few, if any, prospective sites.

The existence of schools close to BT can be beneficial, however. In the case of Unionville-Chadds Ford School District, proximity can mean convenience for township residents. The role of schools as community facilities, beyond a basic function as educational institutions, should not be overlooked. School buildings and grounds are important community resources and should be made available for general community use outside of regular school hours. School districts and municipalities should work cooperatively to ensure that educational facilities are true community resources, with opportunities for use by the general resident population as well as by enrolled children.

Plan Element: Maintain liaison with Unionville Chadds Ford School District to promote best use of district facilities.

Parks and Recreation Facilities

Chapter Three: Management Plan

According to the National Recreation and Park Association (NRPA) municipalities should be provided with 7-11 acres of park space per 1000 residents.

For a 2025 township population of 4,200 (see Section 3 of this chapter and Chapter 2, Section 6), then, some 40 acres of parkland would be required, according to the NRPA standards. This standard is already met by the Sandy Hollow triangle alone (reference below).

The BT BOS is interested in providing passive recreation in the Brandywine Creek flood plain west of Creek Road. Here, “passive recreation” refers to walking trails. Parcel numbers for these parcels are shown on Figure 9.

NRPA standards should be taken merely as a guide and should not necessarily be followed strictly. Local circumstances may indicate that a departure from these standards be in order. For example, BT has a number of residential developments constructed according to cluster design principles. Many of the play-lot and neighborhood park needs have been met at the level of individual developments, and will not constitute a direct responsibility of governmental units or community organizations. At the present time, there are more than 500 acres in the township, part of residential developments that are deed-restricted to open space and recreational uses. While very little active park space is available in BT, there is significant amount of such space nearby.

Publicly-accessible open space beyond the boundaries of a municipality can also supply parkland needs for residents of BT. Pocopson Elementary School and Rustin High School just to the west and east of Birmingham Township, respectively, represent important recreational opportunities for township residents.

Current Township-owned open space is limited to triangle shaped, 46-acre Sandy Hollow property between Birmingham Road and South New Street. Sandy Hollow includes a walking trail with observation points, in addition to a small parking lot. Deed restrictions associated with the Sandy Hollow property limit use of it to “passive” recreational pursuits.

Birmingham Hill (100+/- acres) is the most recent addition of a large area dedicated as open space. It preserves a small part of the Brandywine Battlefield as a scenic viewshed/historic monument and provides a walking trail.

The Birmingham Township Subdivision and Land Development Ordinance currently requires dedication of land for park, recreation and open space use in conjunction with new residential developments. The ordinance was amended to allow for “fee-in-lieu” provisions, whereby developers of land may be required to pay a fee to Birmingham Township for the municipality to provide for park, recreation and open space uses instead of the developer dedicating land. However, in view of the limited amount of acreage remaining for development, this provision is likely to result in nominal benefit going forward.

Municipal Administrative Facilities

The Birmingham Township Municipal Building, on Street Road (PA Route 926) dates from 1986 and is centrally located in the community. This facility continues to serve the township well as an administration center.

Chapter Three: Management Plan

Over the planning period, demands for space at the municipal building may change and the structure may need to be modified. The size of the municipal building's four-acre site and its excellent access should mean that a building expansion can be accomplished relatively easily at this location.

Emergency Services

Two fire companies, the West Chester Fire Department and the Concordville Fire and Protective Association, serve the township. The West Chester Fire Department has three fire stations in and near West Chester Borough, with one station located about three miles from BT, off Miner Street (PA Route 842) in East Bradford Township, just west of West Chester Borough. Access to BT is primarily via Miner Street and Birmingham Road. The Concordville Fire and Protective Association is on Baltimore Pike (US Route 1) near Conchester Road (US Route 322) in Concord Township, Delaware County, about three miles from BT. The most direct access would be via Route 1 and US Route 202. From the perspective of geographic location and road accessibility, the combination of the two companies offers good fire protection to the residents of Birmingham Township.

Both companies are volunteer organizations. At present, they possess adequate manpower and equipment to provide emergency services to the community, but rapid residential and commercial development in their service areas means that updated equipment will be needed over the course of the planning period and additional vehicles and associated apparatus will become necessary as further development occurs.

Significant new office and residential development will mean a corresponding increase in demands for emergency services. The primarily all-volunteer status of community based fire companies and ambulance corps may produce increased staffing problems in the future. Local emergency service providers must compete with a variety of other agencies, activities, and programs for residents' time and interest. In addition, volunteers must submit to greater time demands due to more sophisticated training procedures, and widely-dispersed work locations coupled with traffic congestion make it difficult for adequate numbers of volunteers to reach emergency scenes quickly during regular business hours. Some paid firefighters and paramedics may be needed at these companies over the planning period.

