



Warrington Township

Comprehensive Plan Update

January 2018



The Gateway to Historic Bucks County since 1734





RESOLUTION 2018-R- 08

WARRINGTON TOWNSHIP BOARD OF SUPERVISORS

WHEREAS, the Warrington Township Comprehensive Plan was last updated in 2006;
and

WHEREAS, Warrington Township has experienced enormous growth since the adoption of the 2006 Comprehensive Plan and changes have occurred in the surrounding areas, all of which impact current land use planning, housing, commercial uses, transportation, community facilities and other resources of the Township; and

WHEREAS, Section 301 (c) of the Pennsylvania Municipalities Planning Code provides that municipal comprehensive plans be reviewed at least every (10) years and updated when needed; and

WHEREAS the Board of Supervisors and the Warrington Township Planning Commission have determined that the 2006 Comprehensive Plan is in need of updating; and

WHEREAS, the Board of Supervisors entered into a written Planning Services Agreement with the Bucks County Planning Commission to provide consulting services to update the Comprehensive Plan; and

WHEREAS, the Bucks County Planning Commission prepared a Comprehensive Plan Update that includes Chapters 1-6, Appendices, Maps, Figures and Tables (“Comprehensive Plan Update”); and

WHEREAS, the Township Planning Commission held a public meeting on November 2, 2017 at which time it was recommended that the Comprehensive Plan Update be forwarded to the Board of Supervisors; and

WHEREAS, copies of the Comprehensive Plan Update were sent to the County Planning Commission, the local school district and contiguous municipalities for review and comment; and

WHEREAS, the Board of Supervisors held a public hearing on the Comprehensive Plan Update on January 9, 2018 at which time the Board of Supervisors considered the comments received from the Bucks County Planning Commission, the Township Planning Commission, the local district, contiguous municipalities and the public.

NOW THEREFORE, be it, and it is hereby **RESOLVED** by the Board of Supervisors of Warrington Township, Bucks County, Pennsylvania, that the Comprehensive Plan Update is adopted.

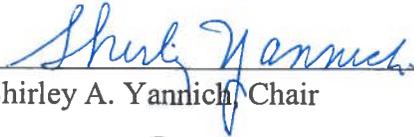
RESOLVED, this 9th day of January, 2018.

BOARD OF SUPERVISORS OF WARRINGTON TOWNSHIP

ATTEST:



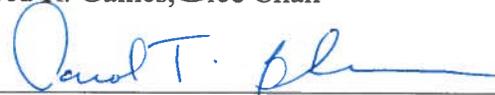
Barry P. Luber
Interim Township Manager



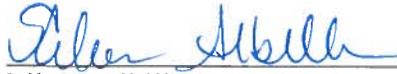
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Chapter 1

Plan Summary

This update to the *Warrington Township Comprehensive Plan Update* was developed to manage and plan land use¹ and development in Warrington Township. A comprehensive plan is a municipality's main policy document that summarizes a community's planning and development issues and develops strategies and recommendations to carry out its desired vision for the future.

In addition, the township has updated its *Warrington Township Parks, Recreation, and Open Space Plan*, which will be a separate document that supplements this plan. The *Parks, Recreation, and Open Space Plan* sets forth municipal policy, priorities, and recommendations that focus on township parks, recreation, and open space. It is a component of the comprehensive plan and is referenced throughout.

Pennsylvania Municipalities Planning Code (MPC)

The update to the *Warrington Township Comprehensive Plan Update* fulfills all of the requirements of the *Pennsylvania Municipalities Planning Code* (MPC), addressing community planning issues such as housing, parks and open space, water supply and wastewater, historical and cultural resources, natural resources, nonresidential development, and transportation and circulation. Most importantly, this plan sets out a preferred vision for the future of Warrington Township. The plan was developed with the full knowledge that today's decisions will affect land use outcomes in the future.

Public Participation

Public participation was an important part of the process in the development of this plan. Members of the Planning Commission, the Board of Supervisors, and township administration oversaw the development of the plan update, ensuring that its scope and direction reflected the values of the township. In addition, a community survey was sent to every property owner in the township to gather opinions on a variety of planning and community service subjects. These opinions were directly incorporated into the plan.

Building upon Foundations

The plan builds upon the foundations established in the 2006 *Comprehensive Plan Update*. Three main themes and seven guiding principles are proposed to provide a growth management strategy for the township. The main themes encompass managing and monitoring growth, maintaining township and community character, and providing for overall vehicular and pedestrian mobility and connections. In short, the themes touch upon the changing needs of the township and

¹ The purpose for which land or the structures on the land are being used.

establish policies and strategies to maintain and manage future challenges to sustain a high quality of life for township residents. Chapter 2, A Vision for the Future, expands upon the themes the township wishes to pursue.

The seven principles that the township will use to guide actions and decisions include:

1. **Manage residential growth**—Current densities as regulated by the current zoning ordinance will be maintained to accommodate new development needed to meet requirements of the Pennsylvania Municipalities Planning Code and the township's share of regional population growth.
2. **Manage non-residential growth**—Development, while occurring at current intensities, will occur in the best manner possible by making sure ordinances and planning efforts are state-of-the-art and follow current best practices.
3. **Promote sustainability and protect natural resources**—Environmental features and natural resources will be protected, through ordinances and enforcement of all environmental laws.
4. **Preserve open space and protect agriculture**—Open space and farmland will be preserved, either through the development process or through use of available state and county grants.
5. **Promote mobility and connections**—Traffic will be managed as best we can by creating a local network of streets, by working with neighboring communities, by providing safe routes for bikes and pedestrians, and by working with PennDOT on local and regional highway and intersection improvements.
6. **Protect historic resources**—Historic sites and resources will be protected by cataloguing all important historic sites and using available tools to protect them.
7. **Build livable communities**—Township resources will be used wisely to provide good services to residents while maintaining fiscal responsibility.

Findings and Changes

Since the 2006 *Comprehensive Plan Update*, many changes have taken place. Even though there has not been significant growth in population, there has been steady land development within the township. To help understand the current situation, and possible directions for the future, some existing conditions and characteristics relative to the township have been examined. These findings include:

- The township has become more educated with an established, older middle class community than in 2006. The average age has increased from 35.4 to 39.8, which reflects the growth of the baby boomer generation who are now the dominant age cohort in Warrington.

- Warrington’s population and housing increased 33 percent between 2000 and 2010, but growth slowed after 2010 to less than 3 percent.
- The Single-Family Residential land use comprises 33 percent of the township’s total area. With many large, undeveloped tracts in the western portion of the township, there will be pressure to develop more single-family residential dwelling units. In contrast and directly related, Agricultural land use has slightly declined overall.
- The U.S. Route 202 Parkway was constructed within the western portion of the township and provides a direct route for travel between Welsh Road (Route 63) and Route 611 in Montgomery, Warrington, and Doylestown townships. In addition, a 12-foot-wide shared-use path parallels the entire length of the road to provide mobility for pedestrians and bicyclists. As housing and population continue to grow, traffic will increase on the parkway and access roads.
- The former Penrose tract was developed into Valley Gate, a 67-acre mixed-use project located on Route 611 (Easton Road). The development features a 155,000-square-foot Walmart Supercenter, several restaurants, retail and service uses, a hotel, as well as an 81-unit townhouse community. This was the last large undeveloped tract on Route 611 in Warrington. Continued commercial development along the Route 611 frontage will be predominately in the form of infill within existing centers.
- Economic activity has grown in the township by the construction of retail and services business. The addition of the Valley Gate shopping center has enhanced Warrington’s role as a regional shopping and entertainment destination. Valley Square, Valley Gate, and Warrington Crossing attract residents of Warrington and neighboring communities to eat, shop, and be entertained.
- Vacant commercial, retail, industrial, and office buildings represent lost tax revenue and jobs and the township will evaluate ways to increase occupancy.
- The Naval Air Station Joint Reserve Base closed in 2011. Even though the base is located in Horsham Township, Montgomery County, the impacts of redevelopment will be felt in Warrington Township along the Route 611 and Street Road corridors. Future activity should be monitored.
- The township is continually adding trails and sidewalks to its trail system which provides off road access for recreation and transportation.
- Township residents strongly support maintaining a rural character that includes saving farmland and preserving existing wooded and other sensitive natural resource areas. They also believe that Warrington does not need more high density multifamily apartments and/or townhomes.
- The township has built new community facilities that provide expanded fire protection and emergency medical services to meet the needs of a growing population.

Continued Development Pressures in Warrington: Route 611 and the Western Portion

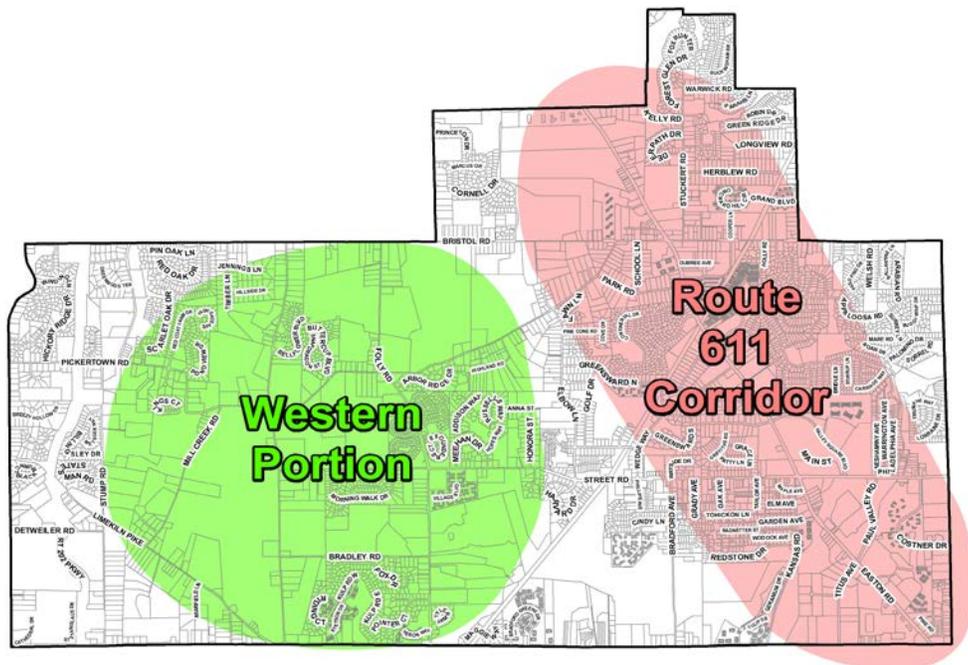
Warrington’s open spaces, convenient roadways, shopping centers, and high quality of life make it an attractive place to live, work, and recreate. Steady growth and development are quickly changing the visual landscape of the township. New housing developments have been sprouting up throughout the township, and the problems of suburban sprawl are slowly creeping into Warrington’s rural way of life in the western portion of the township. The Route 611 corridor is predominately built out with a wide variety of commercial, retail, office, institutional, and multifamily residential uses. These two general development patterns define the township.

The Route 611 corridor contains a large amount of commercial and retail land use with several large regional shopping centers. Traffic has increased along the corridor and combined with future development beyond Warrington’s borders, congestion will continue to increase. In addition to traffic, vacant structures have dotted the Route 611 and Street road corridors. This plan looks at solutions to mitigate potential issues along the developed eastern portion of the township.

In addition, the western portion of the township has been under pressure to be developed with residential subdivisions. Careful planning is needed to ensure these subdivisions and other types of development are integrated and compatible with the surrounding landscape and environment. The township needs to evaluate the extent of water and sewer service in relation to growth in the western portion of the township. Other concerns that are addressed in this plan include the positive impacts associated with conservation subdivision design and the desire to preserve and protect sensitive natural resources, such as agricultural soils, woodlands, wetlands, and flood plains.

Figure 1 below illustrates the two sections of Warrington Township.

Figure 1
Warrington Township Western Portion and 611 Corridor



Short Term Priority Actions

One of the biggest difficulties with most comprehensive plans is that they quickly become irrelevant. Once the plan is completed, the recommendations presented can be easy to ignore because the plan is no longer on the minds of local officials and residents until it becomes time to develop a new plan. New initiatives, which could make a real difference, are essentially wasted.

One way to keep this plan relevant is to periodically distribute a report detailing the plan's progress and tasks yet to be completed. This report will keep the plan on the minds of both decision makers and residents, publicize the accomplishments of the plan, and provide the necessary adjustments that need to be made to carry out the remaining tasks. Another means of ensuring relevance is to refer to the plan whenever a decision must be made about capital investments and amending regulating tools, such as the zoning and subdivision and land development ordinances. Any decision should be predicated on the question: Is this action consistent with the comprehensive plan?

Chapter 6, Implementing the Vision, contains a comprehensive list of activities that are recommended to realize the vision of this plan. What follows is a list of activities that are short term priorities with measurable outcomes (i.e., can be evaluated as completed or not). Each recommended action has been summarized and is listed with a short term timeline which is defined as 0-2 years for completion. This list can form the basis of future progress reports and be the catalyst to implementing the overall plan.

List of Short Term Priority Action Items for the Warrington Township Comprehensive Plan Update

Action Recommendation	Completed
1. Continue to use conservation subdivision techniques to ensure new residential development contributes positively to the character of the township and preserves natural and rural resources.	<input type="checkbox"/>
2. Review current conservation and environmental resource protection measures in the RA District to meet township needs. Investigate supplementing cluster options.	<input type="checkbox"/>
3. Investigate ways to decrease office, commercial, retail, and industrial vacancies and maintain tenants.	<input type="checkbox"/>
4. Monitor existing quarries and their potential expansion in order to safeguard neighboring properties.	<input type="checkbox"/>
5. Monitor potential sale of school district and religious institution landholdings and take a proactive role in their future planning.	<input type="checkbox"/>
6. Encourage the use of Low Impact Development (LID) tools and techniques and Best Management Practices (BMPs) to enhance resource protection standards.	<input type="checkbox"/>
7. Maintain natural resource protection standards; high standards for stormwater management; continued participation in with all state and federal programs for stormwater and environmental protection.	<input type="checkbox"/>
8. To the extent possible, purchase, protect, or preserve open space and prime agricultural soils.	<input type="checkbox"/>
9. Participate with county and state open space and agricultural preservation grant programs.	<input type="checkbox"/>
10. Preserve open space and farmland by purchasing development rights and/or easements and by facilitating preservation through land trusts, conservancies, or similar organizations.	<input type="checkbox"/>
11. Follow the recommendations and principles as set forth in the current <i>Parks, Recreation, and Open Space Plan Update</i> .	<input type="checkbox"/>
12. Implement <i>Map 4-Trail Plan</i> of the <i>Parks, Recreation, and Open Space Plan Update</i> , and enhance the trail network to connect township and county park lands and trails.	<input type="checkbox"/>
13. Control access points along roadways.	<input type="checkbox"/>
14. Improve safety by updating street standards.	<input type="checkbox"/>
15. Cooperate with PennDOT and other municipalities to get local and regional transportation improvements.	<input type="checkbox"/>
16. Plan for land use first and then provide water and wastewater services to areas needed to support desired development patterns.	<input type="checkbox"/>
17. Establish capital project priorities using the comprehensive plan recommendations, with the focus on providing services and facilities for the residents and businesses that are part of the community.	<input type="checkbox"/>

Chapter 2

A Vision for the Future

Warrington Township is an outstanding community in which to live, work, shop, learn, and recreate with many unique opportunities to enhance the quality of life for those who reside, work, or visit. Township officials updated the 2006 Comprehensive Plan in order to reset and present its vision and goals for the future. The overall vision is based on the current general development pattern: being a developed suburban area within the eastern and central portions, which contain a heavily traveled and active commercial/employment corridor along the Route 611/Easton Road span and a suburban/rural scenic area within the western portion. Protecting the township's suburban/rural character will be accomplished by strengthening and reinforcing a balance of development and preservation of natural areas, farmland and sensitive resources. In addition, approaches to help reduce traffic congestion on the Route 611 corridor will be recommended.

During the last several decades, the township has responded to landowner and market forces to accommodate new commercial, office, residential, and recreational development. But the challenge for the next decade is not to expand, but to protect, sustain and serve the township and its residents.

The goal is to responsibly manage community change and protect community character and assets; preserve the natural environment and farmland; improve mobility; provide adequate township services and public facilities efficiently and equitably; and promote the economic and social well-being of the community.

Three main themes have evolved and will build upon the foundation of the *2006 Comprehensive Plan Update* and be reinforced throughout this current plan. The three overriding themes include:

MANAGE AND MONITOR GROWTH

Utilize the comprehensive plan as a guide and foundation for evaluating issues and concerns and making municipal decisions. Policy, opportunities, changing needs, constraints and challenges have been identified within this plan and implementation strategies to achieve township goals will be recommended and suggested.

MAINTAIN TOWNSHIP AND COMMUNITY CHARACTER

Continue policies to retain current densities; protect lands that are critical for the natural ecosystem (prime agricultural soils, aquifer recharge or wellhead areas, and woodlands), protect lands that support valuable renewable economic resources (wetlands, stream corridors, steep slopes, and woodland area), and protect lands that are of a particular aesthetic and recreation value (stream valleys, bodies of water, significant historical and cultural sites or structures, and other unique scenic areas). Many of these particular policies focus on the western portion of the township.

PROVIDE FOR MOBILITY AND CONNECTIONS

Continue to promote and foster a safe, efficient, aesthetic, and comprehensive transportation system of roads, buses, trails, bikeways, and sidewalks to provide a variety of options for traveling in and through Warrington Township. Plan and seek to reduce traffic volume and congestion, enhance traffic circulation, promote alternative modes of transportation, and increase access to businesses, and value to properties; especially along the Route 611 commercial/employment corridor.

The township is committed to protecting the township, improving the quality of life, sustaining our neighborhoods, and serving the residents, by doing the following:

- Environmental features and natural resources of our community will be protected, through ordinances and enforcement of all environmental laws.



- Open space and farmland will be preserved, either through the development process, or through use of available state and county grants.
- Current densities and intensities as regulated by the current zoning ordinance will be maintained to accommodate new development needed to meet requirements of the *Pennsylvania Municipalities Planning Code* and the township's share of regional population growth.
- Development, while occurring at current intensities, will occur in the best manner possible by making sure ordinances and planning efforts are state-of-the-art. Best practices of building and site design will be the norm. This includes using “sustainable development” principles to protect the community for future generations, which means conserving and maintaining natural and historic resources, minimizing traffic impacts, minimizing demands on public services, ensuring capacity and integrity of water supply and wastewater treatment, and supporting site design that reflects the character of the township.
- Historic sites and resources will be protected by continued cataloguing of all important historic sites and using available tools to protect them.



- Traffic will be managed as best we can by creating a local network of streets, by working with neighboring communities, by providing safe routes for bicyclists and pedestrians, and by working with PennDOT on local and regional highway and intersection improvements.
- Create a unified and visually appealing Route 611 corridor streetscape environment with compatible uses and improved traffic and pedestrian circulation.
- Township resources will be used wisely to provide adequate services to residents while maintaining fiscal responsibility.
- Provide adequate active and passive recreation facilities and recreation opportunities for all residents.



After proclaiming the township’s overall vision and plan themes in this chapter, the following chapters will discuss major issues and challenges that face the township and provide recommendations for implementation and action. In addition, more in-depth study of land use and transportation issues will be discussed in separate chapters. The appendix will contain pertinent updated background information regarding the township’s history, demographics, community assets, natural and environmental features, and compatibility with the surrounding municipalities.

Chapter 3

Plan for the Future

How will we live in the future? What kind of community do we want to create for our children? What should it look like and how do we make it happen? These are the questions facing Warrington Township as it envisions the future and prepares its comprehensive plan update.

During the past decade, the township has added population and accommodated new commercial, office, recreational, and residential development.

A comprehensive plan is a guide for the future of a community. It examines the physical, social, and economic characteristics that define what exists today and forms a foundation for the future direction. Its purpose is to guide change and foster informed decision making for the next ten years in order to sustain and strengthen communities and protect the cultural and natural heritage. With the help of Warrington residents, the township boards and commissions, and elected officials, this plan sets a vision, strategy, and basic framework for what Warrington should strive to be in the future. It will provide useful documentation and set priorities for grant funding and help in coordinating capital improvement projects and investments.

Introduction of the 2017 Comprehensive Plan

The mission of the 2006 comprehensive plan was to manage community change to protect community character, preserve the natural environment and farmland, improve mobility, provide adequate township services and public facilities efficiently and equitably, and promote the economic and social well-being of the community. Essentially, the same mission has been established for this plan.

Overall, residential growth in Warrington since 2006 has slowed but there has been some development that has targeted the infill/under-utilized sites within the heavily developed areas in the eastern portion of the township. This plan suggests maintaining the current density formulas associated with residential development. In conjunction with all development, it will re-emphasize the importance of preserving sensitive, scenic natural areas and culturally important land and structures.

The pace of zoning and subdivision and land development ordinance amendments and rezoning of parcels has slowed relative to the recent past. Whether due to the economic downturn of 2008, changing market value of land and property, or reaching capacity in developable areas, the township has become more resolute in sticking to its guns and being more proactive in accommodating change. The township intends to set and meet its own vision, goals, and objectives and not those of developers.

Farming has diminished but open space acquisition has provided land for resource protection and recreation. Municipal facilities such as parks, trails, and emergency facilities have been built to meet demands of a growing population. Municipal facilities will be continually promoted throughout this plan.

It is suggested the Transfer of Development Rights (TDR) program be phased out after all remaining TDRs have been properly appropriated under the guidelines and standards of the current ordinance.



What are the Issues and Challenges Facing Warrington?

Between 2000 and 2016, Warrington Township has added nearly 6,000 new people and 2,533 new homes in the township. This population growth has placed Warrington among the steadily growing communities in Bucks County. Accompanying this development was a rise in commercial and office facilities. Since 2006, properties along Route 611 and along Street Road have been transformed into regional shopping areas, replacing vacant fields or underutilized sites that had outdated buildings.

Several changes have occurred within and beyond the township borders that may have a potential impact on the Warrington community. These changes include:

- U.S. Route 202 Parkway: a 2- to 4-lane semi-limited access roadway that provides a direct route for travel between Welsh Road (Route 63) and Route 611 in Montgomery, Warrington, and Doylestown townships was completed and opened in December 2012. A 12-foot-wide shared-use path parallels the entire length of the road to provide mobility for pedestrians and bicyclists. In addition, there are five-foot-wide paved shoulders/bicycle lanes on each side of the parkway.

Access to the parkway is provided at Bristol and County Line roads, as well as Limekiln Pike (Route 152). There are two main trailhead parking areas within Warrington Township, one near Bristol Road and the other near County Line Road.

- Valley Gate development: a 67-acre mixed-use project located on Route 611 (Easton Road) that was formerly known as the Penrose tract. The development features a 155,000-square-foot Walmart Supercenter, several restaurants, retail and service uses, a hotel, as well as an 81-unit townhouse community.



- Naval Air Station Joint Reserve: Base Willow Grove Realignment and Closure: In 2011, the base was closed, but a small National Guard and Reserve unit remain on a portion of the base adjacent to Warrington Township. Even though the base is located in Horsham Township, Montgomery County, the impacts of redevelopment will be felt in Warrington Township. Current redevelopment studies seek to balance land uses that capitalize on the region's strengths, focus on the creation of job generating uses through a variety of mixed uses, and incorporate the needs and wants of the community. The Horsham Land Redevelopment Authority currently manages the planning and implementation of the former base property redevelopment.

Development of an estimated 862 acres is planned creating an estimated 7,000 jobs. Projected uses that have been noted in preliminary studies include, but are not limited to (or approved), an office park, town/retail center, hotel/conference center, retirement community, school, retail, regional recreation center, parks and open space, and an aviation museum. It is uncertain if any federal installations located on or adjacent to the former base will expand and create impacts and/or require additional services.

- Transportation improvements: the widening and improvement of County Line Road will enhance travel in the southwestern portion of the township. The improved roadway has not brought development pressure at this point; however, it may bring demand for commercial development in the Eureka and western Warrington areas in the future.

In addition, a new roadway, Anderson Way, has been constructed to connect North Easton Road and Bristol Road south of the Village of Warrington, and will provide additional road connections and alternative routes.



These changes in the character of the township help residents and local officials formulate questions about what the future should be and what major issues face the township as it plans for the future.