Suburban communities with growing populations usually find themselves subject to increased demands for police services. Although BT population is expected to remain essentially unchanged over the plan period the demand for increased or changed police protection may be brought about by the expectations of the new residents and business operators and sometimes even changed attitudes on the part of longtime residents. These factors all combine to put pressure on a municipality to provide increased policing.

These services are adequately provided so continued contact with the providers and negotiation of the amounts of funding provided by BT to continue those services are recommended.

SECTION 7: CULTURAL, HISTORIC, AND LANDSCAPE RESOURCES CONSERVATION PLAN

Preservation Approach

The Cultural, Historic and Landscape Resources Conservation Plan element has five basic preservation planning goals: Enhancing the township's quality-of-life; protecting its historic resources; protecting and enhancing the community's low density suburban landscape character; preserving the landscape over

which the Battle of the Brandywine was fought; and promoting research into and education about the township's history.

Unlike the situation in most communities experiencing intense suburban development pressure, Birmingham Township's historic buildings are not severely threatened. As described in Section 5 of Chapter 2, page 13, these historic buildings are predominantly residences constructed prior to 1860. Many are associated with the township's historic farmsteads. The nature of the development that has occurred recently in BT has respected these historic buildings as highly desirable properties. The historic dwellings are generally owner-occupied single-family residences that establish a firm character that many new residential subdivisions actually seek to mimic. The buildings generally are in good condition and retain a high degree of historical integrity.

Suburban development, however, has dramatically altered the township's historic landscape. After almost three hundred years of gradual, incremental change as an agricultural landscape, recent accelerated development activities have changed the township's landscape by eliminating farm fields and field patterns, obliterating farm lanes, removing agricultural outbuildings, and closing in the formerly open spatial character of the landscape with new residential construction and new vegetation.

Battlefield preservation efforts were successful and the township ended up being essentially built-out in terms of potential new, large-scale development. Nonetheless, as regional development pressures persist, a very few smaller tracts and environmentally-marginal properties may continue to be developed, increasing threats to both historic buildings and the historic landscape.

Plan Element: Birmingham Township's preservation initiatives should be strong and aggressive.

They should take the long view, taking actions now that will build and enhance strong community character for the future. Birmingham Township's preservation approach should concentrate upon the preservation of both historic resources and landscape character. Over the short and medium term it should address comprehensive battlefield and open space preservation, extending historic resource management and protection township-wide and influencing potential changes to the landscape.

Plan Element: Consider areas in addition to the current historic district for design standards.

Plan Element: Zoning Ordinance Update: The existing zoning ordinances should be updated for implementation of comprehensive plan policies and recommendations.

Battlefield and Open Space Preservation

Battlefield Preservation: Preservation of the landscape over which the Battle of the Brandywine was fought is the most important preservation issue for BT to address. The township engaged as a partner in the preservation activities of the Brandywine Battlefield Task Force and continued preservation of the battlefield will significantly enhance the future quality of life within the township by helping to preserve large areas of open space and by preserving the township's low density character. The township should continue its effort to protect and interpret its historic resources, consistent with the overall battlefield preservation effort.

Open Space: Birmingham Township's open space will include environmentally constrained lands, township owned parcels, private recreational lands, public right-of-ways, lands owned by conservation organizations, and lands protected by conservation easements and other preservation mechanisms.

Plan Element: Preservation mechanisms and tools evolve and new methods may be available today that were not in 2000.

Plan Element: Benchmark best practices for historic preservation and determine if new practices should be implemented.

Birmingham Road Corridor Act 167 Historic District: Birmingham Township currently has a local historic district complying with Act 167, the Pennsylvania Historic District Act. Emphasis within the district should be placed upon the preservation of the battlefield landscape and the township's historic and agricultural character.

Research and Education

Township History:

All of this should be regarded as a Plan Element: BT has an interesting history that should be recorded. An overview is given in the appendix. Under the guidance of the township Historical Commission, a comprehensive history of BT should be prepared. That history should be made readily available to BT residents. With the change of the township from an agricultural community to a low density suburban community, it is particularly appropriate that the history be prepared as soon as practical. Grants should be obtained for the history, which should be prepared by a qualified professional writer and historian. In cooperation with local partners such as the Chester County Historical Society, Chadds Ford Historical Society and Brandywine Battlefield Park, the township Historical Commission should oversee and coordinate research into the township's history. Research should be organized around key themes related to the township's history as well as specific properties and individuals. Much of the story of BT generated by this work should be accessible on the BT website.

Educational Programming: The BT Historic Commission should coordinate educational programming in coordinate with the Chadds Ford Historical Society. The purpose of the programming would be to inform interested local residents about the township's history. It is recommended that three or four informal presentations on township history be made each year.

Resource Library: The Birmingham Township Historical Commission and HARB should work with the Chester County Historical Society to help maintain a resource library for use by township residents who own historic buildings. The resource library should compile background information on the appropriate maintenance of historic buildings and this information should be available on the township website. This should include preservation briefs published by the National Trust for Historic Preservation and National Park Service, books on preservation techniques, and source books for preservation materials and services. Provide access to the resource library on the BT website.

SECTION 8: UTILITIES PLAN

Sewage Systems

For Birmingham Township, notwithstanding a general lack of central sewer facilities, the community saw rapid growth in new residential developments (see Chapter 2, Section 3). Development has been able to proceed, despite limited central sewer facilities, because of the low intensity (large lots) of most new developments, permitting on-site septic tank and tile field sewage disposal systems for individual lots.

Chapter Three: Management Plan

It is fully anticipated that on-site systems will remain the primary treatment method for the majority of the township with the exception of the areas served by the two facilities mentioned in the paragraph below.

Construction of the first sewage treatment plant in the township accompanied the development of the “Knolls” and “Hunt” developments at the eastern end of the township in the mid-1990s. The service area for this plant now includes the two aforementioned mixed small-lot single-family detached and single-family attached (twins and townhouse) developments plus a handful of properties between Faucett Drive and US Route 202 in the “V”-shaped area at the north end of Old Wilmington Pike. That plant services the commercial facilities at Dilworthtown and along Route 202.

Birmingham Township’s Pennsylvania Sewage Facilities Act (Act 537) Plan includes possible extensions to the central sewer system service network in the eastern end of the municipality, including all properties east of Old Wilmington Pike, the Old Wilmington Pike-Birmingham Road intersection area, and the “Fieldpoint” subdivision on the west side of Birmingham Road.

The Act 537 Plan update acknowledged that flows up to 167,500 gallons per day (gpd) could be accommodated with some equipment upgrades and a re-rating of capacity. This has been unnecessary since actual flows are less than the permitted capacity. An upgrade to the BT owned plant to remove nitrates will be performed in 2015 to meet stricter stream discharge limits. The capacity of the plant will remain at 150,000 gpd and it is currently operated at 2/3 of hydraulic capacity.

Actions to address environmental problems associated with substandard individual on-lot disposal sewage systems should also be recognized as an important part of managing sustainability and protecting the environment. Although there are few problems with these systems in the township, an **education program aimed at maintaining the health of an on-site system is highly recommended** to eliminate unnecessary failures in the future.

The other area of the township served by central sewer service is located in the north end of the Township. Residences on General Howe Drive and Regimental Drive connect to the East Bradford public sewage treatment plant. Eleven homes from East Bradford township and eight homes from Radley Run and the Radley Run Country Club connect to the Radley Run Country Club sewage treatment plant.

It is essential that Act 537 sewer planning for Birmingham Township consider the implications of state and county mandated requirements on the sewage collection system and wastewater treatment plant capacities and capabilities.

Water Systems

Water is supplied by Aqua PA and individual on-site wells. This mix of service is adequate for BT now and for the remaining small number of residential lots that could be developed. Some residents now served by wells have expressed an interest in public water service so **continued contact with Aqua PA is recommended**. (Note that the Chester Water Authority has been purchased by Aqua so all of the service is under one parent company).

SECTION 9: ENVIRONMENTAL PROTECTION PLAN

The Environmental Protection element of the Management Plan identifies specific areas in the township that are environmentally sensitive, based on several sources:

- The US Army Corps of Engineers' 100-Year Floodplain designation prepared for the National Flood Insurance Program;
- The National Wetlands Inventory undertaken by the US Fish and Wildlife Service and Pennsylvania Department of Environmental Protection;
- The Soil Survey of Chester and Delaware Counties prepared by the US Department of Agriculture Soil Conservation Service;
- United States Geological Survey quadrangle series maps; and
- Aerial photography.

Areas that have been mapped include floodplains, wetlands, steep slopes, prime agricultural soils, and woodlands (Figure 4)

These classes of environmentally-sensitive features are not uniform in their impact on development potential or in what they represent as hazards to human life and property. There are levels of sensitivity, suggesting corresponding levels of response.

Floodplains/Stormwater Management

The first and most specific level is represented by the 100-year floodplain designated by the federal government. There is clear authority for a complete prohibition of new residential development within the designated floodplain, and a set of standards for regulating the design and construction of nonresidential development within the floodplain so as to prevent exacerbation of the flood hazard.