- How much more development can we expect in Warrington?
- What should new development look like?
- Is there enough new commercial and office development to meet our needs for the next 10 years?
- What should happen to the undeveloped areas? – Preservation or Development?
- How will new development impact our community facilities?
- How will a declining school enrollment impact our community facilities?
- Should we strive for more open space preservation?
- What is the future of Route 611?
- What controls should be in place to manage changes on Route 611?
- What should happen to aging commercial buildings and shopping centers?
- How do we deal with existing vacant commercial and industrial properties and buildings?
- What should happen to vacant land, such as the area around County Line Road and Limekiln Pike, known as Eureka Village?
- How do we accommodate new development without sustaining environmental damage, flooding, or undesirable changes to the Warrington landscape?
- How do we preserve our cultural sites and historic buildings and properties?
- How do we control traffic – management of existing traffic; limiting new traffic generators; roadway improvements?
- How do we make our township more “walkable?”
- How do we protect good residential neighborhoods?
- Do we want more age-restricted housing?
- How do we provide the needed services to our residents in a cost-effective manner?

Some challenges of the future include forces beyond our control:

- An aging population.
- Increased service costs.
- Higher energy bills for residents and the township.
- Unpredictable levels of support from the state and federal governments.
- Actions of our neighboring communities that affect Warrington, including potential changes to the Naval Air Station Joint Reserve Base Willow Grove and new growth in adjacent communities, such as Chalfont Borough and New Britain Township.

Competing goals also make the job of planning for the future harder.

- How do we deal with more people wanting to live in Warrington while also preserving open spaces and farmland?
- How do we keep a strong commercial core and also manage traffic?
- How can we preserve the historic features of Warrington while accommodating more modern designs?

Chapter 4

Land Use: Present and Future

Existing Land Use

The township is primarily a residential community, with a strong office and retail core along Route 611 and industrial/mining areas in several parts of the township. Nearly 20 percent of the township's approximate 8,944 acres is permanently preserved open space, parkland, natural area, or preserved farmland.

The first part of this chapter will provide a “snapshot” of existing characteristics by classifying the types and identifying the amounts and locations of existing land uses within the township. Based on the overall vision and goals of this plan, an examination of the existing land use patterns and future land use recommendations will be provided.

The existing land uses in the township were evaluated and mapped using aerial photographs, Bucks County Board of Assessment data, and field surveys. See Map 1, Table 1, and Figure 2 for existing land use breakdown. The categories of existing land use are as follows:

- Single-Family Residential
- Multifamily Residential
- Age-Restricted Housing
- Rural Residential
- Commercial/Retail
- Industrial
- Government and Institutional
- Transportation and Utilities
- Parks, Recreation, and Open Space
- Agriculture/Farmland
- Vacant

Residential Land Use

SINGLE-FAMILY RESIDENTIAL

Single-Family Residential is characterized as a single dwelling unit on an individual lot with private yards on all sides of the house. Single-family is the most significant land use, constituting approximately 34 percent of the land area in the township. Many new subdivisions increased the area of the township devoted to residential use since 2006 and were predominately located within the western end of the township.

MULTIFAMILY RESIDENTIAL

The Multifamily Residential use is defined as a building having two or more dwelling units which may have either a common or independent outside access. Dwelling types associated with Multifamily Residential include two-family semidetached, single-family attached, townhouse, multiplex, and apartments. Warrington has a number of zoning districts that accommodate multifamily housing.² The multifamily housing stock accounts for 1.8 percent of the township's total land area.

AGE-RESTRICTED HOUSING

In Warrington Township, age-restricted housing is intended to address the housing needs of older persons who do not require the intensive needs of a nursing home but desire the security, safety and special design of a residential environment which can provide residential units particularly conducive to older persons in the form of independent living. Since 2000, 905 units of housing designed for occupancy by those aged 55 or older have been built, accounting for a significant percentage of the total housing stock in the township.

Most of the age-restricted developments in Warrington are zoned IU-A and IU-B districts and permit the Age Qualified Residential Community use which is specifically for older persons not needing nursing care. The characteristics of age-restricted developments include, small lots, single-family attached or detached, as well as larger assisted living facilities. They are commonly limited to residents 55 years or older and geared to the lifestyle and tastes of older empty-nesters. Age-restricted housing typically limits occupancy to at least one resident who is 55 or older and usually has restrictions on children under 18 years. The age-restricted developments that have been completed since 2006 include:

1. **Legacy Oaks:** the first age-restricted community in Warrington is more than 15 years old. It contains 241 single-family homes with reduced footprints (1,300 to 2,900 square feet).



² The PRD and PRD-M CR/O, C/RO-IU, IU-A-1, IU-B, and CBD districts permit multifamily housing.

2. **Meridian of Valley Square:** 200 condominium units located adjacent to The Shops at Valley Square, which include service, retail, and commercial uses within walking distance.
3. **Bluestone Creek:** 162 condominium units off of County Line and Kansas roads with walking trails and a common clubhouse and fitness center.
4. **Lamplighter Village:** 149 townhomes within 16 courtyards on the corner of Folly and Street roads with fitness trails and a common clubhouse.
5. **Forest Ridge:** 132 condominium units in 11 three story buildings located on Bristol Road and features a small community clubhouse and trails.
6. **The Preserve at Lamplighter:** 21 single-family homes with reduced footprints (1,600 to 1,900 square feet). The community is situated on Philips Avenue and West Street Road and contains a clubhouse and connection to the Bradford Reservoir Recreation Area.

The aging population (Baby Boomers), for whom this particular housing was intended, will likely peak within the next 10 years, so potential future occupancy issues may arise. There may be pressure to ease the age constraints and deed restrictions to allow a wider range of residents to occupy these particular units. Opportunities may open the door for families with children to reside in these units and potentially increase demands for public services and public education and create greater volume of automobile trips. The township should monitor the changing local and regional demographic trends related to the township's age cohort and as they relate the existing age-restricted housing developments.

RURAL RESIDENTIAL

Rural Residential is the same as Single-Family Residential, except dwellings are on lots that are 5 acres or more but do not qualify as Agricultural and may be suitable for subdivision, depending upon the underlying zoning district. Rural Residential tracts are primarily located in the western portion of the township, mainly within the RA Residential Agricultural District and makes up 7.6 percent of the township area. The purpose of the RA District is to provide areas within the township where a low-density residential atmosphere is preserved; to provide area where continued agricultural use of the land is feasible, particularly where prime agricultural soils have been identified; to discourage higher intensity uses which would make agricultural preservation and a rural residential atmosphere impossible; and to discourage higher densities of development in areas where public utilities, particularly sewer and water, are neither available nor anticipated to be provided.

Single-family detached units are permitted by-right within the RA District on a minimum lot size of 3 acres. For tracts 10 acres or larger, a single-family detached cluster option is permitted as a conditional use. Clustering essentially doubles the typical single-family detached density from 0.33 to 0.65 units per acre and requires an overall minimum open space ratio of 83 percent with a minimum lot size requirement of 7,500 square feet. The purpose of the cluster option is to preserve and protect the natural and agricultural resources and provide adequate functional open space to the community.



COMMERCIAL: RETAIL AND OFFICES

The commercial activities in Warrington include local stores in individual buildings, neighborhood shopping centers, national franchises on pad sites, and large regional retail stores. Most of these commercial, offices, and retail uses are located along the main arteries of Street Road and Route 611. The Route 611 corridor spans over 3.5 miles and is zoned to accommodate these uses. In 2015, the last large tract along the Route 611/Easton Road corridor, the Penrose Farm was developed into the Valley Gate shopping center which contains a big box retailer, hotel, townhouse development, several fast food restaurants, and small-scale service retail.

Overall, the retail use in Warrington has followed the national trends, which has shown a shift from local stores to national discount retailers. New businesses and uses have been added to existing shopping centers and along with Valley Gate, other new commercial centers have been constructed that include the Shops at Valley Square and Heritage Center.

The existing commercial centers which contain retail, and/or an office component include, but are not limited to:

- Stone Manor Corporate Center
- Victorian Village
- Warrington Greene
- Diamond Plaza
- Warrington Shopping Center
- Warrington Pavilion
- Warrington Plaza and Home Depot
- Creek View (Target and Lowes)
- BJ's Wholesale Club
- Warrington Crossing (Regal Cinemas)

Several older commercial and office centers along the Route 611 corridor have aged and require upgrading to improve vehicular and pedestrian circulation and connections and aesthetic curb appeal by modernizing facades, signs, and landscaping. Such improvements will help maintain and attract business tenants. In order to promote reinvestment in these centers, the township should consider providing incentives such as flexibility with building and impervious coverage standards, setbacks, parking demand, and parking stall size.



This category currently constitutes approximately 5.4 percent of the existing land use within the township. It will continue to increase as the Valley Gate and Valley Square properties build out to their development limits. The Stone Manor Corporate Center constructed on Route 611 contains a hotel, day care center, bank and restaurant and is the largest concentration of office use within the township.

The township has some vacant office and retail space that is primarily located along the major traffic routes. Below are examples of more significant office and retail space vacancies (as of October 2017):

Vacant office/retail space:

- 20,200-square-foot office building at 1800 West Street Road.
- Space above the Shops at Valley Square.
- Space on the second floor of Building 17 above the Wine & Spirits Store east of Wegmans.
- 2700 Kelly Road, Stone Manor Corporate Center Building 3.
- Former Sports Authority building in Valley Square.
- Former Gander Mountain building in Warrington Crossing.
- Former Genuardis building in Creek View.



INDUSTRIAL

Industrial land uses occupy 7 percent of the township land area in 2017. The industrial area includes manufacturing uses, contractors' shops, and flex spaces that are predominately located in the Warrington Industrial Park on Valley Road and the Paul Valley Industrial Park on Titus Road.

In addition, the township has two quarries: the Eureka Quarry, located between Lower State, Pickertown and Mill Creek roads and the Route 611 quarry. These areas are currently zoned OI Office District, PI1 and PI2 Planned Industrial districts, and Q Quarry. Several tracts adjacent to and around the Eureka Quarry are currently vacant and owned by the quarry. Future land use planning for the quarry properties should be considered by the township as possible expansion of quarry operations may occur or as resource extraction diminishes and the use runs its course. Either way, smart growth management and land use control systems should be in place for future actions.

GOVERNMENT AND INSTITUTIONAL

Government and institutional uses include local government uses, the Health and Wellness Center and other health care facilities, public and private schools, houses of worship, and local emergency services and government facilities. The acreage in this category totals 3.7 percent of the total land use in the township.

TRANSPORTATION AND UTILITIES

Transportation land use consists mostly of road right-of-way. The U.S. Route 202 Parkway has since been constructed and will constitute a major portion of this land use. Utility land uses are primarily sewer and water company properties, gas and electric transmission lines, as well as utility lines within easements on lands in other categories and township owned stormwater basins. The current total land occupied by transportation and utility uses equals 12.5 percent.



PARKS, RECREATION, AND OPEN SPACE

The Park, Recreation, and Open Space category has expanded to 16.7 percent of the township area in 2017 due to the acquisition of additional parkland and open space. Land permanently preserved as open space and land dedicated as part of residential subdivisions are the primary components of the additional open space. Several miles of new trails have been constructed through parks and open space and more are currently planned for future implementation.

When combined with permanently preserved farmland on the protected farms that are in the Bucks County Agricultural Preservation Program and other township-preserved properties, the township has preserved almost 20 percent of its total land area. These farms contain some of the best agricultural soils in the township, and the Garges farm represents one of the last dairy farms in central Bucks County.

For more information on the existing status of Parks, Recreation and Open Space land use, see the *Parks, Recreation and Open Space Plan Update*, prepared by Toole Recreation Planning and Natural Lands.

AGRICULTURE/FARMLAND

Active farmland and land used for agriculture has decreased in the township due to new development and comprises 7.5 percent of the total land area in 2017.

As mentioned above, the farms between Bristol and Folly roads along Pickertown Road that are preserved in perpetuity by the Bucks County Agricultural Land Preservation Program will ensure continued use of the land for agricultural purposes. Additional parcels within the center of the township and in the western end abutting the Eureka Quarry are used for crop farming or horticulture.

VACANT

The remaining acres are classified as “vacant” because there is no residence, farming, and no other current activity. Undeveloped parcels are designated as vacant land under the Board of Assessments’ land use classifications. They have individual tax parcel numbers and are capable of being transferred to new owners as vacant lots. Vacant land constitutes approximately 4.2 percent of the township’s land area.

Of note are several rural residential parcels along the Route 202 Parkway that were condemned by the Pennsylvania Department of Transportation and are adjacent to the right-of-way and classified as vacant.

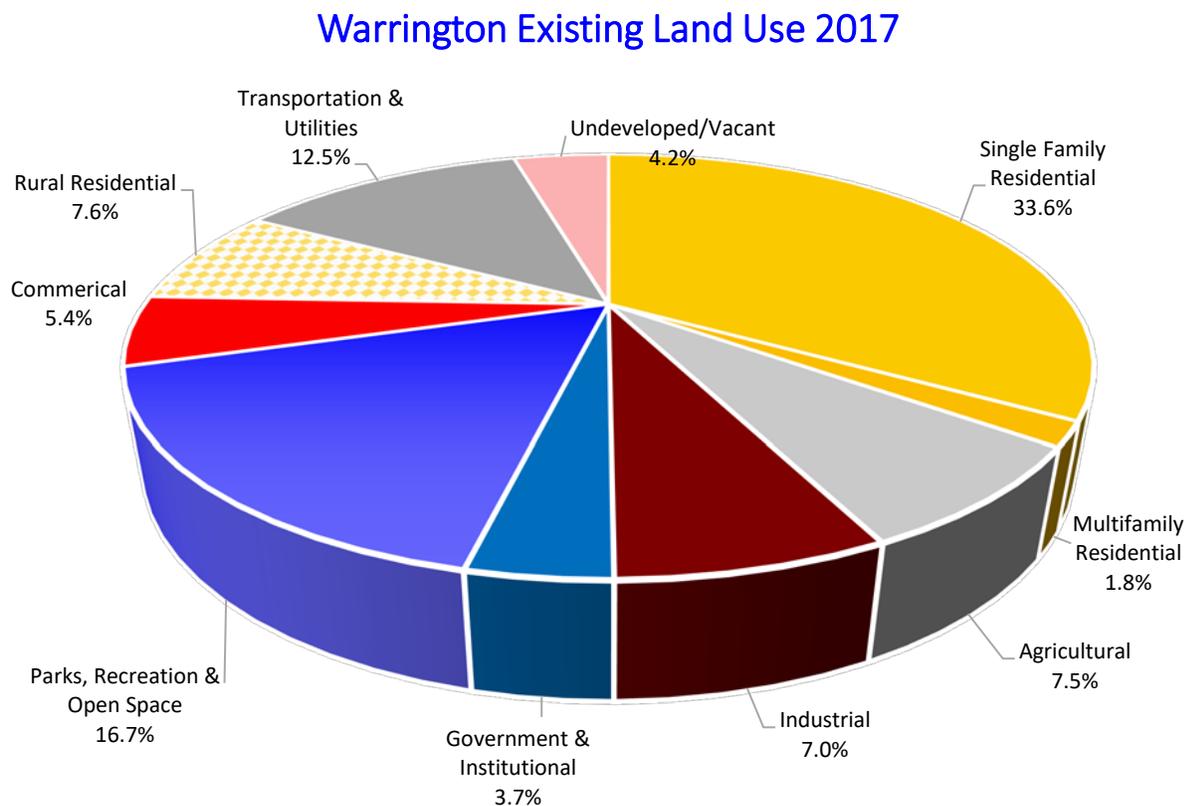
Table 1
Existing Land Use

Land Use	2017 Acreage	Percent
Single-Family	3,003.6*	33.6
Multifamily	160.8*	1.8
Rural Residential	680.9	7.6
Commercial	482.0	5.4
Industrial	626.1	7.0
Government and Institutional	331.3	3.7
Transportation and Utilities	1,122.2	12.5
Parks, Recreation, and Open Space	1,491.2	16.7
Agriculture/Farmland	669.7	7.5
Vacant	376.9	4.2
Total	8,944.7	100

Source: Bucks County Planning Commission 2017 Land Use Analysis.

*Acreage includes pending development proposals that are under construction or have been approved as of July 2017.

Figure 2
Existing Land Use 2017



Future Land Use Plan

The amount of growth in the township depends on the availability of goods and services, land available for future development, proximity of regional transportation networks, and the accessibility to local and regional employment, all of which contribute to the desirability of the area. Establishing goals and guidelines for the future development of the township is central to comprehensive planning. The *Pennsylvania Municipalities Planning Code* requires a municipal comprehensive plan to include “a plan for land use, which may include provisions for the amount, intensity, character and timing of land use proposed for residence, industry, business, agriculture, major traffic and transit facilities, utilities, community facilities, public grounds, parks and recreation, preservation of prime agricultural lands, flood plains and other areas of special hazards and other similar uses.”

Based on the goals and objectives of this plan, this portion of the land use chapter will look at residential areas and the commercial core areas of the township and comment on future growth trends and provide recommendations for the various land uses within the township as guided by the “vision principles” in Chapter 6, Implementing the Vision. The future plans for specific areas of the township are shown on Map 2, the Future Land Use. The map is a guide intended to help manage community change and protect community character and assets.

Residential Land Use

Residential Growth

Residential development grew significantly after 2006, when the comprehensive plan was last updated, but by 2010 the pace of construction had slowed considerably. New developments have been built and occupied since 2010 and some developments have been approved and are not completed but need to be considered when determining future development capacity. There are an additional 302 units under construction or unbuilt as of July 2017.

Residential Development Currently Approved

There are several major subdivision proposals that have received preliminary plan approval that are considered when determining the overall growth capacity as described above. The total and approved number of dwelling units is 506, as noted in Table 2, Pending Development Proposals. The table displays the development name and type of units approved (single-family detached (SFD) and multifamily (MF)) and the number of units that have received occupancy permits and/or have been constructed (204), and the number of units unbuilt, remaining to be constructed (302).

Designated pending development proposals are shown and hatched in Map 1, Existing Land Use. Displayed proposals include Greenbrier Preserve (Lingo), Warrington Glen, Parkview (Illg), Oak Creek at Warrington, Highgrove Manor, and Warrington Pointe. The one-lot subdivisions, Warrington Meadows, and the Warrington Springs developments are not shown.

Table 2
Pending Development Proposals*

Development	Dwellings/Type	Use/Occupancy Permits (Completed)	Under Construction/Unbuilt
853 Elbow Lane	1 SFD	0	1
2105 Bristol Road	1 SFD	0	1
Highgrove Manor	107 MF	3	104
Parkview (Illg)	95 SFD	0	95
Greenbrier Preserve (Lingo)	7 SFD	0	7
Lester	1 SFD	0	1
Oak Creek at Warrington	23 SFD	20	3
Warrington Glen	116 SFD	78	38
Warrington Meadows	21 SFD	21	0
Warrington Pointe	81 MF	30	51
Warrington Springs Phases 1 and 2	48 SFD	47	1
Warrington Springs Phase 3	5 SFD	5	0
Total	506	204	302

Source: Warrington Township Records.

**Total and approved dwelling units, July 2017.*

Residential Development Capacity under Current Zoning

Housing development depends on the perceived supply and demand of housing. If there is a perception of strong demand for, but low supply of housing in the township, a large number of units will be built. If there is a perception of low demand for, but high supply of housing, a small number of units will be built. In addition, single family detached housing will continue to be a large component of the township’s future housing composition.

Assessing the availability and the amount of developable land for future residential land use was determined by measuring vacant residentially zoned parcels and rural residential parcels over five acres within all township residential districts. Fifteen percent of the land was subtracted to reflect land necessary for infrastructure such as streets, sidewalks, and area for sewer and stormwater. The total acreage of each parcel was measured electronically using Geographic Information System software and applications and was totaled for each applicable zoning district.

Natural resource areas such as forests, wetlands, and steep slopes were mapped, measured, and deleted from gross buildable area in accordance with the resource protection standards in the township zoning ordinance. The density permitted in each district was multiplied by the available acres to find the available capacity for growth based on land available and zoned for future development.

The capacity analysis indicates that under current zoning standards 626 new residential units, both single-family and multifamily can be accommodated throughout the township as displayed in Table 3, Capacity for Residential Growth.

Table 3
Capacity for Residential Growth (Under Current Zoning)

District	Total Acres	Developable Acres ¹	Permitted Density (Dwelling units/Acre)	Potential Dwelling Units (Capacity)
RA (3-10 ac)	203.43	148.12	0.30	44
RA (10+ ac)	520.51	368.58	0.65(cluster)	240
R1	75.34	43.50	1.00	43
R2	75.00	40.59	2.20	89
R3	42.04	32.88	1.90	62
PRD	39.02	30.73	3.00	92
PRD-M	0.88	0.43	3.00	1
R2-1-Neshaminy Gardens		48 parcels ²	1.00	48
CR/O	1.44	0.60	12.00	7
Total				626

1 Developable acreage includes only vacant and residential parcels over 5 acre minus resource protection area and 15 percent of the site area to account for needed infrastructure for future development.

2 Parcels in Neshaminy Gardens which existed before adoption of the current zoning ordinance. One unit permitted per parcel.

According to township records, the total number of approved units that are under construction and are approved to be built is 302 as of July, 2017 as displayed in Table 2, Pending Development Proposals. The future residential capacity under current zoning, see Table 3, Capacity for Residential Growth is 626 additional units, which shows that an estimated total

of 928 units can be built in Warrington. Over the next 10-year period, that equates to construction of 92 units per year. Using today's household size figures (2.89 persons per household) as recorded by the American Community Survey, this means that the township can potentially experience more than 2,658 new residents in the next decade.

This prospective growth rate is reasonable and allows Warrington to meet its requirements for future development. Any incentives added to the zoning ordinance to encourage the use of cluster conservation developments that protect open space may increase the development potential of residential areas.

Residential development in the western end of the township has traditionally been of the single-family detached type served by on-lot water and wastewater disposal systems on large lots. These uses define the character of the western portion of the township and should be retained by requiring that all future residential development preserve open space and that public water and sewer service be carefully planned. The township should consider changes to permitted residential uses within the RA Residential Agriculture District to further protect environmental resources, scenic views, and prime agricultural soils. See discussion under the Conservation Zoning heading.

This policy on maintaining current densities would also apply to any additional proposals for age-restricted communities. If the township desires to accommodate new age-restricted communities as a way of limiting school-age population, the current density of the underlying zoning should apply. The accommodation of age-restricted housing does not require increases in overall density. Some allowance for redistributing units on a site may be required as long as the overall number of units per acre remains consistent with current zoning policies.

Conservation Zoning

In order to maintain densities and manage growth in the western portion of the township, protect sensitive natural resources, and preserve open space as principles to uphold, the township should consider refining and enhancing conservation zoning techniques to achieve such actions. Most large, undeveloped residential tracts are located in the RA Residential Agriculture District and can be viewed on Map 1, Existing Land Use. Single-family detached dwelling units are permitted by-right on minimum lot sizes of 3 acres. If developed under current zoning, a typical low-density suburban development would be the outcome with large houses and large lots and minimal to no preserved natural features or open space. Most land on the tract would be privately owned.

In the current zoning ordinance, the RA District does permit a cluster provision as a conditional use. The open space requirement is 83 percent and the density (0.65 units/per acre) approximately doubles the standard 0.33 unit per acre density. The open space is not guaranteed to be owned by the township, thereby leading to a potential loss of critical resources and fragmented open space with little environmental, agricultural, and/or recreational value.

Building upon the existing cluster option, the township should consider refining the cluster option within the zoning ordinance to prevent further loss of critical habitat, agricultural soils, and woodlands, and increase protection of wetlands and waterways. The township should investigate zoning approaches to:

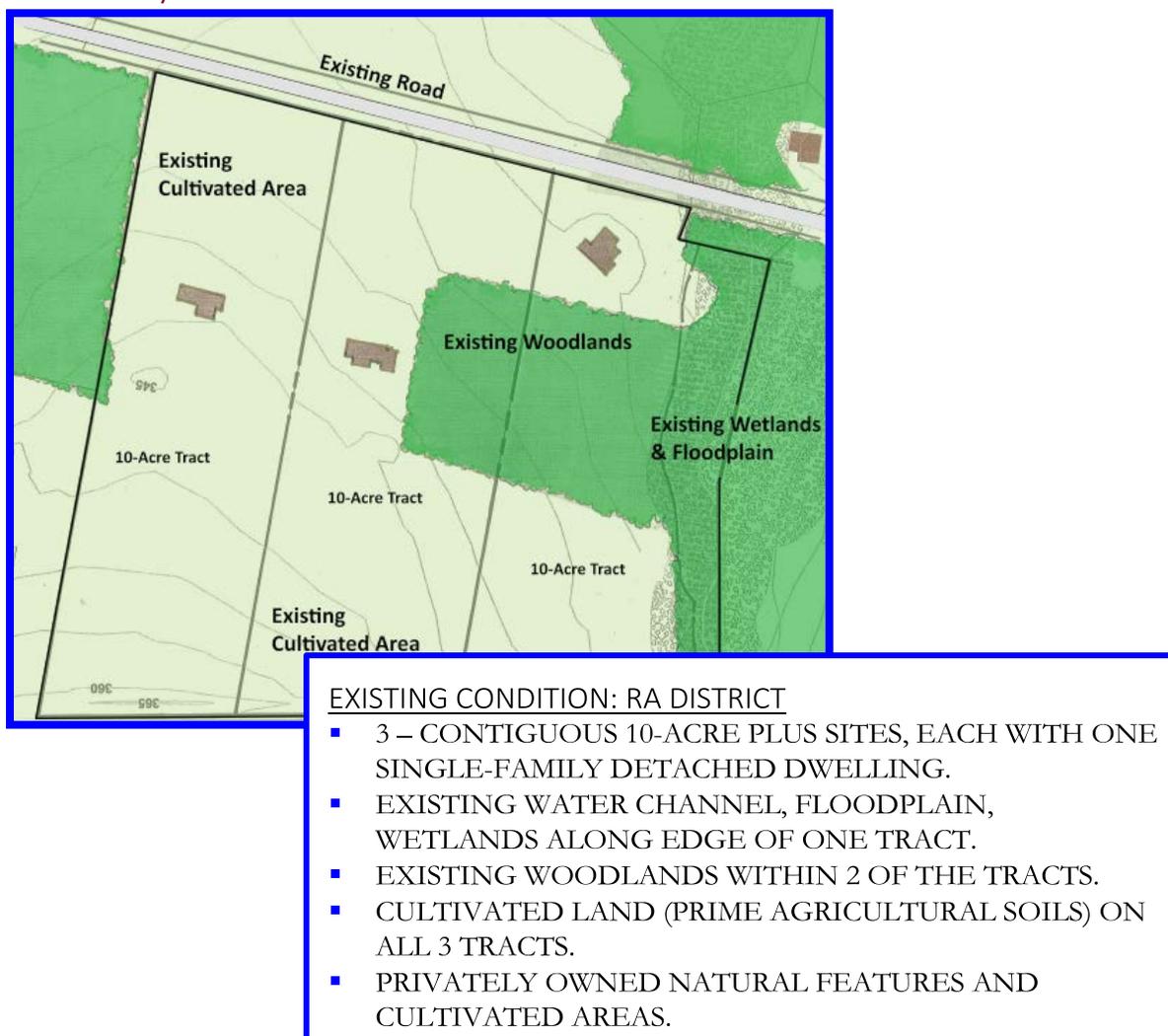
- Control the location, type, and quality of open space.

- Provide flexible housing options.
- Provide flexible setback requirements.
- Provide density incentives for various options.
- Require township input from early planning stages.
- Set minimum tract size for conservation zoning techniques.
- Permit conservation design as a by-right use.

Case Study - Conservation Cluster

The intent of the case study (Figure 3) is to illustrate different scenarios for a residential development in a hypothetical suburban/rural area similar to several properties in the western portion of the township within the RA District. The existing condition shows 3 large tracts, separately owned, that can be classified as Rural Residential. For comparison, a standard by-right (3-acre) subdivision option is juxtaposed to a cluster, conservation subdivision. The attributes of each scenario are listed in order to show the effect of standard subdivision practices verse a cluster design with a specific purpose of preserving sensitive township natural resources.

Figure 3
Case Study - Conservation Cluster



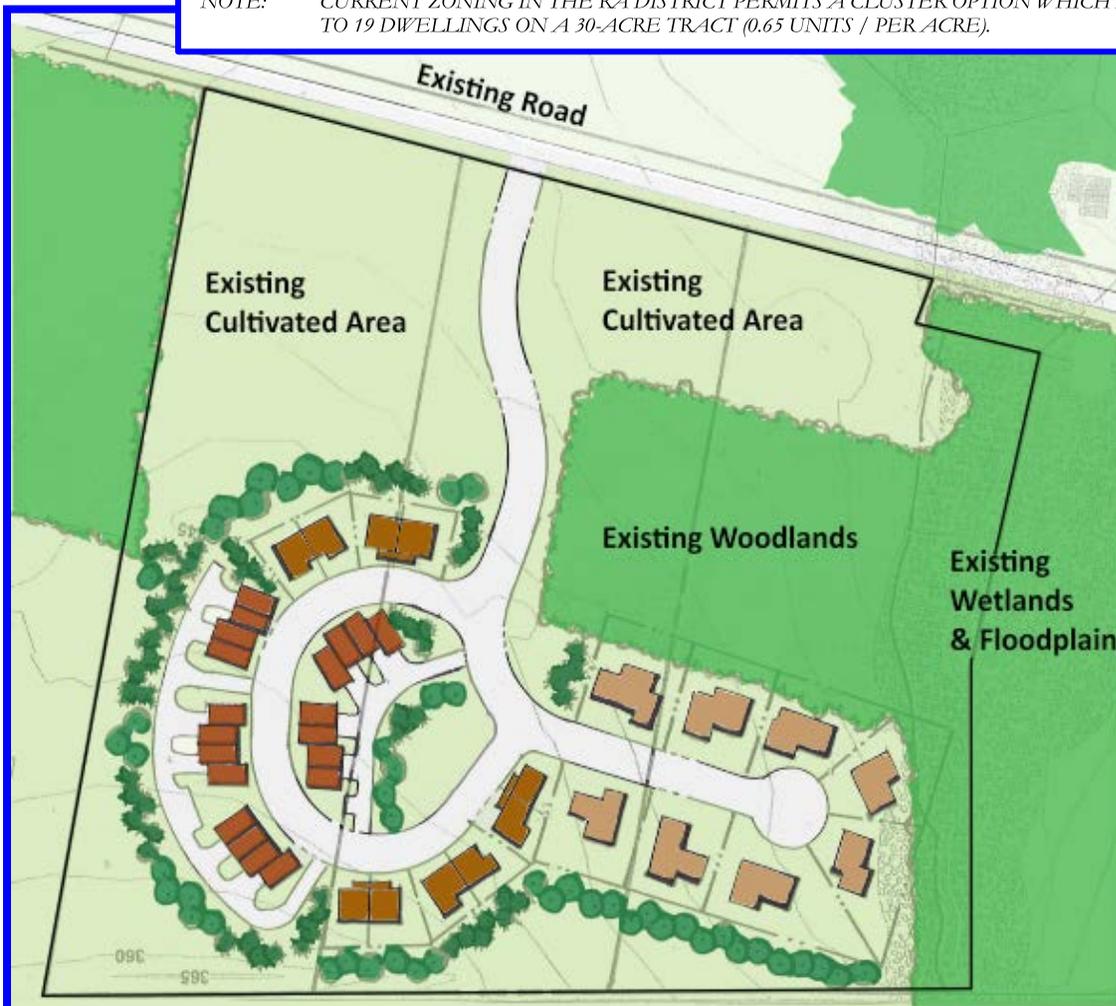


- STANDARD BY-RIGHT DEVELOPMENT: 0.33 UNITS / PER ACRE**
- 3-ACRE LOTS PERMITTED.
 - CREATES 3 – 3-ACRE LOTS PER TRACT FOR A TOTAL OF 9 LOTS ON 30 ACRES.
 - PRIVATELY OWNED NATURAL FEATURES AND CULTIVATED AREAS.

CONSERVATION DEVELOPMENT: CONSOLIDATED TRACTS

- 30-ACRE TRACT
- 38 TOTAL UNITS (SHOWS MIX OF RESIDENTIAL DWELLING TYPES @ 1.25 UNITS / PER ACRE)
- FLEXIBLE SETBACKS AND LOT SIZES
- FLEXIBLE RESIDENTIAL DWELLING TYPES:
 - SINGLE-FAMILY DETACHED
 - TWINS
 - TOWNHOUSES
- PRESERVES SENSITIVE NATURAL RESOURCES:
 - WOODLANDS
 - WATER CHANNEL, FLOODPLAINS, AND WETLANDS
 - PRIME AGRICULTURAL SOILS TO RETAIN FARMING OPERATION.
 - TOWNSHIP OWNED NATURAL FEATURES AND CULTIVATED AREAS.
 - PRESERVES SCENIC VIEWS FROM THE EXISTING ROAD BY LOCATING DWELLING UNITS AWAY FROM THE ROAD AND BEHIND THE EXISTING WOODLANDS.

NOTE: CURRENT ZONING IN THE RA DISTRICT PERMITS A CLUSTER OPTION WHICH EQUATES TO 19 DWELLINGS ON A 30-ACRE TRACT (0.65 UNITS / PER ACRE).



Commercial/Retail Land Use

Eureka Area (*intersection of Limekiln Pike, Lower State, and County Line roads*)

The area known as Eureka contains a combination of vacant, rural residential, and agricultural land near the Eureka Quarry and is presently zoned for commercial and planned industrial uses. An existing commercial/retail center exists at the southern tip of the Eureka area directly adjacent to the Five Points intersection and is zoned commercial. Much of the land in the immediate area is owned by the quarry.

As residential development in Warrington, New Britain, and Montgomery townships has increased, this area may be targeted for new commercial development to meet retail needs. In addition, the improvements and widening of County Line Road and traffic patterns associated with the 202 Parkway may increase development pressure. The township should continue to appropriately determine the type, scale, and mix of uses for the Eureka area.

Route 611/Street Road Corridors

The Route 611/Street Road area has become the center for retail and office uses in the township, providing a regional destination for shoppers. The completion of the Valley Square Center in 2007 and Valley Gate in 2016 (formerly known as the Penrose tract) will further reinforce this corridor as the commercial hub of a larger area. In addition, new townhouse developments have been constructed on tracts that front on Route 611: Warrington Pointe (a component of Valley Gate) and High Grove (across from Park Road).

The township should encourage infill along this corridor during the next decade. Almost 60 percent of resident survey responders strongly agreed with the statement that Warrington has adequate variety of shopping and entertainment venues. The large amount of commercial development in the area, along Route 611 and Route 263, has resulted in several abandoned stores and offices. Older shopping centers suffer as new ones come on line. The new and proposed commercial uses should be absorbed into the community before additional uses are supported.

As redevelopment and infill occurs, several planning objectives should be established to promote and control proper, smart growth within the Route 611 and Street Road corridors. The objectives include:

- Improve safety and circulation and adhere to Complete Street principles (as discussed in this chapter.)
- Protect historic structures and their environs.
- Establish an attractive “Gateway” to Bucks County and Warrington Township along Route 611 that includes comprehensive streetscape amenities, which include sidewalks, landscaping, lighting, wayfinding, and uniform signage.
- Accommodate uses that are needed in the township but which are not provided for elsewhere.
- Allow convenient retail uses to serve desired needs and seek to renovate older centers.
- Discourage new residential uses, except as part of health-care related facilities.
- Ensure that facilities meet architectural and design guidelines.
- Manage access and incorporate an internal street system with limits on Route 611 and Street Road access points.

The shopping centers along Easton Road predominately have internal street systems and controlled access points. New streets such as Paul Valley Road, Anderson Way, and Valley Square Boulevard provide options for access to the centers and ease traffic volume along and around intersections with Street and Easton roads.

Along the Route 611 corridor, there are several areas of older commercial development that contain smaller lots, with less intense commercial uses, with parking areas abutting the street, multiple driveway access points, few street trees, and no sidewalk. These areas include a stretch between County Line and Pete’s Express Carwash on the east side of Easton Road, and on the west side, between Titus Road and the Neshaminy Creek. In addition, the buildings between the creek and Walgreens on the eastern side of Easton Road formed the village of Neshaminy. There is a mix of commercial and residential uses. Over the years, several of these buildings were residential structures adapted for commercial use and each has individual driveway access to Easton Road. This area also has no sidewalks and few street trees.



One positive planning principle to some of these older commercial frontage spans is the existing buildings are closer to the street with smaller building masses. These buildings help frame the roadway better and do not create an expansive parking area in the front yard, therefore providing greater visual appeal and offering more human-scale to the roadway. As these properties consolidate and redevelop, the township should comprehensively look at minimizing curb cuts and access points, promote cross access, and add sidewalk and streetscape components.

Commercial and Office Vacancies

Following the development of the Penrose tract (Valley Square), there are limited large sized tracts along the Route 611 corridor. The township should be very cautious to add new commercial/retail zoning to the corridor as it is almost completely developed and significant vacancies exist at this time. There is opportunity to consider adaptive reuse of the retail and office buildings and shopping centers that have and may become vacant in the future.

Residents responding to the citizen survey noted that more than half believed Warrington had an adequate variety of shopping/entertainment venues. Expanding commercial areas could exacerbate the current vacancy trend.

The Shops at Valley Square shopping center contains vacant space that has never been occupied since its completion. In addition, the former supermarket (Genuardis/Giant) in the Creekview Shopping Center has been vacant for several years and a large box retailer (Gander Mountain) within the Warrington Crossing center recently closed. There are also smaller vacant stores within shopping centers that have been closed due to corporate restructuring.

Opportunities for redevelopment appear to be available in vacant big box and retail center stores for uses which may not be traditional or conventional and which may not be permitted by zoning. New uses should be explored to fill the spaces. Uses envisioned for such buildings and tracts include:

- Residential use over retail (mixed use)
- Institutional uses such as churches or temples
- Assisted living or life-care facilities (excluding 55+ communities)
- Indoor recreation
- Uses permitted within the central business district
- Research/biotech facilities
- Educational facilities
- Day care for children and adults
- Hotel and conference facilities

An example is The Shops at Valley Square that has space above the first floor that was originally designed for office uses and is approximately 60 percent occupied. The remainder, vacant space may be re-purposed for residential use. The shopping center is located in the CBD Central Business District and requires a mix of uses to be provided. Age restricted uses and townhouses are permitted as part of a mixed use development option, but not allowed to be mixed in the same building. Residential use over commercial is an arrangement common to older downtown communities in which a retailer or tradesman would live above their respective workplace.

Potentially, a residential use incorporated into the core shopping area would provide a market and customer base for the first floor businesses. Residential occupants would be beneficial for many reasons that include shopping and eating at the adjacent establishments, providing surveillance during the times the businesses are closed, and reducing vehicular trips on the local street network. The township would gain earned income taxes and add



additional vitality to a site that has activity during set, limited hours. Housing above the businesses would provide opportunities for smaller units and attract residents that may not be otherwise interested in Warrington. Valley Square can become a neighborhood where people can live, work, and play. Revising the CBD zoning to permit multifamily dwellings over commercial uses would be beneficial to the landowners, prospective tenants, and the township.

INDUSTRIAL LAND USE

Industrial Areas

There are four areas primarily zoned for industrial uses:

- Area 1: Titus Avenue, which is bounded by Route 611 and County Line Road and borders Horsham Township, Montgomery County.
- Area 2: Valley Road and Costner Drive area bordering Warminster Township.
- Area 3: Areas adjacent and south of the Eureka Quarry in the western portion of the township that have frontage on Lower State and Mill Creek roads and Limekiln Pike.
- Area 4: Areas adjacent to the Route 611 quarry, between Route 611 (Easton Road) and Kelly Road.

Areas 1 and 2

These two areas appear to have a stable mix of manufacturing, research, contractor offices, auto repair shops, and other various industrial uses. They have easy access to arterial streets and can accommodate truck traffic associated with the industrial uses. However, there are several vacant sites along the Titus Avenue frontage.

Area 3: Eureka Stone Quarry, Inc. (Lower State Road)

Large tracts north and south of the operating quarry site are zoned industrial. The area northwest of the intersection of Pickertown and Lower State roads constitute an area of approximately 77 acres, which contain woodlands, wetlands, floodplains, and two streams. This area is zoned for light industrial development, but due to the natural resource constraints is not suitable for such development. The township has constructed a public works garage and fire station with frontage on Pickertown Road and is considering purchasing other immediate parcels as open space.

The agricultural and wooded areas on the parcels south of the existing quarry between Limekiln Pike, Lower State and Mill Creek roads and north of the five points intersection of Limekiln Pike, Lower State Road, and County Line Road, are more suitable for development. A small strip shopping center (Warrington Square) lies to the west and a pharmacy to the east of this area at the Five Points intersection providing a small commercial core. This area is zoned for light industry and for small-scale nonresidential development. Access for heavy traffic and tractor trailer traffic has been recently enhanced due to improvements to the Route 202 Parkway and widening to County Line Road.

In 2010, a 1.5 million-square-foot warehouse was proposed by Teva Pharmaceuticals on this site. The plan was abandoned after the company received tax incentives for locating on a site in Northeast Philadelphia. This Philadelphia site was never developed due to corporate restructuring.

Area 4: Eureka Stone Quarry, Inc. (Route 611/Easton Road)

Potential expansion of the quarry along Route 611 should be monitored. If expansion occurs, the township should ensure that there will be no increase in air emissions, of regulated pollutants, above previously approved levels. Any new or renewed permit should include monitoring, recordkeeping and reporting requirements designed to keep the facility operating within all applicable local, state, and federal air quality requirements. The protection of immediate neighbors is a priority of the township.

Government and Institutional Land Use

Recent land use trends have seen school districts consolidating and upgrading schools to meet existing and projected student enrollment and improvements to keep up with state-of-the-art technology and teaching trends. In addition, in recent years, the Archdiocese of Philadelphia has been selling select landholdings. The tracts for sale include schools and vacant cemetery land within the Philadelphia suburban region, including Bucks and Montgomery counties. There are over 300 acres devoted to existing institutional and government land use and the township should address future possibilities of both school and religious institution landholdings.

St. John Neumann Cemetery

The Route 202 Parkway has segmented the existing St. John Neumann Cemetery which is owned by the Archdiocese of Philadelphia. The area northeast of the primary cemetery grounds totals over 95 acres and spans both sides of the parkway and is currently classified as Agricultural land use. Following the completion of the Route 202 Parkway with increased development across Upper State Road in New Britain Township and across County Line Road in Montgomery Township, Montgomery County, there has been pressure to develop the 95 acres.



The property is located in a transitional area adjacent to several different types of uses that include single-family and multifamily residential, industrial, office, and institutional and is less than 2.5 miles from a major destination (Montgomery Mall). It has easy access to major arterials, such as the Route 202 Parkway and Route 309. The surrounding zoning is predominately residential. The Future Land Use, Map 2 classifies the area as Single-Family Residential use. If the tract is developed as residential, either single-family or multifamily or a different use, the access should be limited on Upper State Road and the township should consider conserving the natural resources on the tract.

The *Warrington Township Act 537 Plan Amendment No. 5* is the official Act 537 Plan for this portion of Warrington Township. The site and adjoining area lies within the Mill Creek Sewage Management Area which is to be served by on-lot sewage facilities. If the proposed amendment is adopted and public sewer is requested for development, the Act 537 plan should be revised.

Township Facility Needs

The township has recently expanded its fire facilities and public works storage area along Pickertown Road in the western portion of the township. As the township population and housing demands grow in the future, the administration and police services may need to expand. A space and need analysis should be undertaken to determine the need for expansion of both the administration and police functions of the township.

Parks, Recreation, and Open Space

As the township continues to grow and population increases, park and trail development and increased walking and bicycling opportunities will become more important. In a survey of township residents conducted as part of this plan (See Appendix G), 69.3 percent of township residents rated open space as a high priority.

An updated parks, recreation, and open space plan has an overall vision of creating a system that will be the focus of community pride and make Warrington Township a great place in which to live, raise a family, work, retire, and operate a business. The system is intended to:

- Create a strong sense of community.
- Encourage people of all ages to feel engaged and welcome.
- Be safe, clean, beautiful, and functional.
- Foster a connection and appreciation for natural resources, healthy living, and community.

The township should continue its long-standing policy of connecting new subdivisions to older, adjacent subdivisions with sidewalks and trails. As opportunities arise where proposed trails are shown on Trail Plan, Map 4, in the *Parks, Recreation, and Open Space Plan Update*, the township should make every effort to ensure that connections and links are provided so that the overall trail network is implemented.

For all issues related to parks, recreation, and open space, the updated plan should be consulted to understand existing and future policies and recommendations regarding the parks, recreation,

and open space. According to the updated plan, the following guiding principles are suggested:

- Warrington Township currently has 28.5 acres parkland per 1,000 residents. 30 acres of parkland per 1,000 residents should be the parkland standard for Warrington Township. That means for every 1,000 residents moving into the township, another 30 acres of parkland at a minimum should be added.
- This overall park master plan identifies key needs and connections, with consideration for incorporating activities and experiences currently missing from the system, and making the exiting network more cohesive. Individual parks will be professionally designed as scenic beautiful places that the residents will use for recreation, relaxation, fitness, socialization, and connecting to nature.
- Park design standards will be developed and adhered to with respect to current parks and open space, as well as future expansion. These design standards will include but not be limited to signage, furniture, trail materials, fencing, and lighting. The township park signage system will be developed to brand the township as a community with a top-notch parks and recreation system. The professionally designed system will include a logo, a color palette, quality materials with maintenance considerations, and signs for park names, rules and regulations, interpretation, facility names, and wayfinding.
- Parks will comply with the Americans with Disabilities Act and Consumer Product Safety Commission standards for playgrounds.
- Connections to park and other community destinations will be provided via safe places to walk and bicycle. Each neighborhood will have easy access to at least one park or open space area.

In addition, the plan puts forth several immediate recommendations that are highlighted below:

- Removal of unnecessary fencing, particularly along the Doylestown edge of King Park.
- Installation of usable bridge over stream in Barness Park.
- Request for Proposal for a design firm to create a signage standards package to be used for all new and replacement signage within the park system, as well as trails, specifying materials, colors, sizes, installation methods, and potential vendors, including but not limited to entry, rules and regulations, wayfinding, and interpretive signage.
- Identification of key areas for potential environmental stewardship maintenance practices.
- Master planning of and consolidation of Igoe Porter Wellings, Upper Nike and Twin Oaks into one park.
- Master Plan for Bradford Reservoir property.

Agricultural/Farmland Areas

This plan recognizes the importance of agriculture and identifies areas that are preserved or should be dedicated to open space preservation or low-intensity development. The preserved farms between Bristol and Pickertown roads, the working farms and nurseries between Street and Pickertown roads, and the farmland along Lower State Road are shown as Agricultural land use areas (See Map 2, Future Land Use.) This designation does not mean that development cannot occur, but it identifies the farming areas as lands appropriate for preservation and continuation of agriculture. These areas may be preserved in whole or in part through farmland preservation or

through a development process that would allow a portion to remain open space. Present zoning will remain in place, but added incentives for preservation, such as density bonus for conservation design may be offered.

Future development should also take place in a manner that preserves agricultural soils and allows for continued agricultural practices. This policy is supported by the Commonwealth court case *Heritage Building Group v. the Plumstead Township Board of Supervisors* (2003), in which case the court permitted agricultural land to be considered developed and thus a legitimate land use, not a holding zone for future development. Preservation efforts aimed at protecting valuable farmland should continue in the western portion of the township.

OTHER LAND USE CONCERNS

Resource Protection Areas

Strategies for preservation should focus on maximum preservation and conservation by limiting the amount and degree of disturbance and intrusion permitted into areas with woods, floodplains, wetlands, and other sensitive environmental features. This includes scrutinizing the zoning ordinance requirements on buildable area and encouraging development in areas that can be developed more intensely rather than agricultural and resource-restricted lands.

Transfer of Development Rights (TDR) Program

The TDR program in Warrington has succeeded in preserving land for recreation, protecting sensitive natural resources, preventing further development in agricultural areas, and has encouraged development in targeted areas. At this point in time, the program has served its purpose as there are few, large agricultural tracts to preserve in the township. Residents have expressed wishes to retain the rural character of the western portion of the township which can be done with cluster and conservation zoning.

The township should consider phasing out the TDR program because it has achieved the conservation and growth management goals of the previous comprehensive plans. The township should tabulate the number of remaining TDRs and encourage the use of the rights to extinguish them.

Complete Street Policies

To supplement the transportation goals noted in Chapter 5, Connected by Transportation, the township should consider recommending that all new development adhere to the Complete Street policies. Complete Streets aim to create roads that are safer, more accessible, and easier for everyone. In the process, they help create better communities for people to live, play, work, and shop.