Plan Element: In considering any application for uses in the flood plain, discussion should start from and be based on the understanding that any human activity in a flood plain is detrimental to the natural purpose of flood plains especially if part or all of the floodplain is comprised of wetlands.

Flood prone soils, identified by the USDA Soil Conservation Service Soil Survey, at times do not correspond precisely with the federal floodplain designations. The flood prone soils, so classified because of their alluvial nature indicating that they were deposited by floodwaters, reflect not only 100-year floods but also floods of lesser frequency. Where flood prone soils lie outside the federally-designated areas, the burden of proof should be on land developers to demonstrate by specific on-site tests, engineering analysis, and analysis of effects of impervious cover percentages of upstream development that could alter flow levels, that the generalized soil classification is in error for the specific site or that any construction will be designed to avoid any possibility of creating a hazard to human life and property or exacerbating local flooding. **Plan Element: Thus, as a matter of policy, the flood prone soils initially should be subject to all of the development restrictions of wetlands and as land within the 100-year floodplain.**

Serious flooding episodes in BT occur with regularity, especially along Creek Road corridor. PA DOT plans to improve the Route 926 Bridge over the Brandywine Creek by raising the approaches and the bridge itself. While this may reduce the incidents of bridge closings, it will do little for the remainder on

the Brandywine Creek corridor. The need to protect all flood prone areas but especially between Creek Road and the Brandywine Creek should be given top priority in land use decisions. Any use of the land in this area decreases the ability of the wet lands along the Creek to absorb water and lessen flooding downstream.

The Composite Constraints map (Figure 4) is an extremely important resource for the municipality. The information represented, particularly with respect to floodplains, is a strong determinant for land use planning and was significant in shaping the Land Use Plan (Figure 9) for Birmingham Township. Implementation of the Land Use Plan, as well as the preservation of environmentally-sensitive resources, will rely to a considerable degree on the protection of the network of floodplains within the community.

With the continuing and accelerating frequency of acute flooding in the Commonwealth of Pennsylvania, Birmingham Township and its neighboring municipalities should be vigilant in ensuring that new development does not occur in floodplains or flood prone areas unless specific special construction methods are employed. Despite the “special construction methods” any use of the land in floodplains including recreational and commercial uses is ill-advised. Regional efforts to control flooding should be supported.

Stormwater management and flood and erosion control along the Brandywine Creek and its tributaries are necessarily closely linked to upstream land development and stormwater management policies and practices, and it is essential that local regulations promulgated in Birmingham Township and in all surrounding municipalities be based on watershed-wide considerations. Maintenance of stream water quality is also an increasingly large concern.

Close inter-municipality and County-initiated cooperation on all stormwater management issues will be needed over the planning period. Watershed Act 167 Stormwater Management Plans and similar studies examine potential effects of land development upon discharge rates and volumes into streams and creeks, and should lead to local development regulations to assure that developments use the best available technology to minimize off-site stormwater runoff, increase on-site infiltration, minimize off-site discharge of pollutants, and encourage natural filtration functions.

The Chester County-wide Act 167 Stormwater Management Plan has been developed to integrate with the Municipal Separate Storm Sewer System (MS4) permit requirements. These requirements include regular assessments of the existing stormwater management systems within the Township, and are being expanded to require reduction of specified pollutants, (primarily sediment), associated with stormwater discharges. The Township faces a number of challenges in protecting the quality of stormwater runoff. These include:

- Most of Birmingham Township has previously been developed and existing stormwater management systems pre-date current Act 167 requirements or MS4 permit protocols.
- Many of the older, existing stormwater management facilities are detention or retention basins, which may provide some mitigation for flooding events, but probably do little to address water quality issues.
- Many of the older stormwater management facilities receive little, if any, maintenance.
- Most stormwater management facilities within the Township are privately owned.
- Because the Township is essentially “built-out”, there are limited opportunities for implementing current stormwater BMP techniques.

Plan Element: Given the challenges noted above, the focus for advancing an environmental protection plan for stormwater will need to focus on ...

- 1) Developing plans to encourage the private sector owners of existing stormwater management facilities to inspect and maintain their facilities to ensure performance as intended;**
- 2) Developing plans whereby private sector owners of existing stormwater management facilities are encouraged to retrofit existing facilities to enhance or improve their functionality; and,**
- 3) Implementing of the current stormwater regulations for re-development and in-fill projects.**

Wetlands

A second level of environmental sensitivity is represented by wetlands; generally areas within forested lands with a high water table and poor drainage. Under jurisdiction of the US Army Corps of Engineers and the PA DEP, there is a set of regulations concerning wetlands that mandate wetland surveys by developers of land and controlling the degree and type of disturbance permitted.