They are defined by the following general policies and principles:

- Establish a vision for how and why the community wants to complete its streets.
- Specify and account for ‘all users,’ including pedestrians, bicyclists, transit passengers of all ages and abilities, trucks, buses, and automobiles.

- Apply standards to both new and retrofit projects, including design, planning, maintenance, and operations, for the entire right-of-way.
- Encourage street connectivity and aims to create a comprehensive, integrated, connected network for all modes.
- Utilize the latest and best design criteria and guidelines while recognizing the need for flexibility in balancing user needs.
- Direct that Complete Streets solutions will complement the context of the community.
- Establishes performance standards with measurable outcomes, such as tracking the linear feet of new or reconstructed sidewalks and number of new curb ramps, monitoring the level of service at significant interchanges, understanding the number of children walking or biking to school, and tracking the percentage of transit stops with shelters.



Credit: Grand Avenue Streetscape Master Plan, 3DD, 2013

Protection of Historic Resources

Almost 60 percent of Warrington residents who answered the community questionnaire, strongly agreed with a statement that the township should promote protection of historic sites. The *Pennsylvania Municipalities Planning Code* encourages this by requiring local zoning ordinances to protect historic resources. The township needs to capitalize on the work done on identifying its important resources and move toward protecting them.

The historic buildings and sites in the township contribute to the quality of the township, enrich the physical environment, and enhance the township by reminding residents of its long history and unique architecture of the past two centuries.

These buildings and sites can be destroyed by demolition, by neglect, or by development patterns that are insensitive to the historic resource. The primary cause for concern is the loss of historic buildings and resources during the development process, when a developer may choose to demolish a building rather than use it or to surround the historic area with new development so that the historic area loses its significance and setting.

Three Steps to Encourage Historic Preservation

The township can use tools at its disposal to encourage preservation, all of which require amendments to the zoning ordinance. There are individual buildings on lots throughout the township, and there are clusters of buildings at some crossroads villages. The township has a list of older buildings, through its Historic Commission report, that can serve as a foundation for an official township inventory of historic resources.

The township's zoning ordinances should encourage the protection and preservation of historic resources in several ways:

- Requiring development in and around village centers to be consistent and compatible with existing development.
 - Allowing some flexibility and encouragement to preserve historic structures within a new development.
 - Providing additional use opportunities for historic resources – e.g. bed and breakfast.
1. **Protect Crossroads/Villages where they exist**-Require new construction around villages and reconstruction within villages to keep prevailing setbacks, scale, style, and bulk. This would apply to area where buildings remain at crossroads villages, such as Tradesville.
 - Require documentation prior to allowing for demolition of a building in the historic area.
 - Encourage new buildings to be constructed on the same footprint as the demolished buildings and allow for more flexible setbacks.
 - Require new buildings to have same style, scale, and architecture as the historic buildings.
 2. **Encourage the preservation of houses and barns on sites slated for development**-Allow some flexibility so that the farmstead and outbuildings can be protected. Township ordinances should require that all historic resources, houses, barns, and so forth be identified and described on subdivision submissions. Many times, a proposed subdivision will assume the removal of older buildings so that the developer can get a higher yield. If a subdivision or land development is proposed for the site of any structure identified on the official township list of historic resources, the lot lines of the proposed subdivision or land development shall be drawn so as to preserve the historic context of the building, including its outbuildings, with adequate setbacks. The township can encourage the preservation of historic resources and permit the alteration of lot sizes or setbacks on other proposed lots within the same development in order to allow adequate land area and setbacks to preserve the historic character of resource, without increasing the overall permitted density. Adequate land areas and setbacks represent a site sufficient to protect the real estate values of the historic resource to the extent that investment in the restoration and continued maintenance can be ensured.
 3. **Allow additional use opportunities**-One approach that has been used in Bucks and Chester counties to encourage preservation of historic structures, such as large houses or barns, is to expand the uses that are available to specifically identified historic buildings.

Buildings that have been identified and are designated by the municipality as historic

resources are given additional use opportunities under the zoning ordinance. Typical uses are bed and breakfast, museums, or low-impact offices. The objective is to encourage the protection and preservation of landmarks that have historic or architectural interest by allowing them to be used for activities not otherwise permitted.

ESTABLISH ARCHITECTURAL AND DESIGN STANDARDS

Additional architectural standards and site planning standards should be enacted so that high quality design is the norm for the township. Standards should encourage legacy buildings that have long-term usefulness rather than transitory structures. Parking areas should be located to the side and rear. Landscaping should be required. Limits should be placed on the sizes of stores, and long undefined blank walls should be prohibited. Signs should be low and reflect traditional sign styles. Making commercial areas attractive will help to keep the areas vibrant.

Successful communities have learned that high standards pay off in terms of long-term community investment. Similar to the standards required in the Corridor Residential/Office and Corridor Residential/Office-Institutional zoning districts that reinforce integrated architecture and visually cohesive development, the township should consider extending the standards to other appropriate areas. These other target areas include additional spans of frontage along Route 611, portions of Street, Valley and County Line roads, and the Eureka area.

Land Use Plan Recommendations

Even though new development in the township has slowed down since 2006, new development has taken place throughout the entire township. In the western portion, both agricultural and rural residential uses have succumbed to the pressures of development. Also, a number of infill developments occurred in dense areas around Route 611 and Street Road on properties that were passed over in the past. Future population and housing projections call for continued slow growth as discussed in Appendix C, People: Population Characteristics.

Community facilities have for the most part caught up with demand and now the challenge is to maintain the character of the township by having future development conform to adopted plans and ordinances. A major realignment and rerouting of sewage facilities occurred at substantial cost after 2006 in the western portion of the township. Major PennDOT projects (County Line and Route 202 Parkway) are addressing traffic concerns. Significant flooding events have occurred. Emergency services have provided new facilities for western Warrington to meet response time's demands for the growth in that area. The township should limit further overburdening until physical and financial infrastructure liabilities are met.

- Support the preservation of farmland and natural areas through county and state programs.
- Maintain the overall residential densities and intensities of the current zoning ordinance. Any new age-restricted development should be allowed only at existing densities, not higher densities.
- Review current conservation and environmental resource protection measures in the RA District to meet township needs and preserve sensitive, natural resources.

- Do not add or be cautious in creating new commercial areas.
- Discourage zoning map changes to prevent industrial development in areas where the natural resources and road network make it undesirable.
- Strengthen resource protection standards to limit disturbance and maximize protection of environmentally sensitive areas.
- Determine needs for future administration and police functions and plan for potential growth and expansion.
- Allow use of the Transfer of Development Rights program to extinguish all remaining rights.
- Protect historic buildings and resources by amending the zoning ordinance to require continuation of historic development patterns at crossroads villages; to require the identification and preservation of historic sites during the development process; and to allow additional use opportunities for historic buildings.
- Adopt design standards for sites and buildings and extend the Corridor Overlay standards in place for Route 611 to other areas of the township.
- Permit residential uses in the CBD district in mixed residential and commercial buildings.
- Monitor status of age-restricted communities to determine necessity for continued age-restricted covenant.

These land use recommendations have been incorporated into Chapter 6, Implementing the Vision.

Chapter 5

Connected by Transportation

Community transportation issues involve more than just moving vehicles safely and efficiently. To fully understand transportation problems and solutions, economic development, public safety, the environment and quality of life for residents must be considered. Integrated transportation, land use, and circulation systems that are well-designed help preserve a sense of community, advance economic development goals, and preserve both public and private infrastructure investments. Transportation is a primary quality of life issue for all those who work, reside or travel through Warrington Township.

Today's Transportation System

STREETS

The classification of each roadway in the transportation network is based on the purpose it serves. According to the township subdivision and land development ordinance, streets are classified as follows:

1. Arterial Street – designed for fast moving and heavy traffic with access to abutting properties restricted. Streets that carry an average daily traffic volume of 3,000 + vehicles or more are considered arterial streets. An example would be Route 611 and U.S. Route 202 Parkway.
2. Collector Street – designed to carry traffic from other collector, primary or secondary streets into the system of arterial streets. Collector streets carry average daily traffic volumes of 1,001 to 3,000 vehicles per day. Collectors include roads such as Bristol, Lower State, and Upper State.
3. Primary Street – designed to carry traffic from the secondary (residential) streets to the collector streets. Streets included in this category carry an average daily traffic volume of 501 to 1,000 vehicles. An example would be Folly Road.
4. Secondary Street – designed to provide primary access to the abutting properties. Any street that carries 201 to 500 average daily trips is considered a Secondary Street.
5. Residential Streets – streets that serve low population density where abutting properties are one acre or greater, with average trips of up to 200 vehicles per day.
6. Cul-de-sac Streets – streets that are closed at one end and in general shall not be more than 500 feet long. Cul-de-sacs carry fewer than 200 average daily trips.

7. Marginal Access Street – a minor street parallel to and adjacent to an expressway, arterial road, or collector road; provides access to abutting properties and protection from through traffic.

Many of the streets are local roads and are owned and maintained by Warrington Township. Most of the arterials and collectors in the township are owned and maintained by the Pennsylvania Department of Transportation (PennDOT).

PUBLIC TRANSPORTATION

The Southeastern Pennsylvania Transportation Authority (SEPTA) provides public transportation service linking Philadelphia and the surrounding counties with an integrated network of about 200 bus and rail transit routes. SEPTA's Regional Rail Division also operates commuter rail routes to stations in New Jersey and Delaware. SEPTA's extensive network of buses, trolleys, and rapid transit trains in Center City Philadelphia, in addition to Regional Rail, links to downtown employment centers and hubs including University City in West Philadelphia and the Philadelphia International Airport.

One bus route operates within the township and two railroad lines operate in neighboring municipalities. The Southeastern Pennsylvania Transportation Authority (SEPTA) operates the Route 55 bus route along Route 611 with the service connecting with SEPTA's Olney Transportation Center in Philadelphia. SEPTA also operates the Warminster Regional Rail Line which provides service to central Philadelphia with the closest station located in Warminster Township. The Lansdale/Doylestown Regional Rail Line provides service to Lansdale and Philadelphia with stations located in Chalfont Borough, New Britain Borough, Doylestown Borough, and Doylestown Township.

Goals for the Transportation System

Goals for transportation planning in Warrington are:

1. **Increase Mobility Choices.**
2. **Minimize Traffic Congestion.**
3. **Link Land Use and Transportation Decisions.**
4. **Improve Safety for All Users.**

1. INCREASE MOBILITY CHOICES

A well-designed transportation system allows for mobility choices. Those choices should include pedestrian, bicycle and public transportation facilities, in addition to a proper-functioning roadway network.

Bicycle and Pedestrian Facilities

Bicycling and walking are important elements of an integrated, inter-modal transportation system. Constructing sidewalks, installing bicycle parking at transit, teaching children to walk and bike ride

safely, installing curb cuts and ramps for wheelchairs, providing bike lanes and building trails all contribute to the township’s safety and mobility. Unfortunately, many areas of the township are not served by paths or sidewalks. This lack of connectivity separates neighborhoods and activity centers and requires travel on already-congested roads.

Federal transportation law requires states and regions to plan for the “development and integrated management and operation of transportation systems and facilities (including pedestrian walkways and bicycle transportation facilities) that function as an inter-modal transportation system.” State and regional transportation plans are required to consider projects and strategies to increase the safety and security of the transportation system for non-motorized users. Planning for bicyclists and pedestrians should be an integral part of the ongoing transportation planning and implementation process.

The *Township-Wide Trail System Master Plan* recommends construction of safe alternative modes of transportation by providing trails for use by pedestrians and bicyclists. The Conceptual Trails Master Plan Option “A” and “B” maps show proposed road improvements to a number of state roads that include Bristol, Stump, and Street roads. In May 2017, PennDOT eliminated the need to acquire a Bikeway Occupancy Permit and replaced it with the Bike Lane Request/Approval Letters application. The update simplified the process to incorporate bike lanes on targeted roads and encourages municipalities to partner with PennDOT to identify bicycle needs early in the project scoping. The township should evaluate its bike lane connections and links as targeted roads are planned for improvements.

Township actions to accommodate pedestrian and bicycle access include:

- Require sidewalks within all new developments.
- Require sidewalks, or macadam multi-use paths, along the perimeter streets of new development.
- Seek to complete trail and bicycle facilities identified in the *Township-Wide Trail System Master Plan* and park plan and expand trails throughout the township.
- Use township ordinances and authority under the *Pennsylvania Municipalities Planning Code* (Act 247 of 1968, as amended) to require installation of sidewalks, paths or recreational trails.

2. MINIMIZE TRAFFIC CONGESTION

County Line Road Task Force

Warrington Township participated in the County Line Road Task Force, which was created to address potential impacts of a proposed interchange of the Route 202 Expressway at County Line Road. In 1996, five municipalities and two counties combined efforts to develop a transportation improvement plan for the corridor of County Line Road between routes 611 and 309. The municipalities who participated in the study include the townships of New Britain and Warrington in Bucks County and the townships of Hatfield, Horsham, and Montgomery in Montgomery County. The study identified existing problem areas, made recommendations for immediate improvements, and contained an implementation plan for immediate, intermediate, and long-term solutions that will facilitate better traffic flow and safety through the corridor. The group was

reactivated and the plan was updated in 2001 in response to continued growth and development along the corridor.

The major improvements suggested by the plan for Warrington Township are:

- Widen County Line Road to four lanes from Stump Road to Kulp Road; improvements to the Route 152, County Line Road, Lower State Road “triangle.”
- Improve the Titus Avenue intersection (potential traffic signal and safety improvements).
- Widen County Line Road to four lanes from Kulp Road to Route 611.

This committee has been instrumental in the completion of many roadway and traffic signal improvements along County Line Road. These improvements have been made by developers and by PennDOT as part of its Transportation Improvement Program.

DVRPC Transportation Improvement Program

The Delaware Valley Regional Planning Commission (DVRPC) produced the *FY 2017 Transportation Improvement Program (TIP) for Pennsylvania* for Bucks, Montgomery, Chester, Delaware and Philadelphia counties. All projects that intend to use federal funds, along with all non-federally funded projects that are regionally significant must be listed on the TIP. DVRPC and its member governments that respond to region-wide transportation needs administer the TIP program and ensure that all projects comply with all pertinent federal and state policies. Projects can be multi-modal; that is, they include bicycle, pedestrian, Intelligent Transportation Systems (ITS), and freight related projects, as well as traditional highway and public transit improvement projects.

In the southeastern Pennsylvania region, the TIP currently contains approximately 370 projects totaling more than \$5.3 billion over the four-year span of the program. The list of transportation priorities are financially constrained by the *Fixing America's Surface Transportation Act* (FAST Act).

As of the *FY 2017 Transportation Improvement Program for Pennsylvania*, there are two projects currently programmed for funding in Warrington Township. Both projects are improvements to County Line Road. The first project includes the widening of County Line Road from 2 lanes to 5 lanes with 5 foot shoulders between Stump Road and Lower State/Kulp Road. This project is expected to be completed by 2018.

The second project is a road rehabilitation project for County Line Road from Kulp Road to Route 611 and is approximately 2.8 miles in length. The existing roadway consists of two 10' lanes and intermittent shoulders that vary from 2' to 12'. The proposed roadway will consist of milling and overlay and widening to provide two 11' lanes and 5' shoulders. A left turn lane southbound at Titus Avenue will be added. Existing sidewalk and curb is intermittent and will remain and be replaced in-kind. One bridge will be replaced as part of the project.

Create a Good Local Network

The township can help reduce congestion on main roads by insisting that local streets are interconnected, which provides people alternate ways to travel. When new developments are planned that do not connect to neighboring developments, or when they have only one way in and out, all trips are forced onto the collector or arterial streets. This increases congestion. Best practices in transportation planning require that the local network have connectivity. The township

has successfully used this approach in creating a new connection between Route 611 and Street Road via Maple Avenue and Valley Square Boulevard. Cul-de-sac and dead end streets should be discouraged in favor of through-streets and connected streets.

Control Access Points

Warrington Township has several arterial roadways designed for large volumes and high-speed traffic with access to abutting properties. Controlling the access to these roadways will allow them to perform their intended function of carrying cars. When access is not controlled, the number of conflict points with roadway traffic increases. This places serious demands on the roadway capacity and creates unsafe conditions. The conflict between safe and efficient movement of traffic and access to abutting properties is a limiting constraint in traffic operations and transportation systems management.

Access Management

Access Management as defined by the Institute of Transportation Engineers is the process or development of a program intended to ensure that the major arterials, intersections and commercial strips serving a community or region will operate safely and efficiently while adequately meeting the access needs of the abutting land uses along the roadway. Controlling the number of access points allows roads to perform their intended function.

Traffic operations and transportation systems management recognize the inherent conflict between providing efficient traffic movement on roads and safe access to abutting properties. When numerous, excessively wide and separate accessways occur along a street to serve individual properties, roadway capacity and speed are affected, and congestion problems generally rise, causing more accidents.

A basic approach of access management is to minimize the number of conflict points along these types of roadways and to provide safe and efficient access to properties and businesses located along the roadways. Access management may include such techniques as shared driveways and parking, providing access to secondary roadways, driveway spacing, planted median strips, protected left turn lanes, and any other appropriate access control measures. Access management is both a land use and traffic issue that calls for land use controls and incentives to improve the capabilities of the transportation system. The access needs of residents and businesses along such road should be balanced with the convenience of vehicles traveling through the area.

Transportation System Management

Several communities in Bucks County have established cooperative efforts between municipal government and business to address traffic congestion. Transportation management strategies include increasing facilities and incentives for carpooling, flexible work hours, establishment of needed bus routes and stops, and site planning.

Employers in Warminster and Northampton have worked with the Transportation Management Association of Bucks County (TMA Bucks) to establish a bus route serving industrial park employers in these townships. Both SEPTA and TMA service are oriented to commuters arriving on regional rail lines to work in the industrial parks in Warminster and Northampton. Warrington should work with TMA Bucks to investigate potential shuttle services that could service business

and industry in Warrington. This service will help provide mobility for those with other destination and transportation needs.

The Route 55 bus provides access to many Warrington businesses for employees traveling from Philadelphia. Warrington can assist with public transit effectiveness by ensuring that developers incorporate transportation improvements into land development projects by providing bus pull-off areas and transit shelters to encourage public transportation use. Warrington should coordinate these improvements with SEPTA to ensure these public transportation facilities meet current bus station design standards.

3. LINK LAND USE AND TRANSPORTATION DECISIONS

Land use patterns and intensity affect the roadway network. Likewise, the roadway network can influence land uses. Just as new or expanded transportation systems create new access opportunities that attract new development, new development patterns create a need for additional transportation facilities. Land use patterns and transportation patterns are linked in a continuing cycle, with new transportation facilities creating demand for development which in turn generates additional transportation needs.

This continuing cycle has been the traditional route by which most suburban areas have developed, including portions of Warrington Township. For this trend to be broken, this primary relationship between land use and transportation must be recognized, understood and exploited in order to create conditions where new growth and new transportation systems and improvements can occur together in a logical and designed manner.

Linking land use and transportation involves:

- Incorporating land use considerations into transportation planning can influence future development patterns and ensure that transportation facilities have adequate capacity to meet demand. This means examining potential transportation and traffic impacts before any changes in zoning are made.
- Ensuring that land use patterns are matched to the transportation system to help relieve congestion and traffic on existing roads, which in turn reduces the need to construct new transportation facilities.

Providing the link between land use and transportation will reduce congestion, improve mobility, improve air quality and preserve additional open space, all of which will help to create a more attractive and livable community. Inappropriate land uses coupled with inadequate transportation services create congestion and traffic impacts on both highways and local roads. They also cause worsening air quality conditions, decreased highway safety, and reduced community access. Inefficient transportation access and unplanned land use patterns are also a significant hindrance to economic growth and productivity.

Improving the linkage between land use and transportation planning is essential for the future of the township. The township must carefully consider the transportation implications of all land use and zoning decisions to mitigate congestion and make sure that the development does not create new transportation problems.

4. IMPROVE SAFETY FOR ALL USERS

The recommendations for reducing congestion, creating a local road network, and accommodating safe access for pedestrians and cyclists will support the goal of improving travel safety.

Other ways to improve travel safety are:

- Street Design Standards
- Traffic Calming
- Intersection Design

Street Design Standards

The width allocated to lanes for motorists, buses, trucks, bikes, and parked cars is a sensitive and crucial aspect of street design. Lane widths should be considered within the body of a given street delineating space to serve all needs, including travel lanes, safety islands, bike lanes, and sidewalks. Each lane width discussion should be informed by an understanding of the goals for traffic safety as well as making adequate space for larger vehicles, such as trucks and buses.

When appropriate, narrower streets should be considered. Narrower streets help promote slower driving speeds which, in turn, reduce the severity of crashes. Narrower streets have other benefits as well, including reduced pedestrian crossing distances, shorter traffic signal cycles, less stormwater, and less construction material to build. The subdivision ordinance standards should be reviewed to ensure that unnecessarily wide streets are not required.

Street trees are an important part of street design and have been shown to slow traffic and make streets safer. Planting or requiring the planting of street trees will help improve travel safety, as well as community appearance. Subdivision ordinance requirements can also be updated to require that streets include design elements to minimize travel speeds on internal streets. This may include horizontal deflections, limits on straight runs of street, stop signs, or roundabouts at intersections.

The township should consider comprehensive streetscape improvements as a part of the land development process.

Traffic Calming

Traffic calming measures are used to address speeding and high cut-through traffic volumes on neighborhood streets. By addressing high speeds and cut-through volumes, traffic calming can increase the real and perceived safety of pedestrians and bicyclists, and improve the quality of life within the neighborhood. The role of physical design measures in traffic calming is usually emphasized because these measures are self-policing. By using speed humps or traffic roundabouts, motorized vehicles will slow down in absence of a police presence. Some potential traffic calming measures include speed humps, speed tables, chicanes, planted medians, roundabouts, and curb extensions.

Traffic calming techniques should affect driver behavior and improve the safety of the street for all roadway users, including pedestrians and bicyclists. The techniques must be designed so they do not impede emergency access by police, fire, or ambulance personnel. Public participation in the design and placement of traffic calming facilities will help to ensure acceptance.

The township subdivision and land development ordinance may require that traffic calming measures be included in the design of new developments.

Intersection Design

Each person that passes through an intersection should be accommodated at a reasonable level of safety and efficiency. Therefore, an effective and safe intersection design requires that the characteristics, requirements and needs of all intersection users be understood. The use of roundabouts is now favored by PennDOT, the insurance industry, and transportation planners for certain situations and where traffic volumes allow for their use.

A roundabout can lessen traffic delays and enhance safety. A roundabout is designed so that traffic entering must yield the right-of-way to traffic moving in the roundabout. Because vehicles have to yield but not necessarily stop, traffic queues are diminished and traffic moves more quickly. With slower speeds, accidents are greatly reduced and much less severe than intersection crashes. Slower speeds and less idling leads to lower noise levels and decreased emissions. A roundabout also provides for visual gateway and landmark for a community. As new intersections are designed, the use of roundabouts should be considered.

Chapter 6

Implementing the Vision

The challenge of the comprehensive plan is to consider the conditions of the township as it exists today, consider the factors that will affect its future, determine achievable goals for the township for the next 10 years, and embark on a program to attain those goals.

Recommendations for Implementation

The comprehensive plan sets a vision for the future, provides information on trends affecting the township, and makes recommendations for implementation and action. Our goal is to manage community change and protect community character and assets; preserve the natural environment and farmland; improve mobility; provide adequate township services and public facilities efficiently and equitably; and promote the economic and social well-being of the community. Recommendations are derived from the policy, land use, and transportation discussions throughout the entire plan.

There are seven vision principles that the township will use to guide the actions and decisions of the township.

VISION PRINCIPLE 1:

MANAGE RESIDENTIAL GROWTH

VISION PRINCIPLE 2:

MANAGE NON-RESIDENTIAL GROWTH

VISION PRINCIPLE 3:

PROMOTE SUSTAINABILITY AND PROTECT NATURAL RESOURCES

VISION PRINCIPLE 4:

PRESERVE OPEN SPACE AND PROTECT AGRICULTURE

VISION PRINCIPLE 5:

PROMOTE MOBILITY AND CONNECTIONS

VISION PRINCIPLE 6:

PROTECT HISTORIC RESOURCES

VISION PRINCIPLE 7:

BUILD LIVABLE COMMUNITIES

Successful implementation of the comprehensive plan recommendations require that specific actions, techniques, and measures be taken in an organized, cooperative, and timely manner. The entity or entities responsible for completing each recommended action under the specified vision principle is identified along with the estimated timeframe for completing the action task. Timeframes are broken into S—short term (0-2 year), M—mid-term (3-5 years), L—long term (6-10 years), and O—ongoing actions. Township officials can maintain a digital spreadsheet of these recommendations and can sort this table based upon the priority placed upon the individual action task at any given time.

Vision Principle 1: Manage Residential Growth

Current densities as regulated by the current zoning ordinance will be maintained to accommodate new development needed to meet requirements of the *Pennsylvania Municipalities Planning Code* and the township's share of regional population growth.

Recommended Actions	Entities Responsible	Timeframe			
		S	M	L	O
1 Maintain the current variety of housing types at appropriate densities. Periodically review land use ordinances to ensure that housing choices continue to be provided for all types of living units and arrangements.	BOS, PC				X
2 Continue to use conservation subdivision techniques to ensure new residential development contributes positively to the character of the township and preserves natural and rural resources.	BOS, PC, TA	X			
3 Review current conservation and environmental resource protection measures in the RA District to meet township needs. Investigate supplementing cluster options.	BOS, PC, TA	X			
4 Phase out TDR program.	BOS, PC				X
5 Promote appropriate infill (multifamily residential) in the heavily developed eastern portion of the township.	BOS, PC				X
6 Investigate permitting residential uses in the CBD District to create a mix of retail, commercial, and residential.	PC, TA		X		
7 Monitor status of age-restricted communities to determine necessity for continued age-restricted covenant.	PC, TA				X
8 Continue certificate of occupancy inspections and other building health and safety code enforcement.	TA				X

Vision Principle 2: Manage Non-Residential Growth

Development, while occurring at current intensities, will occur in the best manner possible by making sure ordinances and planning efforts are state-of-the-art.

Recommended Actions	Entities Responsible	Timeframe			
		S	M	L	O
1 Investigate ways to decrease office, commercial, retail, and industrial vacancies and maintain tenants.	BOS, PC	X			
2 Enhance existing design guidelines for sites and buildings, limiting size and intensity, improving landscaping, and parking lot design.	BOS, PC		X		
3 Accommodate new commercial/retail development in existing centers; restrict the creation of new commercial/retail districts elsewhere.	BOS, PC		X		
4 Promote appropriate infill (commercial, retail, and office) in the heavily developed eastern portion of the township.	BOS, PC		X		
5 Enhance major corridor and gateway areas and promote comprehensive streetscape amenities.	BOS, PC		X		
6 Monitor status of age-restricted communities to determine necessity for continued age-restricted covenant.	PC, TA			X	
7 Monitor existing quarries and their potential expansion in order to safeguard neighboring properties.	BOS, PC, TA				X
8 Monitor potential sale of school district and religious institution landholdings and take a proactive role in their future planning.	BOS, PC, TA	X			X
9 As township growth occurs, determine need for the expansion of community facilities to protect and facilitate public health, safety, morals, and general welfare.	BOS, PC, TA				X

Vision Principle 3: Promote Sustainability and Protect Natural Resources

Environmental features and natural resources will be protected, through ordinances and enforcement of all environmental laws.

Recommended Actions	Entities Responsible	Timeframe			
		S	M	L	O
1 Require a Site Analysis and Resource Conservation Plan submission with all major subdivisions and land developments.	BOS, PC		X		
2 Enact riparian buffer and wetland requirements to increase the protection of streambanks and enhance stormwater management.	BOS, PC		X		
3 Encourage the use of Low Impact Development (LID) tools and techniques and Best Management Practices (BMPs) to enhance resource protection standards.	BOS, PC				X
4 Amend ordinances so that net buildable site areas determine development potential to further enhance natural resource protection.	BOS, PC		X		
5 Maintain natural resource protection standards; high standards for stormwater management; continued participation in with all state and federal programs for stormwater and environmental protection.	BOS, PC				X
6 Review, monitor, and enforce the performance of stormwater management facilities following completion of construction.	TA				X
7 To the extent possible, purchase, protect, or preserve open space and prime agricultural soils.	BOS, PC				X
8 Implement practices that reduce energy consumption, increase efficiency, and increase use of alternative and renewable energy and natural resources.	BOS, PC, TA				X

Vision Principle 4:
 Preserve Open Space and Protect Agriculture

Open space and farmland will be preserved, either through the development process or through use of available state and county grants.

Recommended Actions	Entities Responsible	Timeframe			
		S	M	L	O
1 Participate with county and state open space and agricultural preservation grant programs.	BOS, PC, TA				X
2 Preserve open space and farmland by purchasing development rights and/or easements and by facilitating preservation through land trusts, conservancies, or similar organizations.	BOS, PC				X
3 Follow the recommendations and principles as set forth in the <i>Parks, Recreation, and Open Space Plan Update</i> .	BOS, PC, TA	X			X

Vision Principle 5: Promote Mobility and Connections

Traffic will be managed as best we can by creating a local network of streets, by working with neighboring communities, by providing safe routes for bikes and pedestrians, and by working with PennDOT on local and regional highway and intersection improvements.

Recommended Actions	Entities Responsible	Timeframe			
		S	M	L	O
1 Link neighborhoods and activity centers with pedestrian and bicycle paths.	BOS, PC				X
2 Require sidewalks in new developments and macadam paths on perimeter roads where development occurs.	BOS, PC				X
3 Continue to implement trail development and enhance trail network to connect township and county park lands, and other destinations per <i>Parks, Recreation, and Open Space Plan Update</i> .	BOS, PC, TA				X
4 Control access points along roadways.	BOS, PC	X			
5 Incorporate land use considerations into transportation planning and ensure that transportation facilities have adequate capacity to meet demand; promote complete streets and smart development that is conducive to pedestrian and bicycle travel.	BOS, PC				X
6 Analyze paper streets to determine which should be opened and improved and where access should be maintained.	BOS, PC, TA				X
7 Encourage context-sensitive solutions for transportation planning in cooperation with the state and county governments.	BOS, PC		X		
8 Improve safety by updating street standards.	BOS, PC	X			
9 Require comprehensive streetscape amenities along commercial corridors.	BOS, PC		X		
10 Cooperate with PennDOT and other municipalities to get regional transportation improvements.	BOS, PC, TA	X			

Vision Principle 6: Protect Historic Resources

Historic sites and resources will be protected by cataloguing our important historic sites and using available tools to protect them.

Recommended Actions	Entities Responsible	Timeframe			
		S	M	L	O
1 Amend the zoning ordinance to: (1) encourage preservation through additional use opportunities; (2) protect historic resources during the development process; and (3) preserve the pattern of development at crossroad villages.	BOS, PC				X

Vision Principle 7: Build Livable Communities

Township resources will be used wisely to provide good services to residents while maintaining fiscal responsibility.

1 Plan for land use first and then provide water and wastewater services to areas needed to support desired development patterns.	BOS, PC, TA				X
2 Complete trail planning effort and enhance trail network to connect township and county park lands, and other destinations.	BOS, PC, TA				X
3 Continue to promote BMPs for stormwater management and consider naturalized maintenance practices.	BOS, PC, TA		X		
4 Cooperate with other community service and facility providers.	BOS, PC, TA		X		
5 Establish capital project priorities using the comprehensive plan recommendations, with the focus on providing services and facilities for the residents and businesses that are part of the community.	BOS, PC, TA	X			
6 Monitor township facility needs to determine expansion potential for the future.	BOS, PC, TA			X	X

Entities Key			
BOS	Board of Supervisors	S	Short Term
PC	Planning Commission	M	Medium Term
TA	Township Administration	L	Long Term
		O	Ongoing

Appendices

Appendix A

HISTORY: WARRINGTON

Appendix B

HISTORY: WARRINGTON PLANNING

Appendix C

PEOPLE: POPULATION CHARACTERISTICS

Appendix D

NATURAL AND ENVIRONMENTAL FEATURES

Appendix E

COMMUNITY FACILITIES

Appendix F

PART OF A LARGER COMMUNITY

Appendix G

RESIDENT SURVEY 2016

Appendix A

History: Warrington

Township History

Warrington was established in 1734 and named for a borough in the north of England between Liverpool and Manchester. The township remained wilderness for many years because of its location and because much of the land was held by absentee landlords.

The township's boundaries are those planned by William Penn's surveyors. Master survey lines were drawn extending northwesterly from original settlements along the Delaware River and serve as boundaries for original land grants as well as courses for future highways. These lines serve as boundaries between Philadelphia (now Montgomery County) and Bucks County and became the basis for a grid system in Bucks. The parallel lines were called Street roads (County Line, Bristol, and Street roads). All roads running northeast to southwest were to intersect at right angles. The grid established by Penn forms much of what is now Warrington Township.

Villages such as Warrington, Neshaminy, Pleasantville (Eureka), and Tradesville were established at crossroads and served as marketplaces and gathering places for the farming community. Goods produced in the township were shipped by wagon to larger markets in Philadelphia.

The villages were stopping points for travelers moving between Allentown, Easton, and Philadelphia. The Warrington Inn, in the village of Warrington at Bristol and Easton roads, was built in 1782 and served wagons and stagecoaches on Easton Road.

The village of Neshaminy, at the intersection of Street and Easton roads, was named after the nearby creek. The Frog Hollow (Old Time) Hotel just south of the village was built to serve travelers fording the Neshaminy Creek. Post offices were established in Warrington and Neshaminy villages in the 1800s. School board minutes from 1841 indicate that there were five schools.

A trolley line constructed along Easton Road in the early 1900s afforded access to Warrington. This line made it easier to travel to Doylestown and to a number of vacation home communities built along the banks of the Little Neshaminy Creek where city dwellers seeking relief from the heat and illnesses of Philadelphia settled.

The Route 611 Quarry opened in the 1920s and added industrial activity to the township's northern corner.

As the Philadelphia metropolitan area grew in the 1970s, '80s, and '90s, people moved into the township, and its population more than doubled. Many of these new residents moved into new

subdivisions created on farmland. Along with the new residents came commercial and industrial development, primarily along the main roads. Steady growth continued throughout the 2000s, seeing some of the last large tracts along Easton Road be developed into both commercial and residential uses. In addition, the number of open space and park acres grew as well as additional linear feet of trails and walkways.

Historic Resources

The Warrington Township Historic Commission's book, *Warrington Township - The Gateway to Historic Bucks County*, provides a summary of the important historic resources of the township. Relying on their own research and that of the Heritage Conservancy, the commission catalogued over 50 historic buildings which have been studied as historic sites. Their report provided the foundation for the township's historic resources preservation ordinances.

The Heritage Conservancy surveyed over 140 sites with structures built before 1940 in a 1988 survey. The properties are located throughout the township, with some concentrated in the villages of Warrington, Neshaminy, Tradesville, and Eureka/Pleasantville.

Several of the individual historic resources in Warrington inventoried by the Heritage Conservancy may be eligible for inclusion on the National Register of Historic Places due to their significance in the history of the nation. At least eight properties are deemed eligible for the National Register of Historic Places by the Pennsylvania Historical and Museum Commission.

Villages

The village of Warrington once contained clusters of buildings on all sides of the intersection of Easton and Bristol roads. Today, the Barclay house (ca. 1799) and Warrington Hotel (ca. 1800) remain at the intersection and have been redeveloped and operating as a restaurant and office building, respectively. Many of the buildings in Warrington were removed to allow for construction of Easton and Bristol roads. However, several original village structures still remain, such as the former Amelia's Flowers building (now vacant), the Irwin house (recently adaptively reused as an office), and the one-room schoolhouse along Bristol Road (currently operating as a gift shop).

The village of Neshaminy at the corner of Easton and Street roads has disappeared over time. A collection of wooden structures just south of the intersection on the east side of Easton Road appears to be historical structures, one of which was a church.

The village of Tradesville at the corner of Lower State and Bristol roads contains two stone homes with accessory structures. The other half of the village in Doylestown Township contains a modern gas station and stone dwelling. The village once had a general store.

The village of Eureka/Pleasantville at the intersection of Lower State Road, Limekiln Pike, and

County Line Road was in Warrington and Montgomery townships and contains several stone dwellings along Limekiln Pike. The Pleasantville Church (ca. 1898) on Limekiln Pike is an original village structure.

Appendix B

History: Warrington Planning

Warrington Township’s history of comprehensive planning began in 1957, nearly 60 years ago, when the township elected officials recognized the importance of guiding the future of the community.

1957 Comprehensive Plan

Warrington Township’s first Comprehensive Plan was adopted in 1957. The plan was prepared under the Planning Assistance Program of Bucks County Planning Commission. It comprised the following elements: general background, population, economic development, use of land, major facilities, highways, the developed plan, and a continuing planning program.

In 1957 Warrington officials were concerned with preserving the farms. Eighty-eight percent of the land mass was used for agriculture. The predominate tax base was farming. The officials were concerned with the rising number of school-aged children. The 1950 census reported a township population of 2,336 including 510 persons between the ages of 5 and 19 years of age. There was one elementary school with six grades, 12 classes and 30 students per class. One of the goals of the township officials was to encourage the school board to purchase land before development pressure occurred.

Besides the agricultural activity, approximately 1.3 percent of the land was used for quarries. An airport and other quasi-public uses took up 2.5 percent of the land. Manufacturing plants mainly consisted of knitting mills and machine parts businesses operated along the most southern part of Route 611.

For zoning purposes the township was divided into 29 areas, which were based on a countywide method, established under a Uniform School Census Program. Besides density, the only zoning requirement at the time was to provide buffers along waterways to protect the streams. In 1957, the people of Warrington believed that, “Under the residential requirements of the present zoning ordinance population density in Warrington could never reach a level where public water and sewer facilities would be needed.”³ The first zoning ordinance was enacted in 1952.

In 1957, there was a proposal from the state to re-route State Highway 611. Besides Route 611, Upper State, Lower State, Limekiln, County Line, and Bristol roads are mentioned in the plan.

³ Warrington Township Comprehensive Plan, 1957, page 22.

The long-range view was simply to:

- Channel future residential development to preserve agriculture.
- Develop a county core so when municipal services are required they can be provided most efficiently.

1970 Comprehensive Plan

Experiencing an onset of development the township officials commissioned an updated comprehensive plan. In November 1970, the township adopted an updated plan prepared by the Warrington Township Planning Commission and a planning consultant with input from the Board of Supervisors and citizens of the township.

The plan focused on bringing a rural environment into a “planned” semi-suburban community. The goal of the plan was to “... create a community with maximum concern for those qualities which will enhance the township’s value for residential uses.”⁴ The plan proposed to achieve this goal by producing “...a community in a way that will minimize friction between land use while enhancing the township’s value for each type of use.”⁵

Besides the introduction, goals, objectives, and summary of plan proposals the plan consisted of three parts: land use, circulation, and community facilities and was presented with text, maps, illustrations and tables. Much of the text was presented in academic form explaining the planning process.

In 1970, there were six zoning districts, two arterial roads, U.S. Route 611 and Street Road, ten collector roads and sixteen primary roads, and a proposed Route 202 expressway. SEPTA provided bus service through to Doylestown, rail commuter service was available nearby, and the Warrington Airport offered chartered service.

Twenty-six plants within the township employed 1,200 people. There was no police department. There was one fire station. There were few fire hydrants and two-thirds of the township was classified as unprotected by insurance rating standards.

The population in 1970 was 7,550. There were 2,059 dwelling units. Public water and sewer was available to 41 percent of the dwelling units. Sixty-one percent of the township was classified as unimproved land.

Although there is no mention of a Capital Improvement Program existing there is a listing of major expenditures included in this plan.

⁴ Warrington Township Comprehensive Plan, 1970, page 8.

⁵ Ibid

The plan called for the following:

- Cluster development provisions to provide a variety of housing types for all ages and all incomes.
- A system for recreation to identify the township as an outstanding recreational and culturally minded community.
- The development of three new schools.
- Acquisition of land and establishment of a municipal building.
- Provision of a library or auditorium for cultural facilities.
- Encourage two shopping centers to be built, one at Route 611 and Street Road and the other at the intersection of County Line Road, Lower State Road and Limekiln Pike.
- Connect roads to the arterial highways.
- Provide public water and sewer to all development except single-family houses on 40,000-square-foot lots or larger.

1975 Updated Comprehensive Plan

By 1975, Warrington officials began noticing that surrounding municipalities were experiencing development pressures. The township commissioned the Local Government Research Corporation, Planning Consultants at State College, Pennsylvania to prepare a growth management study. This may have been the township's first Growth Management Plan. The plan that was adopted was designated Volume II of the 1970 Comprehensive Plan.

The major emphasis of the plan was to recognize the identity of the township as a “recreationally and culturally minded community.”⁶ The 1975 plan reiterated most of the text, goals, and objectives of the earlier plan. The study portion of the 109-page document consisted of five models and build out scenarios. The study not only looked at the vacant and undeveloped land in Warrington Township; it also observed the regional influences. The consultants studied future population growth and environmental constraints.

The models were identified as:

- **Model I. Existing policy.**
Assumed development at one dwelling unit per acre (40,000 square feet). No provisions for non-private open space. Clustering of dwelling units and Planned Residential Development (PRD) were not permitted.
- **Model II. Higher density.**
Assumed development at one dwelling unit per 30,000 square feet. This model is similar to Model I; however, it removed pressure from developers and landowners who felt that the one-acre zoning was exclusionary.
- **Model III. Higher density plus cluster.**

⁶ Growth Management Study, 1975 Introduction.

Assumed residential clustering and some open space. This model builds on Model II that allowed higher densities to prevent misuse of the environment.

- **Model IV. Higher density plus cluster plus PRD.**
Assumed using the tool of PRD to respect the environment.
- **Model V. Higher density plus cluster plus PRD plus open space.**
Assumed adding an open space program with the effect of decreasing the overall density and providing more extensive non-private open space.

The following table shows the summary of build out for each model.

Model	Overall Density of Saturation Persons per Acre	Roads in Acres	Open Space in Acres
Model I	3.79	477	0
Model II	4.22	477	0
Model III	4.22	477	871
Model IV	5.04	447	275
Model V	4.21	447	1,394

Source: Growth Management Study, 1975 pages 37-42.

It would appear that the growth management study was not implemented.

1980 Comprehensive Plan

In 1980, the township officials hired a law firm out of Kansas City, Missouri, consulting engineers and land surveyors from New Britain, Pennsylvania, and a Philadelphia, Pennsylvania-based architectural firm to update the comprehensive plan. In doing so they directed the consultant to propose a means to control growth. The plan was twice the size of earlier plans, including maps, text, tables, and an entire chapter devoted to growth management.

The Board of Supervisors relied on the results of a public opinion survey that addressed managing growth by indicating their support to an active commitment to growth management. The many objectives set forth in this plan were policy statements to protect the rural holding and resource protection areas with the goal of reducing urban sprawl and addressing growth management.

The consultants proposed a completely different growth management plan than had been adopted in 1975. They suggested that a natural ridge line separating watersheds and diagonally bisecting the township from County Line Road to the most northern boundary would divide the land consistent with the state’s Sewage Facilities Plan (Act 537 Plan). The lands east of the ridge line would be the growth area since pressure for development was more apparent and the lands west of the ridge line, for the most part, should be preserved.

There were major proposed improvements influencing growth in Warrington at this time. The

improvements to the Route 202 expressway were dropped by the state. This action reduced the pressure to develop the western portion of the township.

Public water was scheduled to be available in the township by 1984 and public sewer was expected to extend to the western portion of the township by 1984. In the eastern portion of the township a new wastewater treatment plant was being negotiated with the local utility authorities.

The goals set forth in this plan were as follows:

- Development and realization of management of growth.
- Retain rural character in the western portion of the township.
- Preserve agriculture, stream and wooded areas.
- Extend public services.
- Limit commercial growth to neighborhood service centers.
- Recognize density as it relates to affordable housing needs.
- Accommodate future population growth within ranges projected by the Bucks County and Delaware Valley Regional Planning Commissions.

1990 Comprehensive Plan

In spite of the growth management plan established in the 1980 comprehensive plan, several residential developments were built in the western portion of the township. As a result the township officials hired the Bucks County Planning Commission to review the 1980 plan. The result of the review was that the plan was changed in 1990. Instead of providing for growth east of the fault line and preservation of land west of the ridge line the updated plan established the following four growth management areas.

- Stage I. - Developed Areas
- Stage II. - Staged Growth Areas
- Stage III. - Rural Holding Areas
- Stage IV. - Resource Protection Areas

The objective of this plan was to “...accommodate projected growth to the year 2000 in a staged and sequenced manner based primarily upon the availability of public sewer and water, while minimizing the impact of that growth upon the rural and agricultural areas of the township, and while providing for a variety of housing types and densities in order to meet the needs of the economic segments who might desire to live in Warrington Township.”⁷

The above stages were outlined on a township map included in the updated comprehensive plan with appropriate text explaining that the re-delineation of the staged growth area boundaries were established to conform to man-made features; i.e., roads and property lines instead of watershed boundaries.

⁷ Warrington Township Comprehensive Plan, 1990, pgs. 106-107.

By 1990 technology had advanced to the point that computer-generated mapping was available, records of extensions of water and sewer lines were available, the township had an established police department and development had occurred along the Route 611 corridor, both nonresidential and residential. An array of housing types existed and more were in the planning stages.

Besides growth management, there was an interest in addressing a transportation circulation plan that would establish a Route 611 overlay district. Consideration was given to adopting an official map and there was interest in creating a capital improvement plan.

The goals of the 1990 comprehensive plan were as follows:

- Preserve areas to protect natural and cultural resources.
- Provide adequate open space and parkland to enhance life.
- Provide residential development that will meet future housing needs.
- Coordinate efficient and economical provisions of public water and sewer.
- Promote industrial, professional, business, and commercial development.
- Promote safe and efficient traffic circulation.

2006 Comprehensive Plan

The 2006 Comprehensive Plan Update was prepared by the Bucks County Planning Commission in conjunction with township and public input. The goal of preserving much of the land in the western section of the township envisioned in the 1990 comprehensive plan was altered as a result of several zoning challenges in the late 1990s that resulted in major residential subdivisions being built. The development of the curative amendment sites dictated the provision of water, sewer and other infrastructure in the center of the township, where none was forecasted for another decade or so. Although development has occurred in the western portion of the township, farming still exists.

The 2006 update set both transportation and land use goals. The transportation goals included:

- Increase mobility choices for all modes of travel.
- Minimize congestion.
- Link land use and transportation.
- Improve safety.

The township established a policy statement regarding the Route 202 Parkway that dealt with issues such as right-of-way acquisition, safety, construction, maintenance, wetland mitigation, and impacts to local township roads.

The primary land use goals included the following:

- Continue the township's vision for preservation of its cultural and natural heritage.
- Maintain the overall residential densities and intensities of the current zoning ordinance.

Any new age-restricted development should be allowed only at existing densities, not higher densities.

- Create opportunities for a mixed-use village-style development at Eureka.
- Create opportunities for mixed-use institutional and health care-related uses along Route 611 to address population shifts and community needs at the gateway to Warrington.
- Do not add or create new commercial areas.
- Strengthen resource protection standards to limit disturbance and maximize protection of environmentally sensitive areas.
- Adopt design standards for sites and buildings and extend the corridor overlay standards in place for Route 611 to other areas of the township.

Many large-scale projects were in the planning stages during the 2006 update, including The Shops at Valley Square and the Route 202 Parkway, and they were subsequently completed. Commercial development and infill continued along the Route 611 corridor. The Penrose tract was developed into a mixed-use proposal with residential, commercial, and retail uses.

The township strived to manage community change and protect community character; preserve the natural environment and farmland; improve mobility; provide adequate township services and public facilities efficiently and equitably; and promote the economic and social well-being of the community. Park and open space acreage increased and additional historic structures were catalogued, besides the razing of the historic farmhouse on the Penrose tract. Public water and sewer facilities were extended and police, fire and emergency services expanded. A municipal administration building was erected.

Appendix C

People: Population Characteristics

Warrington's population has grown in the last 20 years and is expected to continue growing. Growth during the 2000s was slightly slower than the projections made in 2000 for the township's future growth. The population is younger and family size is larger than the average for Bucks County. The income and educational levels are higher as well.