Plan Element: Enforce land disturbance permit conditions carefully and fully.

Aquifer Recharge Protection

About one-half of BT is served by the central water distribution systems of Aqua PA (as itself and as owner of Chester Water Authority). For the remainder of the municipality, local groundwater is the direct source for drinking water for residential units and businesses in the community. The principle of groundwater recharge is thus important, since so many residential units obtain drinking water from on-site wells. In addition, the underlying aquifer feeds springs that supply area streams and creeks.

The Delaware River Basin Commission (DRBC) has designated extensive areas of southeastern Pennsylvania, including all of Montgomery County, most of Bucks and Chester Counties, and parts of Delaware, Berks, Lehigh and Philadelphia Counties as Groundwater Protected Areas (GPA). Within these areas groundwater is considered to be under threat, either by excessive extractions or pollution. The DRBC has promulgated regulations which affect these areas and give the DRBC authority over the approval of any individual groundwater permit application to extract more than 10,000 gallons per day.

While BT is within the Groundwater Protected Area, the municipality ranks favorably relative to other parts of the GPA in terms of the degree to which local watersheds are “stressed.” Nonetheless, the inclusion of the area of the township within the GPA is an indication that efforts to protect groundwater need to be undertaken at the local and county levels, in addition to the region-wide regulations.

The Land Use Plan reveals a generous proportion of the township intended for, *Permanent Open Space, Resource Protection and Recreation* uses that can act as an extensive aquifer recharge area and assure a permanent framework for groundwater recharge. A key technique is adoption of appropriate land use regulations, including those that would

- Maintain an overall low intensity of development throughout most of the community;
- Conserve woodlands;
- Ensure the use of “BMP” measures, and
- Encourage the use of infiltration technology for sewage treatment, when appropriate.

BT applied to the Pennsylvania Department of Environmental Protection to have three streams in the township- Renwick Run, Wylie Run and Brinton Run – declared as Exceptional Value Streams. This designation would confer on these streams the State’s “absolute protection” for lowering of water quality.

Wildlife and Plants

Many species of plants and animals may be found in the township’s three main types of habitat – open field or pasture, forest and wetlands. (Wetlands include streams, springs, ponds, and meadows). Although some species have adapted to more than one habitat, other flora and fauna have adapted to very specific needs and conditions, and are critically dependent upon particular habitat types. Generally speaking, man-made features are considered disruptive to natural habitats, but some, such as farm fields, pasture, hedgerows, and tree lines offer important food and cover sources.

The Pennsylvania Natural Diversity Index (PNDI) provides an inventory of threatened or endangered animal and plant species.

The Land Use Plan affords open fields or pasture, forest, and wetlands the highest degree of protection through the application of the *Permanent Open Space* designation to them to the maximum extent feasible. Prohibited uses in this land use category would include any commercial or industrial facilities and, except in rare circumstances, any new residential dwellings.

The Land Use Plan describes an extensive, interconnected network of protected open space areas incorporating a wide variety of sizes and types of landscapes and habitats consistently. The continuous corridors or open space are a significant aspect of the Land Use Plan’s system, providing for essential movement, dispersion, and migration of wildlife. Especially important to wildlife are the maintenance of natural corridors such as stream valleys and wooded hillsides and ridgelines.

Other Natural Features

A further level of environmental sensitivity includes areas affected by the following constraints: mature woodlands; areas of steep slopes; and areas having a seasonal high water table within six inches of the soil surface. These features, especially when occurring in combination (Figure 4), suggest that **Recommendation: little or no development should take place within the areas exhibiting these conditions or that development should be severely curtailed and closely regulated.**

The thrust of the Land Use Plan is the broad protection of these sensitive features. Affected areas are designated generally as open space or for very low density residential uses. The policy of BT toward these environmentally-sensitive areas should be one of discouraging development wherever possible to prevent destruction of important resources or to protect residents of the township from future problems.

Again, the essentially built-out condition of BT makes it unlikely that any significant land development can occur.

It must be recognized that the maps of environmentally-sensitive areas are accurate to the general level only. **Plan Element: Developers should be required as a matter of municipal policy to undertake more detailed field studies of specific parcels proposed for development that will verify or modify the precise location of the sensitive features on the Comprehensive Plan or other, similar maps.**

Chapter Three: Management Plan

By requiring such studies, especially where there is a strong suspicion or known presence of environmentally-sensitive features, developers will be more aware of the need to protect scarce resources and to avoid future problems at an early point in the development process, leading to better land planning and design solutions in the long run.