It should be noted that this analysis is based on information from both the 2010 U.S. Census and the 2010-2014 American Community Survey (ACS) 5 year estimate. The 2010 Census did not record the same data that had been solicited in earlier nationwide censuses. For analysis of information not available in the 2010 Census, such as housing and household characteristics, the ACS data was used. The ACS provides estimates based on samples, along with a margin of error, for the specific information it addresses. The ACS estimates are based on a smaller survey sample, and may be less accurate or reliable than those of the full census.

Warrington's housing stock is slightly more expensive than that in nearby communities and is generally less than 30 years old. The proportion of housing types is similar to adjacent communities, although there is a greater percentage of multifamily housing than several other Bucks communities. Housing rents are lower than some adjacent communities and the housing is predominantly owner occupied.

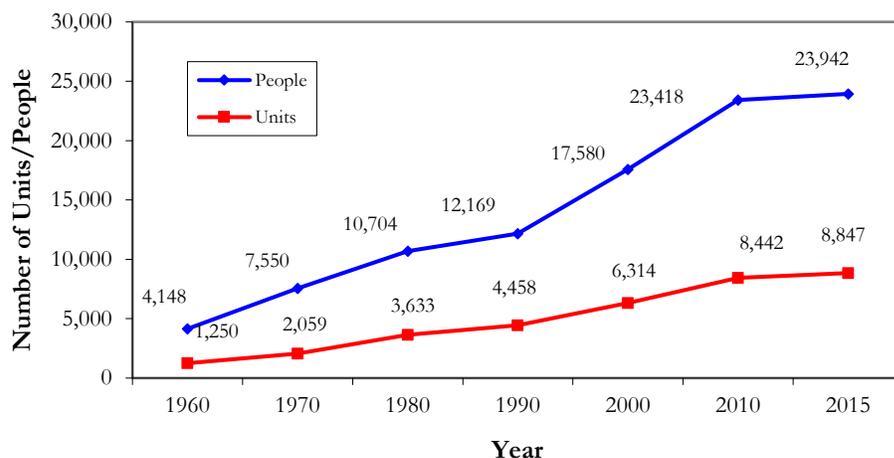
Warrington's census population in 2010 was 23,418, and the 2015 Census Bureau estimate put the population at 23,942. The number of housing units in 2010 was 8,442. The township's population has more than quintupled since 1960, and the number of homes has increased approximately 600 percent in the same period. Growth in township population and housing is shown in Table 4 and Figure 4:

Table 4
Population and Housing in Warrington, 1960–2015

Year	Total Population	Percent Change	Housing Units	Percent Change
1960	4,148		1,250	
1970	7,550	82.0%	2,059	64.7%
1980	10,704	41.8%	3,633	76.4%
1990	12,169	13.7%	4,458	22.7%
2000	17,580	44.5%	6,314	41.6%
2010	23,418	33.2%	8,442	33.7%
2015	23,942	2.2%	8,847	4.7%

Sources: U.S. Census 1960–2010, 2015 Estimate; American Community Survey; Warrington Township building permit data

Figure 4
Warrington Township Population and Housing Growth, 1960-2015



Sources: U.S. Census 1960–2010, 2015 Estimate; American Community Survey; Warrington Township building permit data

The gains in population and housing over the last 40 years have occurred at an uneven pace. A cumulative population increase of nearly 60 percent between 1960 and 1980 preceded a relatively modest 14 percent increase during the next 10 years, followed by a 92 percent rise from 1990 to 2010. Since 2010, growth has leveled off.

The rate of growth in housing units has followed a similar pattern: sharp increases, moderating from 1980 to 1990, before a major upturn during the next two decades. The rate of population growth has been greater than the rate of housing growth due to increasing household size.

Warrington’s growth has been rapid compared with its municipal neighbors. (See Table 5.) Warrington saw more growth between 2000 and 2010 than Warwick Township, which more than doubled its population between 1990 and 2000 and posted the highest rate of growth in Bucks County. Warrington’s growth during that period was much greater than the 4.6 percent population gain for Bucks County as a whole.

Table 5
Population in Warrington, Surrounding Townships, and Bucks County, 1990-2015

Place	2000 Population	2010 Population	2015 Est. Population	2010 to 2015 Absolute Change	2010 to 2015 Percent change
Warrington Twp.	17,580	23,418	23,942	524	2.28
Doylestown Twp.	17,619	17,565	17,563	-2	-0.0001
New Britain Twp.	10,698	11,070	11,236	166	1.50
Warminster Twp.	31,383	32,682	32,594	-88	-.26
Warwick Twp.	11,977	14,437	14,694	257	1.78
Horsham Twp.	24,232	26,147	26,587	440	1.68
Montgomery Twp.	22,025	24,790	26,025	1,235	4.98
Bucks County	597,635	625,249	627,367	2,118	0.34

Source: U.S. Census 2000, 2010, 2015 Estimate

Households

The size and type of households in Warrington have remained consistent over the past decade, and the typical township household lives in a conventional family situation. More than three-fourths of all households consist of families. The average household size and family size in Warrington increased slightly.⁸ In 2014 the average Warrington household size was 2.89 compared to 2.86 in 2000 and the average family size was 3.30 compared to 3.26 in 2000. The characteristics of township households are shown in Table 6:

Table 6
Characteristics of Warrington Households, 1990, 2000-2014

Characteristic	1990 Number	2000 Number	2014 Number	2000-2014 Percent Change
Number of Households	4,204	6,124	8,140	32.9%
Average Household Size	2.89	2.86	2.89	1.0%
Average Family Size	3.27	3.26	3.30	1.2%
Family Household	3,316	4,805	6,457	34.4%
Married Couple Families	2,777	4,156	5,680	36.7%
Nonfamily Households	888	1,319	1,683	27.6%
Householder living alone	664	1019	1417	39.1%

Sources: U.S. Census 1990, 2000, 2010; American Community Survey 2010-2014

Population Characteristics

AGE

Although the median age of township residents has risen since 1980, Warrington is one of the youngest communities in Bucks County. The median age in the township in 2010 was 39.8, up from 35.4 in 2000. But the median age in the township was among the lowest in the county. The countywide median age was 42 years. Age distribution in Warrington is shown in Table 7.

Regionally and locally, the age distribution reflects the dominance and influence of the baby boomers, the massive postwar generation born between 1946 and 1964. The two age groups composed primarily of boomers—the 45-to-64-year-olds—totaled 28.3 percent of the township’s population in 2010. The children of the boomers, the so-called “baby boom echo,” form a sizable segment of the population that has contributed to a median age below that of other nearby communities. This group comprises people aged 10 to 30.

The ranks of most other age groups have thinned or stayed about the same.

⁸ The Warrington Township zoning ordinance defines a family as any number of persons living and cooking together as a single housekeeping unit; provided, that this shall not be interpreted to include more than three roomers or boarders.

Young adults make up a much smaller proportion of township residents. Even though the total township population increased, the number of young adults, aged 20-34, decreased. In 2000, these young adults made up 18.1 percent, a bit less than one-quarter of the population, but by 2010 they represented only 13.7 percent. This is typical of the loss of young people (age 20-34) that occurred throughout Bucks County.

The 65-and-older age group accounted for 12.5 percent of the population in 2010, an increase of about 94 percent since 2000. Within this category, the number of those aged 85 or older rose slightly.

Since the 2000 census, some 905 units of housing designed for occupancy by those aged 55 or older have been built or planned. Construction of these units may have overshadowed construction of conventional units and may drive the average age of population higher. Over the long term, the concentration of this age group in the township may increase demand for health care and other specialized services and facilities for the elderly in the local area. Changes in the township’s age distribution are shown in Table 7.

Table 7
Changes in Age Distribution in Warrington, 2000–2014

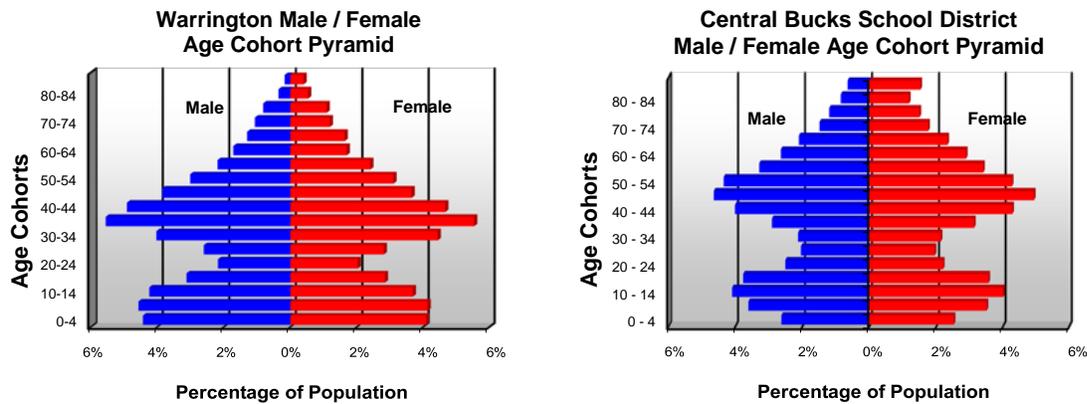
Age	2000 Number	Percent	2010 Number	Percent	2014 Number	Percent
Under 5	1,498	8.5	1,437	6.1	1,360	5.8
5 to 9	1,529	8.7	1,900	8.1	1,949	8.3
10 to 14	1,393	7.9	2,047	8.7	1,868	7.9
15 to 19	1,043	6.0	1,547	6.6	1,590	6.8
20 to 24	738	4.2	1,037	4.4	1,020	4.3
25 to 34	2,439	13.9	2,186	9.3	2,172	9.2
35 to 44	3,634	20.7	3,715	15.9	3,531	15.0
45 to 54	2,393	13.6	3,996	17.1	4,167	17.7
55 to 59	807	4.6	1,423	6.1	1,401	6.0
60 to 64	599	3.4	1,187	5.1	1,215	5.2
65 to 74	911	5.2	1,769	7.6	1,803	7.7
75 to 84	491	2.8	921	3.9	1,173	5.0
85 and older	100	0.6	226	1.0	295	1.3
Total			23,418		23,541	

Sources: U.S. Census, 2000, 2010, American Community Survey 2010-2014

MALE/FEMALE AGE COHORT POPULATION PYRAMIDS

To gain a better understanding of the age distribution of the townships population, population pyramids are provided in Figure 5. The pyramids display the percentages of people in each 5-year age group out of the total number of people in the community. The horizontal axis shows the share of the total population for each group as a percentage of the total. The data used are census figures by a given age group, or cohort by sex for Warrington and the municipalities in the Central Bucks School District (CBSD). The CBSD pyramid provides contrasting data to which Warrington may be compared. The pyramids are generally similar in shape, however, closer analysis points out several differences.

Figure 5
Male/Female Age Cohort Pyramids, 2010



The pyramids for the township and Central Bucks School District (CBSD) in 2010 show a significant bulge in the 40–54 age group. This group represents the younger portion of the baby boomers born between 1946 and 1964. Many of these people have already started families. In Warrington the 45–49 age group is the largest of all cohorts. The CBSD pyramid shows a greater proportion over 65 but a smaller proportion of children under 5 compared with Warrington.

The age groups 5-19 form a bulge at the bottom and represent a significant proportion of children born to the baby boomers, the baby boom echo.

The narrow area displayed by cohorts 20–34 reflects young adults in the township who have likely left the township for college or employment elsewhere.

RACE, ETHNICITY, AND GENDER

The population of Warrington was mostly white and native-born as of the 2010 census. The share of white township residents was 88.2 percent and residents born in the United States made up 89.4 percent of the population. The gender distribution was 49.7 percent male and 50.3 percent female. The largest single minority group was Asians, which represented 6.1 percent of the population. Blacks represented 2.1 percent of the population and Hispanics, 1.8 percent. The share of minorities rose from 5.8 percent in 2000 to 11.8 percent 2010, with Asian Indians accounting for most of the increase.

SOCIAL AND ECONOMIC CHARACTERISTICS

Township residents have levels of income and educational attainment that exceed countywide averages. The median (half are higher, half are lower) household income according to the 2000 2010 census was \$95,795, compared to \$76,824 for Bucks County. Warrington’s household income is within the top quarter of all municipalities in the county.

Ninety-five percent of township residents were at least high school graduates and 48.4 percent held bachelor’s degrees or higher in 2014. The corresponding figures for Bucks County were 93.5 percent and 36.5 percent, respectively.

COMMUTING PATTERNS

Census data on residents’ travel to work is useful in transportation and housing planning. The location of workplaces and the duration of daily commutes, shown in Tables 8 and 9, can help explain traffic patterns.

Changes in the employment base will have an impact on the local housing market. If a community has a lot of employers, there will be demand for housing from local employees.

Table 8
Place of Work for Residents of Warrington and Bucks County, 2014

	Warrington		Bucks County	
	Number	Percent	Number	Percent
Worked in state of residence	11,061	94.7%	269,736	85.8%
Worked in county of residence	6,162	52.7%	177,260	56.4%
Worked outside county of residence	4,899	41.9%	92,476	29.4%
Worked outside of state of residence	623	5.3%	44,735	14.2%
Total	11,684	100.0%	314,471	100.0%

Source: American Community Survey 2010-2014

Slightly more than half of Warrington residents age 16 and older work outside their home county. Township residents were less likely than other Bucks residents to work outside the county, but less likely to cross state boundaries to work. Nearly 57 percent of township residents lived less than 30 minutes’ drive time from work. Since 2000 the number of those working outside the state has almost doubled from 365 to 623.

The proximity of Warrington to employment centers in Doylestown, Warminster, and Horsham is the likely reason for the high percentage of residents with commutes less than 30 minutes. Journey to work data from the U.S. Census indicates that more than half of Warrington commuters work in Bucks County (52.7 percent). Slightly less than a third commute to jobs in Montgomery County (29.7 percent). Approximately 11 percent work in Philadelphia County. Only 4.6 percent commute to New Jersey.

Township residents’ commuting times broadly aligned with those of other Bucks County residents, although Warrington residents were somewhat less likely to work within 15 minutes’ travel time from home. For both township and county commuters, 15 to 29 minutes’ travel time to work was cited most often.

Working at home is a growing trend. The share of township residents who worked at home was 4.7 percent, a figure that nearly mirrors the countywide rate of 4.6 percent.

Table 9

Travel Time to Work for Residents of Warrington and Bucks County, 2014

Place of Work/ Travel Time	Warrington		Bucks County	
	Number	Percent	Number	Percent
Worked at home		4.7%		4.6%
Did not work at home		95.3%		95.4%
Less than 10 minutes		9.4%		10.5%
10 to 14 minutes		13.9%		13.8%
15 to 29 minutes		34.1%		35.3%
30 to 59 minutes		30.2%		28.7%
60 or more minutes		12.4%		11.7%
Total		100%		100%

Source: American Community Survey 2010-2014

Housing

HOUSING GROWTH

Due to a number of factors including availability of land and public water and sewer capacity, and low interest rates, Warrington’s housing stock grew more than 2,000 units between 2000 and 2010. This decade also saw construction of more dwelling units than in any other decade in the township’s history

HOUSING TYPES AND HOUSING CHOICE

Warrington contains a mix of housing types, most which are of a relatively recent vintage as shown in Table 10. Construction since 1970 accounts for 77.8 percent of the township’s dwelling units.

Table 10

Housing Age in Warrington, 2014

Year Built	Number	Percent
2010 or later	82	1.0%
2000 to 2009	2,413	28.5%
1990 to 1999	1,986	23.5%
1980 to 1989	986	11.7%
1970 to 1979	1,111	13.1%
1960 to 1969	718	8.5%
1940 to 1959	825	9.7%
1939 or earlier	341	4.0%
Total	8,462	100%

Source: American Community Survey 2010-2014

While the single-family detached dwelling predominates, there are other residential unit types as shown in Table 11. Since 1980, single-family detached housing has continued to account for about two-thirds of the housing stock, while the relative shares of other housing types have shifted.

Table 11
Housing Units by Type in Warrington, 1990 - 2000 – 2014

Housing Type	1990		2000		2014	
	Number	Percent	Number	Percent	Number	Percent
Single-family detached	2,858	64.1%	4,329	68.6%	5,476	64.7%
Multifamily-buildings of 2 or more units (apartments, townhouses)	1,553	34.8%	1,979	31.3%	2,981	35.2%
Mobile Homes/other	47	1.1%	6	0.1%	5	0.1%
Total	4,458	100.0%	6,314	100.0%	8,462	100.0%

Sources: U.S. Census 2000; American Community Survey 2010-2014

Between 1990 and 2014, the number of housing units increased by nearly 90 percent, going from 4,458 to 8,462. The number of single-family detached units rose by nearly 91.6 percent and the number of multifamily units rose by 91.9 percent during the 24-year span.

In 2000, 80.5 percent of township housing was owner-occupied and the remaining 19.5 percent was renter-occupied. But by 2014, 82.8 percent of housing in the township was owner-occupied and 17.2 percent was renter-occupied. Those figures differ from the Bucks County numbers of 77.2 percent and 22.8 percent, respectively.

The mix of housing options in Warrington is comparable to what exists in several neighboring central Bucks County municipalities and the county as a whole. Table 12 compares the township’s housing stock with those of neighboring municipalities and the county.

Table 12
Housing Types in Warrington, Surrounding Townships, and Bucks County, 2014

	Warrington Township	Doylestown Township	New Britain Township	Warwick Township	Warminster Township	Horsham Township	Montgomery Township	Bucks County
Single-family Detached	5,476 (64.7%)	3,972 (63.9%)	2,869 (68.9%)	3,157 (60.5%)	7,544 (58.3%)	5,735 (57.0%)	4,907 (52.6%)	155,431 (63.0%)
Multifamily buildings of 2 or more units (townhouses, apartments)	2,981 (35.2%)	2,055 (33.0%)	1,177 (28.2%)	2,063 (39.6%)	5,376 (41.5%)	4,224 (42.1%)	3,777 (40.0%)	85,490 (34.7%)
Other	5 (0.1%)	187 (2.8%)	121 (2.9%)	0 (0.0%)	16 (0.1%)	105 (1.0%)	653 (6.7%)	5,310 (2.2)
Total	8,462	6,214	4,167	5,220	12,936	10,064	9,337	246,231

Source: American Community Survey 2010-2014

Warrington, its neighboring Bucks County municipalities, and the county each have about two-thirds of the housing stock in single-family detached units and about a third in multifamily units. The figures for the neighboring Montgomery County townships of Horsham and Montgomery are below 60 percent for single-family detached dwellings. Warminster, Warwick, Horsham and Montgomery townships have a greater percentage of multifamily dwellings than Warrington.

HOUSING COSTS

The cost of housing in Warrington reflects a number of factors, including the convenient location relative to regional employment centers, the desirable character of the community and its school system, and the housing market. Housing cost data is shown in Table 13.

Owner-Occupied Housing

The median value of owner-occupied housing in the township in 2015 was \$376,000, according to the ACS. Other recent private Berkshire Hathaway market analysis data on the costs of homes sold in 2010 and 2015 reflect the median price of \$336,000 and \$350,000, respectively. This is consistent with the price increases in the area as shown in Table 14.

Table 13
Housing Cost Data—Warrington, 2010, 2015

	2010	2015
Total Units Sold	215	332
Days on Market	89	82
Median Price	\$336,000	\$350,000

Source: Berkshire Hathaway Fox & Roach Home Expert Market Report

Table 14
Median Sales Price, 2015 and Median Housing Value, 2010-2014 in Warrington, Surrounding Townships, and Bucks County

Locality	Median Price of Units Sold 2015	Median Value 2014
Doylestown Township	\$392,500	\$430,400
Horsham Township	\$266,550	\$318,700
Montgomery Township	\$270,000	\$317,900
New Britain Township	\$292,725	\$339,900
Warminster Township	\$250,000	\$288,300
Warrington Township	\$350,000	\$376,000
Warwick Township	\$335,500	\$361,000
Bucks County	\$277,000	\$307,600

Source: Berkshire Hathaway Fox & Roach Home Expert Market Report; American Community Survey 2010-2014

Renter-Occupied Housing

Housing occupied by renters accounted for 17.2 percent of all Warrington housing units in 2014, and the ratio of rental units in the township remained among the highest in the area as show in Table 15.

A total of 1,403 units were renter-occupied, and the 2014 median rent was \$1,278 per month, up from \$829 in 2000. Rents in the township were among the lowest in the immediate area, but higher than the countywide median.

Table 15

Renter-Occupied Housing Units in Warrington, Surrounding Townships, and Bucks County, 2000 and 2014

Locality	Percent Renter-Occupied Units - 2000	Median Rent 2000	Percent Renter-Occupied Units 2014	Median Rent 2014
Doylestown Township	16.4%	\$1,160	18.9%	\$1,549
Horsham Township	26.5%	\$821	22.5%	\$1,163
Montgomery Township	6.1%	\$976	10.5%	\$1,536
New Britain Township	9.4%	\$831	12.3%	\$1,402
Warminster Township	25.7%	\$701	31.0%	\$1,194
Warrington Township	19.5%	\$829	17.2%	\$1,278
Warwick Township	4.5%	\$1,081	5.4%	\$1,371
Bucks County	22.6%	\$736	22.8%	\$1,128

Source: American Community Survey 2010-2014

FUTURE POPULATION AND HOUSING

Warrington Township's population and housing stock will grow in the future although this growth is limited by the amount of land available and zoned for development. Future growth is based on the vision of township officials and residents, past development patterns, and policies on community facilities and land preservation.

Estimated Population and Housing Growth

FUTURE POPULATION AND HOUSING

Forecasts from the DVRPC call for 24,796 residents in 2020 and 26,510 by 2035. The figures show a 3.6 and 16.4 percent increase from the 2015 Census estimate. The forecasts are based in part on past growth and not factoring variables such as available land and zoning.

Population growth is determined by multiplying the 2010-2014 estimate average household size (2.89) by this maximum number of units that can be built along with existing housing stock. Therefore the total number of units at buildout, approximately 9,721, will result in a total number of residents of approximately 26,468.

Appendix D

Natural and Environmental Features

Warrington Township is a 13.8 square mile community located in the central portion of Bucks County, along the Montgomery County border. The township recognizes the importance of protecting the landscape and environment as development occurs. Development without concern for the natural limitations of the land is costly to residents and to the township and can result in the loss of valuable community amenities.

The *Pennsylvania Municipalities Planning Code* requires that comprehensive plans address the protection of natural resources, including wetlands, woodlands, steep slopes, prime agricultural land, and floodplains. Preserving natural resources should be central in considering the significant development opportunities in the township. Our goal is to use the right land for development and use the land right when development occurs.

Topography

The township topography is rolling with moderate slopes generally less than 15 percent. Steeper slopes exist along stream banks of the Neshaminy and Little Neshaminy creeks. The highest elevation in Warrington is 468 feet in the northern corner near Pickertown and Upper State roads, and the lowest point, at 200 feet, is found along the Little Neshaminy Creek near Valley Road.

Topography and slopes are important because they determined how land was used in the early history of the township and help define the character of the landscape.

Disturbance of slopes can result in increased erosion and sediment pollution as well as accelerated stormwater runoff and flooding. Because of severe on- and off-site impacts, development on steep slopes has been regulated through ordinance regulations in Warrington as a way of encouraging developers to respect the natural topography and rolling hills. Few vacant parcels in the township contain significant areas of steep slopes.

The amount of grading during the land development process should be minimized. Design of subdivisions and commercial sites should seek to preserve natural terrain, vegetation and protect as much open space as possible.

Geology

The rock formations that underlie the township create the topography and affect groundwater resources and land use activities such as quarrying.

Underlying rock formations will determine how much groundwater is available for homes and businesses. While not all water used in Warrington comes from underground, much of it does. The two primary rock formations – the Lockatong and the Stockton shale – have different groundwater characteristics.

The Lockatong formation passes under much of central Bucks County through Doylestown, Buckingham, and Wrightstown townships. Lockatong lies beneath the western portion of the township between Upper State Road and Elbow Lane. The Lockatong formation is composed of argillite, a hard gray stone used to build roads and structures. This is the stone mined at the township’s quarries. The Lockatong formation holds less groundwater.

The Stockton formation lies south of the Lockatong and east of Elbow Lane and Bradford Road. Stockton is soft sandstone interbedded with shale. Stockton geology provides a good source of groundwater.

A diabase dike parallels Easton Road to the east. This dike is composed of hardened magma that protruded into a crack in the softer Stockton formation. The dike acts as a barrier to groundwater flows. The ridge east of Route 611 near Stuckert Road was created by the Little Neshaminy Creek eroding softer rock adjacent to the dike.

Soils

Soil characteristics have influenced development patterns through the history of the township. The good farming soils were used for agriculture during early township history. Soils that supported wastewater disposal were used for recent development. Soils that percolate quickly and absorb stormwater can support structures and are appropriate sites for development. Good stormwater management practices requires the township to consider soils when planning for new development so that stormwater can be kept on site and allowed to infiltrate into the ground.

Agricultural soils are important in defining areas for the preservation of farmland. Farmland preservation ensures that significant agricultural soils are used for local food production. Warrington Township, in conjunction with Doylestown Township, has an Agricultural Security Area of 1,251 acres. This area designation is based on agricultural soils and on the presence of active farm operations. At least 50 percent of the properties included must have Class I-IV soils, the best soils for farming. The township should strive to preserve properties with prime agricultural soils either through purchase or easements.

The major soils are mapped and described in the *Soil Survey of Bucks County* (11/16/2015).

Woodlands

The township woodlands are located along the streams and other areas that were left undisturbed. Forested areas provide wildlife habitat, groundwater recharge, storm water runoff filtration and absorption, and act to buffer different land uses. These areas also provide better air quality, provide aesthetic value, and can provide energy savings.

Woodland areas and natural habitats are identified so that preservation efforts are a priority during the planning and development process in order to protect these features. Wooded areas, especially in and around wetlands, forested slopes, floodplains and riparian buffers should be protected through zoning and subdivision and land development ordinances.

The township permits removal of a minimum number of trees during the development process and requires in-kind replacement of removed trees within the township. Also, the township should purchase as much wooded acreage as possible to avoid destruction of remaining forested areas.

Preservation of existing woodlands and preservation of continuous unfractured stands are a priority of the township. These continuous unfractured stands need to be maintained to provide the optimum habitat for wildlife as well as healthy woodlands. Wooded areas provide habitat for nesting and provide travel corridors for migrating birds. Of particular concern are the woodlands within John Paul Park at Lower Nike. Because of the diversity of flora and fauna, woodlands and meadow development and preservation are extremely important.

Wetlands

Wetlands, streams, and floodplains exist throughout the township and are identified under Section 404 of the Clean Water Act (CWA). This definition is regulated by the U.S. Army Corp of Engineers and the U.S. Environmental Protection Agency. These regulations have been in place since the 1970s and require a developer or any person wishing to disturb Waters of the United States, including wetlands to obtain a permit before discharge, dredging or fill material be placed in these protected areas. A certified wetland delineator should perform a Jurisdictional Determination issued by the Army Corp of Engineers to determine whether an area will be regulated under CWA 404. State and federal regulations prohibit the filling of wetlands, and township ordinances restrict disturbance of lakes, ponds, wetlands, and watercourses.

Applications by a developer should be prepared and submitted by a professional wetland delineator/engineer prior to any disturbance of any areas. If disturbance requires wetland mitigation of impacts, a certified wetland biologist should work with an engineer to develop and implement the plan.

Township ordinances delineating appropriate buffer zones must be adhered to. Buffer zones will vary depending on the quality of the wetland, riparian area or stream so that there is a proper level of protection.

Watersheds

Streams have eroded the land surface of the township and divided the lands into two primary watersheds. The Neshaminy Creek watershed drains the northern half of the township and contains the Mill Creek subwatershed. The Little Neshaminy Creek watershed and its subwatershed, Park Creek, drain the south side of Warrington. Park Creek also drains much of Horsham Township. The Bradford Dam subbasin, formed by the Bradford flood control dam, lies within the Little Neshaminy Watershed. The primary watershed divide extends across the

township east and west from the intersection of County Line Road and Limekiln Pike to the intersection of Guinea Lane and Bristol Road.

Floodplains

Floodplains are areas that adjoin streams and accommodate floodwaters. The natural vegetation associated with floodplains provides controls for soil erosion, and sedimentation and protects water quality. On March 21, 2017, the Department of Homeland Security's Federal Emergency Management Agency (FEMA) issued new or revised Flood Insurance Rate Map (FIRM) panels for Warrington Township.

Warrington Township participates in the National Flood Insurance Program (NFIP), designed to reduce flood hazards by regulating activities in the floodplain. The NFIP is a result of a policy shift away from structural flow control solutions, such as dams, to a more comprehensive floodplain management approach of keeping obstructions out of floodplains.

The floodplain areas mapped and regulated by the NFIP in Warrington are located along the Little Neshaminy Creek and its tributaries, and Mill Creek which drains into the Neshaminy Creek.

Native Plants

Native plants are suited to the local climate and form an important part of the local ecosystem. Nonnatives require more water and nutrients and compete with natives. When we replace our native plants with non-natives, cultivators, and insist on large expanses of green lawn with no weeds, we are adversely affecting our environment.

The township will encourage the use of native vegetation and replanting native plants when removal has taken place during the development process. An approved list of native plants can be found in the township subdivision and land development ordinance and requires native plants to be used in all new developments. This ordinance also encourages residents to replace nonnative trees and shrubs with native vegetation. Planting native plants can have a profound impact on the diversity of life around us. This will result in the ability of birds and insects, especially humming birds, bees, and pollinators and other species to continue their life cycle.

The township has implemented an invasive species removal program in Lower Nike Park and along the Morning Walk Trail. It is strongly recommended that residents remove invasive species and replant with native vegetation. The township should restrict required plantings for land developments to native species; promote control and reduction of invasive species

Naturalizing and improving those areas in our township that are undeveloped and critical to wildlife and for the residents is a priority. This includes managing existing forests and all open space that is being managed for both active and passive recreation. Working with experts, the Warrington Environmental Advisory Council (WEAC) is removing invasive plants from forests and planting native trees and shrubs that will provide an inviting space for both residents to enjoy as well as improved habitat for birds and other wildlife.

A very important issue which the township is evaluating is reduced mowing on passive recreational areas and other open spaces. The WEAC will develop a plan to establish meadows and bring back habitat that is vital to wildlife and pollinators. This is not just a local interest, but has become a nationwide project that has become vital to supporting bees and other pollinators that are in drastic decline. Reduced mowing is also a big money saver for the township. The township is encouraging homeowners do this on their own properties by leaving a small unmowed area, or plant a small garden with plants that attract pollinators and butterflies.

Air Quality

Warrington Township lies within the Philadelphia Metropolitan Statistical Area (MSA), characterized as a marginal nonattainment area because of unacceptable levels of ozone. The region is meeting the CO Carbon Monoxide and particulate standards. The region is mandated to attain acceptable ozone standards. If attainment is not reached, the local U.S. Environmental Protection Agency will be required to put the most up-to-date restrictions on emissions.

Typical pollution that is experienced in the area may be attributed to regional industrial activity and motor vehicle emissions. Although Warrington Township is an automobile-dependent suburb, planning future development to reduce pollution and improve air quality will be important. Reducing dependence on the personal automobile and encouraging alternative travel by foot or bicycle are means of reducing emissions. This can be done by facilitating transit, by encouraging mixed use, and by providing pedestrian and bicycle trail networks. The township should work to reduce emissions by encouraging carpooling, mass transit, and utilization of linked walking and biking trails throughout the region. A further discussion of implementation measures is provided in the chapter on transportation.

Environmental Protection: Policies and Programs

The township environmental policies and programs are aimed at preserving open space, natural areas, and sensitive environmental features within the township. This involves working with other levels of government and neighboring communities with similar objectives and policies.

WARRINGTON ENVIRONMENTAL ADVISORY COUNCIL

THE WARRINGTON TOWNSHIP ENVIRONMENTAL ADVISORY COUNCIL (WEAC) WAS CREATED IN NOVEMBER 2004 BY A TOWNSHIP ORDINANCE PASSED BY THE BOARD OF SUPERVISORS. THE MAIN FUNCTION OF THE WEAC IS TO SERVE AS AN ADVISORY GROUP TO THE BOARD OF SUPERVISORS. IT IS RESPONSIBLE FOR IDENTIFYING AND PROVIDING ACTION PLANS FOR TOWNSHIP ENVIRONMENTAL ISSUES, AS WELL AS TO COORDINATE WITH OTHER LOCAL ENVIRONMENTAL ADVISORY COUNCILS (EAC) ON ENVIRONMENTAL ISSUES THAT REACH BEYOND WARRINGTON TOWNSHIP. SINCE ITS INCEPTION, THE WEAC HAS TAKEN ON THE TASK OF MANAGING THE TOWNSHIP'S NATURAL OPEN SPACE, NATURALIZING STORMWATER DETENTION BASINS, HOSTING AN ANNUAL COMMUNITY SERVICE DAY, AND EDUCATING THE PUBLIC ON ALL ENVIRONMENTAL ISSUES.

Protecting Natural Features

Past plans and current ordinances require the protection of certain areas of natural features, including floodplains, alluvial soils, steep slopes over 8 percent, forests, lakes, ponds and watercourses, pond shorelines, and wetlands. The subdivision and land development ordinance and stand-alone ordinances address stormwater management, soil erosion and sedimentation, and tree protection during development. These standards should be maintained.

Water Quality

Non-point source pollutants from stormwater runoff result in deteriorating water quality in streams. Gasoline, motor oil, road salt, herbicides, pesticides, and fertilizers flow into storm drains and streams, degrading water quality.

Erosion and sedimentation from construction sites include suspended solids and toxins that may harm organic and aquatic life in streams as well as polluting groundwater.

Contamination of groundwater has occurred in the township due to failing on-lot sewage systems, leaking underground storage tanks, and industrial pollution.

Contamination from leaks or pollution has occurred near the intersections of Route 611 and Bristol and Street roads and at a service station along Route 611, north of Upper Barness Road. Provision of public sewage disposal has solved some groundwater problems associated with sewage systems. Volatile organic compounds from underground tanks and industrial sites have been remediated at the site of contamination and by air strippers at wellheads. The Pennsylvania Department of Environmental Protection monitors all efforts until remediation is complete.

Contamination of groundwater from the former Willow Grove Naval Air Station Joint Reserve Base has caused closure of several township wells. Enhanced filtration is planned for several township wells to lower contamination to acceptable levels. The township receives surface water from the Delaware River via the North Wales Water Authority to replace well water drawn from township wells.

EROSION AND SEDIMENT CONTROLS

- National Pollution Discharge Elimination System (a mandated federal program)
- Controls on removal of woodlands and protection of steep slopes
- Wetlands and floodplain protection programs
- Pennsylvania Code Title 25 Chapter 93 Water Quality Standards Regulations
- Clean Water Act
- Safe Drinking Water Act

Water Quantity

Warrington lies within a groundwater-protected area, designed by the Delaware River Basin Commission. The township is subject to southeastern Pennsylvania groundwater protection regulations, which require permits for withdrawals greater than 10,000 gallons per day. Approximated groundwater withdrawals in Warrington Township are limited to 1.456 million gallons per day. Groundwater should be preserved by ensuring efficient use, minimizing additional withdrawals, promoting infiltration of stormwater, and encouraging reuse.

The township uses surface water supplies as well as groundwater resources. The North Wales Water Authority provides surface water from the Delaware River to the township.

Stormwater Management

Pennsylvania's Stormwater Management Act 167 of 1978 was adopted to address the impacts of stormwater runoff from development. Counties prepare stormwater management plans and municipalities must adopt stormwater management ordinances to implement the standards and criteria of the county plans. Bucks County has developed and adopted a stormwater management plan for the watersheds in Warrington: the Little Neshaminy Creek and Neshaminy Creek.

Stormwater within the Neshaminy Creek watershed is regulated by the *Neshaminy Creek Watershed Stormwater Management Plan* (1992). Stormwater within the Little Neshaminy Creek watershed is regulated by the *Little Neshaminy Creek Watershed Stormwater Management Plan* (1996) and *Warrington Township Neshaminy Creek Watershed Act 167 Stormwater Management Ordinances 2011*.

In the 1970s structural improvements were made along the Little Neshaminy Creek. The Bradford Dam (PA 611) was constructed in 1976 and holds 2,156 acre-feet of water. It drains an area of 10.9 square miles. The dam provides flood control for downstream properties. A stormwater control dam was also constructed on a stream in the Palomino Farms subdivision in 1976. This dam was built to control flooding and eliminate maintenance problems of small detention basins constructed as part of the original subdivision. The dam was an early effort to manage stormwater on a regional level. The dam is being retrofitted to remove sediment which has limited its capacity.

The outdated emphasis on getting water off a site as quickly as possible has been changed as science and experiences reveal that keeping water in place limits flooding and erosion impacts downstream and maintains groundwater supplies. Stormwater is a resource, not something to be disposed of downstream.

New development in the township must provide stormwater management measures in accordance with the stormwater management plan. Volume controls are required to mitigate increased runoff impacts, protect stream channels, maintain groundwater recharge, and contribute to water quality improvements. Stormwater runoff may be released at different rates based on the location of a site within the watershed. Release rates may vary for sites within a watershed according to the existing hydrologic conditions, proximity to existing flood control structures and streams, and need to protect downstream areas. Portions of the township were developed prior to adoption of these plans and mandated ordinances so that stormwater is channeled into storm sewers and directly into streams.

Flooding problems along the Neshaminy and Little Neshaminy Creeks due to uncontrolled stormwater from existing developments will not be solved by stormwater management planning, which regulates only new development.

Maintenance and monitoring of stormwater basins is an important township function as development continues. Narrative information on proposed and constructed stormwater management facilities that explains short- and long-term operation and maintenance tasks and the projected life span of the facility should be provided, approved, and recorded by the township. Ensuring proper long-term operation and maintenance will allow the township to comply with federal and state requirements of the National Pollutant Discharge Elimination System and stormwater management act. Projected scheduling also allows budgeting time and funds to inspect and repair facilities as necessary.

The township should reduce the use and size of grass fields that require mowing in favor of more naturalized meadows, which require little maintenance and enhance water management and encourage naturalizing existing detention basins with native plants.

The township should consider ordinances which require the use of naturalized detention basins and the use of meadows in designated open spaces in new, and where possible, existing developments. It will help control water runoff and pollution as these naturalized areas by design help purify water and return it to underground aquifers.

Tree Preservation Programs

The township has a number of ordinances which are primarily directed at providing protection for native trees and trees of significance. Big Trees and Trees of Historical Significance, Invasive Species Ordinance, Invasive Bamboo Ordinance, Native Plant Ordinance, and Street Tree Ordinance shall be adhered to and implemented by the township and the WEAC.

The Big Trees of Pennsylvania program identifies and protects Champion trees within the state. A Champion Tree is considered one of the largest specimens of its species. This program is administered by the Pennsylvania Forestry Association and has been named the Pennsylvania Champion Tree Program. Locating, measuring, and nominating big trees is important and the WEAC will conserve, preserve, and identify as many of these trees as possible. The first tree in Warrington that was placed on this register is located at the 10 Folly Road School House.

The township should implement an ongoing program directed to the protection of trees in Warrington.

Habitat Protection Programs

Plants and animals need environments which provide sufficient food, shelter and protection from predators. Land development often diminishes or destroys these environments and leads to loss of habitat and species. Critical habitats can be preserved by reducing development intensity and density and increasing resource protection standards. The township should act to preserve and protect critical habitats that support native, rare, threatened, and endangered plants and animals.

The township WEAC is undertaking specific programs to preserve wildlife habitat. The implementation of nesting boxes is a very effective measure to protect bluebirds. Bluebirds eat a very large amount of insects, which is a natural way to control mosquitos and other insects, without using chemicals. These cavity nesters (Eastern Bluebirds) adapt well to nesting boxes.

A bat house and screech owl program is also ongoing within the township. The WEAC is building these nesting boxes and making them available to the public for purchase at cost. These programs will be on going as a way to educate the community and as a habitat enrichment program.

Environmental Protection: Recommendations for Improvements

In addition to maintaining the protection of natural features through the current ordinances the township should address the following issues:

RIPARIAN BUFFER REQUIREMENTS

Riparian buffers are areas along stream banks. Stream corridor or riparian protection regulations prohibit clearing, grading, paving, and structures (except for essential utilities) within a designated setback from a stream. The township should consider an ordinance requiring a 100 foot buffer zone. These requirements, known as riparian buffer standards, provide stream protection not provided by current ordinances. Preservation of natural vegetation will help stabilize the stream bank, filter stormwater, slow stream velocities, preserve the floodplain, and provide wildlife habitat. In a developed area such as Warrington, a minimum width watercourse corridor can be established on private land, and landowners can be encouraged to let streamside vegetation grow or plant additional vegetation.

Warrington shares waterways with Horsham, Warminster, and Warwick townships. The Little Neshaminy Creek provides a greenway for recreation and wildlife as well as drainage for stormwater. The township should seek a balance for recreational activities and natural resource protection within buffer areas. Linking this waterway as a continuous greenway will allow for recreation, wildlife habitat, and natural resource sustainability.

WELLHEAD PROTECTION

Wellhead protection is a program to protect public water supply sources from man-induced contaminants. A wellhead protection area is the area surrounding a public water supply well or well field both above and below ground, through which contaminants may travel and reach the well or well field. Zoning and land use controls should be used to prohibit high-risk uses that threaten groundwater near wells. The township may require that potential threats be evaluated by requiring an applicant for an underground storage tank, such as a gasoline station, provide proof that no negative impacts will be created upon wellheads and groundwater. Devices to mitigate spill risk may also be required.

LOW-IMPACT DEVELOPMENT AND NET BUILDABLE AREA PRESERVATION

The loss of prime agricultural soils, erosion, removal of wooded areas, filling of wetlands, and

improper land uses in floodplain areas are some of the negative impacts of development. Ordinance restrictions now prevent some environmental damage, but communities are now looking for more comprehensive ways of preserving natural features and minimizing damage during the development process. Low-Impact Development stresses the minimization of development impacts and site disturbances such as grading and tree removal and favors the preservation and utilization of a site's natural drainage system. A key component is involvement of municipal officials during the initial planning process to identify resource protection opportunities for each project. Low-impact development techniques can be incorporated into the zoning ordinance.

Changes to the zoning ordinance that base development and disturbance limits on the buildable site area, rather than on the gross site area, are recommended.

SITE ANALYSIS AND RESOURCE CONSERVATION PLAN REQUIREMENT

Site Analysis and Resource Conservation Plan requirements combine elements from standard subdivision ordinance requirements with conservation design principles, for both natural resources and cultural features (such as historic resources). These requirements may not affect the development potential of a site, but would encourage better site planning essential to ensuring the preservation of important resources. This can be part of a larger Low-Impact Development strategy.

The purpose of a site analysis and resource conservation plan is to ensure that all development occurs in a manner that respects the natural environment and the cultural features that are important to the site, the surrounding area, and the township. With such an analysis and plan, the applicant and township officials would have a solid understanding of the conditions around the site that provide the context for the proposed development. It could be used in conjunction with an environmental impact assessment (EIA), but unlike an EIA, it would address how valuable resources could be preserved, particularly those that relate to larger habitats and ecosystems, as opposed to identifying what impacts would result after the development is built.

An existing resources inventory provides a comprehensive analysis of conditions on the proposed development site and areas within 500 feet, showing topography, natural drainage patterns, vegetative cover, soils and geology, historic buildings or sites, viewsheds/scenic views, pastureland and cropland, critical habitat areas identified by the Pennsylvania Natural Diversity Inventory, solar access and orientation, and other features on and off the site. Narrative provided indicates ways in which the applicant will respect the existing valuable resources described in the site analysis.

The resource conservation plan requires that the layout of the lots or development occur so that the areas identified as being sensitive and important on the site analysis are preserved, and the areas of secondary importance are used for development. Limits on site disturbance, use of natural drainage patterns, preservation of historic areas and scenic views, preservation of solar access, protection of natural areas, and protection of groundwater resources would all be required considerations.

The requirements of the site analysis and resource conservation plan could be supplemented by encouraging applicants to schedule pre-application meetings and site visits with the township officials before full-scale engineering work is started.

Appendix E

Community Facilities

What makes Warrington Township a community where people want to live are the services and facilities offered to residents. The residents responding to the community questionnaire said that the school system and the facilities that are available to families were important factors in deciding to live in the township. Some community facilities and services are provided by the township. Other services are provided by private contractors, by non-profit organizations, or by other levels of government.

Services and Facilities Provided by Warrington Township

The focus of this plan is on those services provided by the township and those over which the township has some control. These are:

- Police protection
- Code enforcement
- Township administration and finance
- Public works – Maintenance of streets and public facilities
- Parks and recreation
- Wastewater and water supply
- Stormwater management
- Fire protection

Other important community services and facilities needed to make Warrington a good community to live in are: emergency services (ambulance and fire), schools, solid waste disposal, health care facilities, telecommunications, and utilities. These services are provided by others, although the township may have a role by providing financial support, governmental cooperation, or license. Services require funding so the township may focus spending and financial assistance in ways which reflect its priorities.

POLICE PROTECTION

The township police department has offices adjoining the township administration building at 852 Easton Road. A chief, 1 deputy chief, 1 lieutenant, 5 sergeants, 1 corporal, 19 patrol officers, 3 detectives, 2 highway officers, and 1 school resource officer staff the department. The township has special equipment and responsibilities to meet special needs. A two-person traffic unit patrols the township using motorcycles and patrol cars. The school resource officer is focused on creating a safe, secure, and orderly learning environment for students, teachers, and staff in schools located in the township. The department cooperates with other police departments in the Central Bucks Special Emergency Response Team (SERT) and the Bucks County Major Incident Response Team (MIRT) groups. The steady growth of the police department may result in the need to either expand or replace their facilities.

Future demands on the department will result from population increases, from additional commercial development, and due to increased traffic incidents and law enforcement actions. Police protection is the largest single expense to the township taxpayers, and services should keep pace with demands.

TOWNSHIP ADMINISTRATION

The township administration provides supervision of daily operations of township government. The administration building is located at 852 Easton Road and was dedicated in 1993.

Administration includes the Township Manager, a Finance Director, a Director of Administrative Services, and 4 full-time administrative support staff.

The Codes and Emergency Services Department administers the township building and fire codes and zoning ordinance. The department has a Director of Codes and Enforcement/Emergency Services, a Director of Planning and Special Projects, 3 inspectors and 2 administrative support staff.

The administration building is not sufficient for current operation and additional space will be needed for anticipated growth in administrative operations. Staff needs will increase as population increases and new services will be provided in response to mandates from other levels of government or citizen demands.

PUBLIC WORKS

The Public Works Department is located at 3361 Pickertown Road. The department employs 11 full-time employees including the director, and 10 part-time/seasonal employees. Public Works is responsible for maintenance of roads, stormwater management facilities, street signs, trees, township buildings, fleet maintenance, and parks. The department maintains 80.0 miles of public roads and is responsible for assisting the Water/Sewer Department as needed. Lawn maintenance at parks and in stormwater detention basins is the responsibility of Public Works, however some of the work is done by private contractors. Appropriate levels of funding for road repair, park maintenance, and stormwater management facility repair, and upgrades will be necessary. Some public works employees are also volunteer firefighters, assisting with the fire department needs.

Future impacts may include increasingly time-consuming park maintenance, road repairs, stormwater systems, inlet and basin maintenance and a statewide mandate to recycle yard waste.

Parks and Recreation

The Park and Recreation Department develops year-round recreation programs for all ages and maintains a park system consisting of 16 township parks and a swim club. The parks department employs one full time Parks and Recreation Coordinator, 2 part-time Park Stewards and approximately 35 seasonal employees who work at the Mary Barness Tennis and Swim Club. The department, in conjunction with a local health care facility, runs a variety of programs including yoga, Pilates, Zumba and aquatic fitness, to name a few. The demands for the services and facilities have increased due to residents' desire to stay close to home for recreation and the increasing number of families with children in the township. Additional discussion on recreation, programming, and future operations is contained within the *Parks, Recreation, and Open Space Plan Update*.

PARKS AND TRAILS

Respondents to the township questionnaire expressed a desire for trails and paths. This preference for walking trails is consistent with polling conducted throughout the county. Trails can be located along stream corridors, using a “greenway” approach. Greenways are open space corridors that are protected and managed for conservation and recreation purposes. They serve to extend parks and open space areas in a linear fashion to maximize visual and physical contact with the outdoors for park users. They are most appropriate for trail-based activities involving hiking, jogging, and bicycling.

This approach has been favored by Bucks County since the 1970s when it prepared its link park plan showing trails along stream corridors. The plan lists a link park along the Little Neshaminy Creek through Warrington Township as a second priority link park. This link park, if completed, could connect the Bradford Dam Park to the Neshaminy Creek and then to the Delaware River.