Chapter Four: Implementation Plan – First Three Years

| Chapter Three Section | Plan Element | Initial Action (First 3 years of Plan) | Ordinance Issues | Immediate Responsibility | Start Date | Complete By Date |
|------------------------------|---|--|-------------------------|---------------------------------|-------------------|-------------------------|
| 3 | Make the CP 2015 readily available to interested residents | Produce an executive summary of CP; make available to residents and other interested parties on website | No | PC | 2015 | |
| 3 | Insure that development restrictions and conditions of use are known and adhered to | Prepare a list of all development restricted properties in BT with a list of the restrictions. Start with a list of storm water retention facilities, responsible parties and locations. Next expand the list to all properties over ten acres with development restrictions | No | PC | Ongoing | |
| 3 | Maintain buffers between differing land uses | Review all subdivision or permit applications with a view to providing between use buffers. Develop and disseminate guidelines | Yes | Building Inspector and PC | 2016 | |
| 3 | Continue to encourage cluster development and to reinforce the terms of previously set cluster development agreements | | Review | BOS | Ongoing | |
| 3 | Where minor subdivisions are proposed, consider the impact on open space and historic landscape preservation | Develop and disseminate guidelines | Review | Historic Commission and RPOS | 2016 | |
| 3 | Standards for building placement, height, and bulk and for parking, landscaping and lighting should be in place to promote a well-functioning and visually-appealing character for the corridor | Review options for accomplishing this with samples from other jurisdictions | Yes | PC | 2016 | |
| 3 | Insure that the commercial area will be protected from becoming failed or derelict commercial property | Update ordinances | Yes | PC | 2015 | |

Chapter Four: Implementation Plan – First Three Years

| Chapter Three Section | Plan Element | Initial Action (First 3 years of Plan) | Ordinance Issues | Immediate Responsibility | Start Date | Complete By Date |
|------------------------------|--|--|-------------------------|------------------------------------|-------------------|-------------------------|
| 3 | Review the possibility for design standards for commercial structures and appropriateness of zoning ordinances in the 202 corridor | Solicit opinion of attorney; next actions to be determined by that opinion | Review | PC | 2015 | |
| 3 | Protect the qualities of Dilworthtown that make it a unique place in the community | Work with adjoining Chadds Ford Township to protect the Dilworthtown village to the extent possible. Maintain ongoing contact. Develop plan with input from business and residents in the village | Review | BOS, HARB, and Historic Commission | Ongoing | |
| 3 | Minimize fiscal impact of county and state regulations on activity in BT | Prepare for state and county regulations that could impose expensive obligations by becoming and remaining aware of forthcoming regulations. Have counsel and township engineer regularly prepare summaries of regulations being promulgated | Review | BOS | Ongoing | |
| 3 | Harmonize zoning, land use, traffic with adjacent townships | Provide input on zoning and land use regulations in the adjoining townships in Delaware and Chester counties. Continuous contact on planned development and timely input are the path recommended here | Yes | PC/BOS | Ongoing | |
| 3 | Minimize the impact of the Route 926 bridge reconstruction on township residents | Well in advance of the start of construction, a plan to route east-west traffic should be developed in coordination with PennDot and impacted adjacent communities. This should include a separate routing for trucks that restricts trucks to Route 202 and Route 1 | No | BOS | 2015 | |

Chapter Four: Implementation Plan – First Three Years

| Chapter Three Section | Plan Element | Initial Action (First 3 years of Plan) | Ordinance Issues | Immediate Responsibility | Start Date | Complete By Date |
|------------------------------|---|---|-------------------------|---------------------------------|-------------------|-------------------------|
| 4 | Improve the safety of roads in BT while maintaining aesthetics | Add creation of a list of obstructed intersections to the Roadmaster's responsibility and evaluate the importance, practicality and impact of improving these intersections | No | BOS | 2016 | |
| 4 | Maintain the high quality local road services on those roads for which BT is responsible | Continue the excellent snow clearing work and the maintenance of BT roads with budget and avoid adding traffic control signs unless demonstrably required | No | BOS | Ongoing | |
| 4 | With minimal interference with residents, provide some improvement in walking trail availability | Determine the feasibility of a two-part plan, as listed about that meets the conditions stated. Defer any further debate on paths until such time as the plan about has been fully developed | No | RPOS | 2016 | |
| 4 | Walking paths | Note interest by BT in acquiring passive recreation resources in the flood plain between Creek Rd and the Brandywine | No | BOS | 2016 | |
| 4 | Avoid adding bike trails to roads where there is a question of safety for cars and bikes | Maintain the township's position that we do not see a responsible way to support a bike path system through BT | No | BOS | Ongoing | |
| 4 | Look for realistic opportunities to provide public transportation in BT | Keep abreast of the CCPTP as it evolves but expect that BT will not be served by nearby public transportation in the plan period. At some time, determine if there is a destination sufficiently concentrated that some sort of van pool becomes feasible | No | PC | Ongoing | |
| 5 | Assure that BT actions maintain the character of housing in BT | Track the few remaining parcels where one or more homes could be constructed. Provide guidance to owners of those properties when use other than as regulated is proposed | Review | BOS | 2015 | |
| 6 | Insure availability of school district facilities for resident activities where this is desirable | Maintain liaison with Unionville Chadds Ford School District to promote best use of district facilities | No | BOS | Ongoing | |

Chapter Four: Implementation Plan – First Three Years

| Chapter Three Section | Plan Element | Initial Action (First 3 years of Plan) | Ordinance Issues | Immediate Responsibility | Start Date | Complete By Date |
|------------------------------|---|---|-------------------------|---------------------------------|-------------------|-------------------------|
| 7 | Preserve the historic and landscape character of BT | Birmingham Township's preservation initiatives should be strong and aggressive to protect parcels already under open space protection. List of all such properties with restrictions and responsibilities noted. Inspect properties on some agreed basis | Review | Historic Commission | 2017 | |
| 7 | Consider areas in addition to the current historic district for design standards | Review possible additions with counsels and Historic Commission | Yes | Historic Commission | 2017 | |
| 7 | Zoning Ordinance Update: the existing zoning ordinances should be updated for implementation of comprehensive plan policies and recommendations | Much was done in the early 2000's but should be examined again | Yes | PC with ZHB input | 2015 | |
| 7 | Prepare a comprehensive history of BT | Expand on the earlier work by Milner (Birmingham Cultural Resources Plan) and other documents brining a complete history into one document | No | Historic Commission | 2017 | |
| 8 | Comply with PA Sewage Facilities Act (537) | Complete improvements for nitrates removal | No | BOS | 2015 | |
| 8 | Guard against failure of numbers of on-site systems in BT | Education program aimed at maintaining the health of an on-site system including reporting as needed | Review | BOS | 2017 | |
| 8 | Maintain reliable potable water supply | Continued contact with Aqua PA. Determine the potential for water line extensions | No | BOS | Ongoing | |
| 9 | Avoid making a flooding situation worse than it already is | Establish a policy for reviewing proposed land use in flood plains. In considering any application for uses in the flood plain, discussion should start form and be based on the understanding that any human activity in a flood plain is detrimental to the natural purpose of flood plains | | | | |

Chapter Four: Implementation Plan – First Three Years

| Chapter Three Section | Plan Element | Initial Action (First 3 years of Plan) | Ordinance Issues | Immediate Responsibility | Start Date | Complete By Date |
|------------------------------|---|---|-------------------------|---------------------------------|-------------------|-------------------------|
| 9 | Comply with Storm water Management Act 167 | Develop plans to encourage the private sector owners of existing storm water management facilities to inspect and maintain their facilities to ensure performance as intended; 2) to develop plans whereby private sector owners of existing storm water management facilities are encouraged to retrofit existing facilities to enhance or improved functionality; 3) continue implementation of the current storm water regulations for re-development and in-fill projects | Review | BOS | 2016 | |
| 9 | Flood prone soils initially should be subject to all of the development restrictions of the land within the 100-year floodplain | Develop guidance | Yes | PC and BOS | 2015 | |
| 9 | Enforce land disturbance permit conditions carefully and fully | Emphasize guidelines and educate contractors and residents | No | BOS | Ongoing | |
| 9 | Protect natural features like steep slopes, mature woodlands, and areas of seasonal high water table | Establish policy/ordinances such that little or no development should take place within the areas exhibiting these conditions or that development should be severely curtailed and closely regulated | No | BOS | 2016 | |
| 9 | Improve storm water mgmt. in BT | Implement current storm water regulations for re-development and in-fill projects | | | | |
| 9 | Improve storm water mgmt. in BT | Private sector owners of existing storm water management facilities are encouraged to retrofit existing facilities to enhance or improve their functionality | No | BOS | 2016 | |
| 9 | In areas of environmentally sensitive resources, protect against damage done through inaccuracies in mapping | Developers should be required as a matter of municipal policy to undertake more detailed field studies of specific parcels proposed for development that will verify or modify the precise location of the sensitive features on the CP or other similar maps | Review | PC | 2016 | |

TABLE 1 Birmingham Township Resident Survey 2013

| Adult Respondents (Age Spread) | Number of Respondents | % of total Respondents | Birmingham Resident adult population % | From 2010 US Census number of adults |
|--------------------------------|-----------------------|------------------------|--|--------------------------------------|
| 90+= 1 counted as 80+ | 0 | 0.00 | | |
| 80+= 5 | 6 | 2.63 | 2.6 | 76 |
| 70+= 23+1+1 | 25 | 10.96 | 7.6 | 226 |
| 60+= 59+5+2 | 66 | 28.95 | 19.3 | 559 |
| 50+= 53+3+1 | 57 | 25.00 | 27.1 | 785 |
| 40+= 38+7+3+2 | 50 | 21.93 | 27.1 | 786 |
| 30+= 14+3+1 | 18 | 7.89 | 9.7 | 282 |
| 20+= 6 | 6 | 2.63 | 6.5 | 188 |
| TOTALS (1) | 228 | 100.00 | 99.9 | 2896 |

Does respondent have children in school 70 Yes 151 No

Tax increase: Would you accept a tax increase to pay for your “want?” 91 Yes 106 No

Note: the 228 respondents represented approximately 10%, or 140 households of the township’s 1420.

| Keep what we have now | Open Space | Preserve Historic culture | Keep parks we have now | Trails we have are adequate | Maintain police department | Low property tax |
|-----------------------|--------------------------------|---------------------------|------------------------|------------------------------|------------------------------|-----------------------|
| | 175 | 39 | 7 | 14 | 26 | 12 |
| WANTS: | Nothing (Z) or Open Space (OS) | Road Improvements | More Parks | Walking paths or bike routes | Change police protection (1) | Provide public sewers |
| | 70 (Z), 23 (OS) | 32 | 38 | 25 (TR), 15 (BK) | 27 | 6 |

(1) Some respondents want more policing, some wanted less

Other requests and number of responses: Various energy suggestions (3), Reduce deer herd (6), Provide train service (1), More activities, concerts, etc

**Table 2 from US Census, 2010
Birmingham Township
Population by Age Group, Median Age and Median Age of Adults**

| | 1980 | | 1990 | | 2000 | | 2010 | |
|-----------------------------|------------------------|--------------------------|--------|---------|--------|---------|--------|---------|
| Age Group | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 0-4 | 82 | 5.2 | 132 | 5.0 | 245 | 5.8 | 187 | 4.4 |
| 5-17 | 480 | 30.2 | 640 | 24.3 | *1117 | 26.5 | *1125 | 26.7 |
| 18-24 | 108 | 6.8 | 205 | 7.8 | **82 | 1.9 | **116 | 2.8 |
| 25-44 | 469 | 29.6 | 731 | 27.7 | 1026 | 24.3 | 693 | 16.5 |
| 45-64 | 364 | 23.0 | 774 | 29.4 | 1458 | 34.5 | 1545 | 36.7 |
| 65-74 | 55 | 3.5 | 110 | 4.2 | 207 | 4.9 | 382 | 9.1 |
| 75+ | 26 | 1.6 | 44 | 1.7 | 86 | 2.0 | 160 | 3.8 |
| Totals | 1584 | | 2636 | | 4221 | | 4208 | |
| Median Age | 34.0 | | 38.8 | | 41.1 | | 44.8 | |
| Median Age of Adults | 41 | | 44 | | 48.4 | | 52 | |
| Notes | * 5-19 years of age | ** 20-24 years of age | | | | | | |

**Table 3
Housing Units**

According to the 2010 census there are 1459 total housing units in Birmingham Township which shows that only 46 units were added in the 2000-2010 period. The current and historical housing mix is shown in Table 3, below.

| Structural Type | 1990 Count | 1990% | 2000 Count | 2000% | 2010 Count | 2010% |
|------------------------|------------|--------|------------|--------|------------|-------|
| Single Family Detached | 839 | 96.9 | 1151 | 81.4 | 1219 | 83.6 |
| Single Family Attached | 5 | 0.6 | 240 | 17.0 | 240 | 16.4 |
| 4-Family Buildings | 11 | 1.3(1) | 11(1) | 0.8(1) | 0 | |
| Mobile Homes | 11 | 1.3(1) | 11(1) | 0.8(1) | 0 | |
| Totals | 866 | | 1413 | | 1459 | |
| Total Occupied | 826 | | N/A | | 1420 | |
| Total Vacant | 38 | | N/A | | 39 | |

(1) These properties have not been located or confirmed. There does not appear to be a record of the location of such housing and it is questionable that it existed.

Maps and Figures

See attached PDF file with Figures 1 through 10 referenced within the Comprehensive Plan document.