The township’s *Park, Recreation, and Open Space Plan Update* provides guidance and details on the township’s parks, trails, and open space. In addition to policies established in the plan, the priorities for the township park and recreation department will be:

- Establish balance for active and passive open space uses.
- Ensure that the needs of Warrington Township residents are met and not compromised by use of fields by nonresidents.
- Maintain high park and recreation standards within budget constraints.
- Continue to secure contributions of land or fees from new developments.
- Examine needs for sustainable park and recreation maintenance practices.
- Integrate township trail system into design of total park system.
- Cooperate with neighboring communities on integrated trail systems.

Table 16
Parks in Warrington

Park	Park Type
Township Owned	
Igoe, Porter, and Wellings/Upper Nike	Community
John Paul	Community
King	Community
Twin Oaks	Community
Alou	Neighborhood
Palomino	Neighborhood
Valley Glen	Neighborhood
Dapple	Mini Park
Penns Wood	Mini Park
Shank	Mini Park
Warrington Village	Mini Park
Willow Knoll	Mini Park
Barness	Special Use
Mary Barness Tennis & Swim Club	Special Use
Special Equestrian Center	Special Use
County Owned	
Bradford Reservoir	Regional

WASTEWATER AND WATER SUPPLY

Most residents of Warrington have access to public water and sanitary sewer. The Warrington Water and Sewer Department provides the township with potable water and wastewater treatment. The department's office is located at 852 Easton Road and has a full time director, 2 billing clerks, 1 superintendent and 6 operations personnel.

The sewage flow from the eastern portion of the township is treated at the Warminster Township's Log College Sewage Treatment Plant along the Little Neshaminy Creek. The Log College treatment plant provides tertiary level treatment and has a capacity of 8.18 million gallons per day (MGD). Warrington Township has an inter-municipal agreement for 1.9 MGD of treatment capacity at the Warminster sewage treatment plant. In 2016, the average daily flow transferred to Warminster was 1.365 MGD. Approximately 6,900 properties are served in the eastern portion of the township. The sewage collection system in this area of the township includes twenty sewage pumping stations, in addition to gravity collection sewers and interceptors.

Soils and underlying geology in the western portion of the township are poor for on-lot wastewater disposal systems. Development in the western section of the township is served by the Tradesville wastewater treatment plant (WWTP). Because of topography, all flows are pumped to the Tradesville plant via force mains from 5 sewage pumping stations.

The township operates the Tradesville WWTP, located on Pickertown Road. The treatment plant serves approximately 1,100 homes in the western portion of the township. The Tradesville WWTP was completed in 1998 and provides tertiary level treatment to the domestic wastewater flow. The treatment plant has a capacity of 330,000 gallons per day; in 2016 the average daily flow to the plant was 267,000 gallons per day.

The township has used both surface water and groundwater for water supply. The eastern section of the township was historically supplied with groundwater from 9 wells. These wells are permitted for up to 1.46 MGD, 4 wells are treated by air strippers to eliminate volatile organic compounds. The water distributions system includes 4 water storage tanks with a total capacity of 1.7 million gallons. In 2014, the presence of perflourinated chemical (PFC) compounds was detected in the township's wells; 5 wells which exceeded the Environmental Protection Agency's Health Advisory Level were taken out of service. The PFC contamination is attributed to past firefighting activities at the Willow Grove military base. Granular activated carbon (GAC) treatment systems are being installed on these 5 wells (Numbers 1, 2, 3, 6, and 9). Increased surface water purchases from North Wales Water Authority (NWWA) has compensated for lost groundwater supply resulting from the PFC contamination.

The western portion of the township has historically been served by surface water supplied by NWWA from the Forest Park Water treatment plant. The Forest Park plant receives raw water from the Delaware River via the Point Pleasant Pump Station. The township had contracted for purchase of up to 0.9 MGD for use in the western area, following the PFC contamination the contract was increased to 2.0 MGD for use throughout the township. There are presently five points of interconnection between NWWA and Warrington Township; 2 additional interconnections in the eastern portion of the township are under construction.

The Warrington Township Water and Sewer Department has capital improvement needs including infrastructure maintenance and improvement to both the drinking water and sanitary sewer systems. Such improvements include but are not limited to water main extensions, booster station upgrades, water tank maintenance, interconnections with external water sources, sanitary sewer main rehabilitation and extensions, sewage pump station maintenance and improvements, supervisory control and data acquisition (SCADA) integration and software updates, utility billing software upgrades, and regular GIS (geographic information system) maintenance.

To preserve water resources in the township several actions should be considered: storm water management to encourage infiltration in new developments; retrofitting older developments to permit storm water infiltration; impervious surface limits; and open space preservation. Certain land uses, such as gas stations, should be controlled so that they will not negatively affect groundwater.

The township policy on land use decisions and wastewater disposal decisions is that wastewater service should serve the desired land use pattern. Land use and zoning decisions must be made first and must be based on many factors, including environmental concerns, accessibility, and compatibility with other nearby developments. Sewage availability is one of many land use factors. The existence of a sewer line is not sufficient reason to rezone an area for higher density. Conversely, areas that the township deems to be suitable for higher density development should be served by public water and sewer facilities so that public health is protected. The *Township Sewage Facilities Plan* (Act 537 Plan) should be consistent with land use policy.

STORMWATER MANAGEMENT

The stormwater management system in Warrington relies primarily upon channeling stormwater into stormwater basins. Some older areas in the eastern section of the township use storm sewers, which discharge the water into streams. Newer developments use stormwater management facilities that provide runoff volume control and water quality improvements reflecting the more enlightened view of stormwater as a resource rather than as a waste product to be removed as quickly as possible. Much of the township is drained by the tributaries to the Neshaminy and Little Neshaminy creeks. Park Creek, a tributary of the Little Neshaminy, floods frequently due to development in Horsham Township and causes problems in Warrington. This situation reinforces the need for regional stormwater management solutions, as well as controls on future development. The township adopted the *Warrington Township Neshaminy Creek Watershed Act 167 Stormwater Management Ordinances 2011*.

Maintenance of stormwater detention basins is a township responsibility under the federal National Pollution Detection and Elimination System (NPDES II). The NPDES II regulations require municipalities to develop a stormwater management program that meets the states small municipal separate storm sewer system (MS4s) permit requirements and includes 6 minimum control measures: public education and outreach, public participation, illicit discharge detection and elimination, and construction site and post-construction runoff control, and pollution prevention. Annual reports must be submitted to the Department of Environmental Protection (DEP) to signify how the municipality is meeting incremental elements of the program.

Thus far, Warrington has submitted the requisite annual reports in accordance with the NPDES II program. The township is engaged in public education and outreach, providing educational materials to township residents, and additional measures to meet permit requirements.

FIRE PROTECTION

The Warrington Township Fire Company provides primary fire protection service for the township using 35 volunteer firefighters. This non-profit organization is not operated by the township but receives township tax dollars. Warrington Township allocates through the budget a set amount of money per year for the fire company to use as operating funds.

The Warrington Fire Company has a main station (Station 29) on Freedoms Way and Easton Road. The substation (Station 78) located at the intersection of Pickertown and Mill Creek roads is owned by the township but leased to the fire company.

The township faces the challenges of many suburban communities where dwindling volunteers make the future of an all-volunteer fire company uncertain. Attrition of existing staff, fewer new volunteers willing to undergo extensive training and take time away from family and work, leave the squads with fewer qualified people. In 2014 the township hired career firefighters which operate out of Station 78, 10 hours per day, and 5 days a week (Monday through Friday). There are four firefighters on duty per shift. As volunteer firefighter's numbers drop, career staffing will have to be increased to insure proper protection.

In the future, it will be necessary to upgrade the aging Station 29. Anticipated proposed improvements would include enlarging the apparatus bays, providing accommodations for sleepover crews or career firefighters, better training facilities and more up-to-date utilities, and communications equipment.

SERVICES AND FACILITIES PROVIDED BY OTHER ORGANIZATIONS

Ambulance Service

Warrington Community Ambulance Corps (WCAC) is a nonprofit corporation that provides transport and emergency rescue for Warrington Township and portions of Doylestown and Warwick townships. The Warrington Community Ambulance Corps, located at 1140 Easton Road, is staffed 24 hours a day and provides around-the-clock basic and advanced life support. The WCAC is staffed by full- and part-time, paid and volunteer paramedics and EMTs. The corps' equipment and staffing needs are adequate at this time. The WCAC receives township tax dollars through the budget process to use as operating funds.

The challenges faced by the WCAC are providing adequate staffing, equipment, and facilities to meet the needs of a growing and aging community. Traffic congestion slows response times. Needs will increase with population increases and with a shifting demographic trend toward older residents. Consideration must be made to add a crew at station 78, 24 hours a day/7 days a week to adequately cover all the residents of Warrington. Currently a portion of the western end of Warrington is covered by Chalfont EMS.

Schools

The Central Bucks School District, which serves Warrington, Warwick, Doylestown, Plumstead, Buckingham and New Britain townships and the boroughs of Doylestown, New Britain and Chalfont, has an enrollment of nearly 20,000. Enrollment has been steady in recent years and many schools have been updated and improved. Schools in Warrington include Mill Creek,

Florence Titus, and John Barclay elementary schools, Tamanend Middle School, and Central Bucks South High School.

Central Bucks South opened in 2004 with peak enrollment of 2,000 students. This facility includes a football stadium and additional outdoor athletic facilities. Indoor facilities include a gymnasium, pool, and auditorium.

A cooperative relationship exists between the school district and township that allows residents to use school district educational and athletic facilities when coordinated through the appropriate school and district representatives.

Private education within the township is limited, but several parochial and private schools are located nearby in other municipalities within Bucks and Montgomery townships.

Table 17
Public School Enrollments and Capacity

School	Current Enrollments (2016)	Enrollment Capacity
Elementary Grades K-6		
Florence Titus (1951)	630	528
John Barclay (1965)	529	605
Mill Creek (2000)	832	1,100
Middle School Grades 7-9		
Tamanend (1960)	856	850
High School Grades 9-12		
C.B. South (2004)	1,805	2,000

Source: Central Bucks School District

The Central Bucks School District has recreational facilities throughout the area that township residents can use. The facilities include, but are not limited to ballfields, running tracks, and playground equipment. There are rules and regulations associated with the use of school facilities that all residents should respect. Coordination between the township and school district is important to ensure effective decisions on sharing use and meeting future facility needs.

Solid Waste Management

Property and business owners contract directly with private haulers to collect, transport, and dispose of their solid waste. Depending upon the hauler, municipal waste collected in Warrington Township may be disposed of directly into a landfill or waste-to-energy facility in the region or it may be delivered to a transfer station in Bucks or Montgomery counties.

During 2015, as part of the recycling effort in Warrington Township, the haulers operating in the township reported having collected 1,585 tons of aluminum cans, steel cans, 3 colors of glass containers, #1 and #2 plastic bottles, and newspaper from residential sources. With an estimated 19,000 tons of municipal waste generated in the township, this total composes about 9.3 percent of the municipal waste stream. These figures include 1,123 tons of recycled waste collected at commercial and institutional facilities in Warrington Township: a fourfold increase from 2003. Residential data has dropped significantly. However, it is likely that considerably more material is

recycled at residential dwellings in the township that is not being reported by the licensed haulers. The Pennsylvania goal for recycling is 35 percent of the waste stream. Better reporting of recycling provided by waste haulers will help Warrington maximize its recycling grants from the state.

Removing yard waste from the waste stream is a requirement for all Pennsylvania municipalities. Future efforts to accommodate yard waste recycling in central Bucks County will require a regional effort. To properly institute an enforceable program, would require an ordinance mandating the separation of yard waste from regular waste and requiring the hauler to report to the township the tonnages collected.

Electric and Gas Service

PECO Energy provides electric service to Warrington via a 230 kilovolt transmission line crossing east to west across the southern portion of Warrington. The power is distributed to local residences and businesses from a substation on Bristol Road. The company is obligated by the Pennsylvania Utility Commission to provide adequate and reliable service to all customers.

Gas service is provided where it is feasible and profitable for the company. New development may be served by gas if PECO determines it is worthwhile or when the developer contributes to installation. PECO monitors development activity to determine the demand for electric and gas but relies on municipal assistance to obtain specifics about land use planning.

Pipelines

The Transcontinental Gas Pipeline Company transports natural gas through five pipes passing through Warrington in the southern corner of the township. Three 30-inch, 1 36-inch and 1 42-inch pipe lie underground beneath easements. The township should take into account pipeline locations in making planning and zoning decisions.

Telecommunications

Telecommunications is the transmission of voice, video, or data between two points and has become a significant part of our information-based economy and culture. Growth of the telecommunications industry has been driven by increasing advancement of technology and has resulted in greater business and consumer demand. Telecommunications will be an integral part of the municipal infrastructure. Planning for telecommunications allows for control of the right-of-way, control of public property, universal service, and economic development.

Financing Township Services and Facilities

Decisions about how funds are spent reflect the township's priorities, making it essential to link what the township wishes to do with the available funds. How future growth occurs and what services are provided will affect the municipal budget as well as the residents' tax burden.

Growth and development affect municipal finances and budgeting, by both increasing revenues and increasing expenses. Comprehensive studies on the impact of development on budgets and tax burdens all point to the same conclusion: development costs money, and more development costs more money. As communities add more people, demands on local government for new and expanded services will increase.

Providing services and facilities in a fiscally responsible manner requires planning and capital programming. A capital improvements program is the multiyear scheduling of public physical improvements. The scheduling is predicated on the availability of fiscal resources and the selection of specific improvements to be constructed over a span of 5 to 6 years into the future. The township's ongoing capital programming should take into account the facilities that are recommended in the comprehensive plan.

Appendix F

Part of a Larger Community

Regional Issues

Warrington Township is part of the Bucks County community and the communities of southeastern Pennsylvania, linked by transportation corridors, stream corridors, common history, and regional forces. While safeguarding the interests of its own residents, Warrington must also take into account what is happening around it and how outside forces affect its future planning.

Issues that affect the township's planning are:

- Environmental issues: water supply and quality and stormwater management and flooding concerns on the Neshaminy and Little Neshaminy creeks.
- Development in surrounding communities, including the future of the Willow Grove Naval Air Station.
- Transportation and traffic.
- Population changes in the region and state.
- County and regional plans.

ENVIRONMENTAL ISSUES

The township's participation in regional and watershed-based stormwater management plans helps to provide a system-wide approach to stormwater control. Development in surrounding communities – past and future – has an effect on potential flooding that may occur in Warrington. Studies of the Neshaminy and Little Neshaminy Creek, such as Rivers Conservation Plans, address water quality issues that transcend municipal boundaries.

The township diligently monitors water supply and quality issues and is in constant contact with surrounding communities to maintain safe and uninterrupted service to its citizens.

DEVELOPMENT IN SURROUNDING COMMUNITIES

How neighboring communities have planned and zoned for future development affects what happens in Warrington. The township shares its borders with several municipalities: Doylestown, New Britain, Warwick, and Warminster townships in Bucks County and Horsham and Montgomery townships in Montgomery County. Each of these bordering municipalities has development, land use plans, and zoning controls that must be examined to ensure compatibility with this plan. This plan encourages a cooperative approach to address regional issues such as the provision for trails, water resources, and traffic management. See Map 6, Zoning in Warrington and Adjacent Municipalities.

The uses along the Route 611 corridor in Horsham, Warrington, and Doylestown townships are

similar, but their age and appearance differ. Opportunities exist for further coordination among communities to establish corridor design criteria to enhance both aesthetics and function. The townships could work together with Pennsylvania Department of Transportation (PennDOT) to coordinate improvements. Besides the Route 611 corridor, the reuse of the Willow Grove Joint Reserve Base Naval Air Station will profoundly impact land use and traffic patterns within Warrington and surrounding communities.

Table 18 lists the adjoining municipalities and their zoning standards. Residential zoning districts predominately surround Warrington on all sides. In addition, Warrington currently has residential districts along most of its municipal border, with the exception of several areas. These non-residential areas include:

- Cemetery District (CE) along County Line and Upper State roads.
- Commercial Districts (C-1 and C-2) in the Eureka area along County Line and Lower State roads and Limekiln Pike (S.R. 152).
- Central Business and Planned Industrial districts (CBD and PI1) along the Route 611 corridor in the southern corner of the township. The CBD and PI1 districts extend along County Line and Valley roads.

It appears that existing and proposed development in Warrington Township and this comprehensive plan are generally compatible with existing and proposed development or plans for proposed development along adjacent portions of contiguous municipalities.

Table 18
Adjacent Zoning Districts

Municipality	Zoning District	Permitted Land Use Type	Single-Family Detached: Minimum Lot Size	Single-Family Cluster: Minimum Lot Size	Other Permitted Uses & Minimum Lot Size
Doylestown	R-1	Residential	40,000 SF	30,000 SF	
	R-1a	Residential	2 Acres	1-Acre	
	C-2	General Commercial			2 Acres; Shopping Center (10 Acres)
	I	Institutional			5 Acres
Horsham	R-1	Residential: Single-Family	60,000 SF		
	R-2	Residential: Single-Family	43,560 SF		
	R-4	Residential: Single-Family	12,000 SF		
	GC-2	Gen. Commercial			10,000 SF
	I-3	Industrial			2 Acres
Montgomery	R-1	Residential: Single-Family	40,000 SF	10,000 SF	
	R-2	Residential: Single-Family	20,000 SF		
	R-5	Residential: Single-Family	15,000 SF	12,000 SF	
	Curative Amendment	Court Approved	15,000 SF		Apartment:(9 units/acre) Townhouse:(10 units/acre)
New Britain	RR	Residential: Single-Family	1-Acre		
	PR/PRD 1	Residential: Single-Family	20,000 SF	8,500 SF; 5,000 SF	Townhouse; Multifamily
	SR-1	Residential: Single-Family	1-Acre	12,500 SF	
	SR-2	Residential: Single-Family	2 Acres	1-Acre	
	C-3	Commercial			3 Acres
Warminster	R-1	Residential: Single-Family	20,000 SF		
	R-2	Residential: Single-Family	12,500 SF		
	R-4	Multifamily	9,000 SF		
	C-1	Professional	10,000 SF		
	G	Park			1-Acre
Warwick	R1	Residential: Single-Family	2 Acres	15,000 SF	
	R2	Restricted: Residential	2 Acres	15,000 SF	

Transportation and Traffic

The township recognizes the regional nature of the transportation system and participates with all relevant transportation and traffic studies. The township understands that cooperative efforts between municipal government and businesses is necessary to develop transportation strategies to help decrease overall traffic and congestion along the major corridors.

The existence of the Turnpike interchange at Willow Grove affects travel patterns and traffic in Warrington Township. In addition, the newly constructed Route 202 Parkway had a significant impact on traffic patterns within the township and the outlying communities it connects.

County and Regional Plans

Bucks County and the Delaware Valley Regional Planning Commission have adopted plans that include Warrington as part of their jurisdictions.

BUCKS COUNTY COMPREHENSIVE PLAN

The *Bucks County Comprehensive Plan* (2011) provides policy recommendations and guidelines to assist municipalities with managing growth, developing comprehensive plans, and evaluating development proposals. It classifies the Route 611 corridor through Warrington as an “Employment Area” and the remainder of the township outside of the corridor as an “Emerging Suburban Area.” The “Employment Area” is characterized to occur adjacent to arterial corridors with access to the regional transportation network and encourages the following:

- Medium- to high-density residential uses within mixed-use developments in order to link jobs and housing.
- Nonresidential development should be undertaken in a planned and coordinated way.
- Commercial development should be undertaken with an emphasis on access control, streetscape appearance, pedestrian travel, and safety.

The “Emerging Suburban Areas” is identified as areas with planned and available public infrastructure, appropriate zoning and development districts, and areas that have had significant population gains over the last 20 years. The “Emerging Suburban Areas” encourage the following:

- Smart growth development principles.
- New development should be compact and built where existing infrastructure is adequate.
- New development should be designed with the pedestrian in mind.
- Future development may include residential, nonresidential, and a mix of uses as part of a planned development.

There are two greenway corridors located within the township and noted in the *Bucks County Comprehensive Plan* (2011) and the *Bucks County Open Space and Greenways Plan* (2011). They include the Little Neshaminy Creek natural corridor and the US Route 202 Parkway span. These corridors and natural features are important in maintaining a high quality of life for the residents of the county by providing recreation and by protecting sensitive natural resource areas.

DVRPC: CONNECTIONS 2040: PLAN FOR GREATER PHILADELPHIA

The Delaware Valley Regional Planning Commission (DVRPC) developed *Connections 2040: Plan for Greater Philadelphia* (2013) as an update to *Connections 2035: The Regional Plan for a Sustainable Future*. The purpose of the plan is to carry out DVRPC’s defined mission, which is to plan for the orderly growth and development of the region. The four core principles are:

1. Manage Growth and Protect the Environment.
2. Create Livable Communities.
3. Build the Economy.
4. Establish a Modern, Multimodal Transportation System.

Page 33, Figure 17: Land Use Vision of the Plan identifies the western portion of the township as “Rural Resource Lands” and the remainder of the township as an area intended for “Infill and Redevelopment.”

The plan directs development and investment to the already established areas in the region, which appears to be consistent with the township’s existing conditions located to the north and east and along the Route 611 corridor. Key policy approaches for rural resource areas focus on preservation and limiting development, limited expansion of infrastructure systems, preservation of a rural lifestyle and village character, support for continued farming, and natural resource protection.

Future Regional Impacts

The future of Warrington will be affected by what happens around it. Significant issues that should be considered in planning for the future include:

- Future of the Willow Grove Joint Reserve Base Naval Air Station.
- Water supply and quality issues to maintain safe and uninterrupted service to township citizens.
- Traffic patterns stemming from the Route 202 Parkway.
- Regional environmental concerns with flooding and stormwater management.
- Strategic trail/walkway connections within the township and with neighboring communities.
- Corridor planning for shared arterial and collector roads – Bristol, County Line, and Upper State roads.
- Cooperation between municipalities on land use and transportation issues.

Appendix G

Resident Survey 2016

Warrington Resident Survey - Summary

The survey was sent out with the Warrington Township Spring 2016 Link newsletter. The township received 854 responses. The survey asked for the following basic demographic information: residency, age cohort, and housing ownership status (tenure). The survey provided 27 questions with the choice of the following responses:

- ✓ Strongly Agree.
- ✓ Disagree.
- ✓ Neutral.
- ✓ Agree.
- ✓ Strongly Disagree.

On the reverse side of the form an open ended question was asked:

- What do you feel is the most critical issue facing Warrington Township in the next decade?

OVERALL RESPONDENT CHARACTERISTICS

Provided here is the summary of results. The overwhelming majority of respondents (97%) indicated that they were residents or employees of the township. The respondents were primarily those over 30. The youngest members of the township did not respond in significant numbers. Several age cohort groups were predominant among the respondents as noted in the table below.

Table 19
Survey Respondent Characteristics

Age Cohort	Survey Respondents (%)
Under 30	0.8
30-49	36
Baby Boomers (50-69)	45.4
Over 65	17.7

Of the 840 respondents who identified their housing tenure status 97 percent identified themselves as homeowners. Only 14 (1.6 percent) indicated they were renters.

QUESTIONS

The survey asked 27 questions about critical issues in the township. “Strongly Disagree” or “Strongly Agree” was selected by more than half of the respondents for almost half the questions. This pattern may have been influenced by the wording of the questions, leading to particular responses.

The following questions elicited a response of **Strongly Agree** by more than 57 percent of respondents:

- Q1: Warrington should maintain a rural character to include farmland? (78.7 %)
- Q13: Warrington should prioritize preservation of existing wooded areas? (71.3 %)
- Q6: Traffic congestion is a major issue? (69.3 %)
- Q8: Warrington should continue to maximize open space? (69.3 %)
- Q9: Warrington should provide greater protection of natural resources? (65.4 %)
- Q5: Warrington has an adequate variety of shopping/entertainment venues? (57.4 %)

The following questions elicited the response of **Strongly Disagree** by 50 percent or more of respondents:

- Q17: Need more high density multi-family apartments and/or townhomes? (80.1 %)
- Q15: Need more residential developments with a variety/mixed housing types? (69.2 %)
- Q10: Recent approvals of new growth in commercial and residential developments has been acceptable? (52.1 %)
- Q18: Need more senior or age-restricted (+55) housing? (52.2 %)
- Q16: Need more single family homes on larger lots? (50.7 %)

KEYWORD COUNTS – WRITTEN RESPONSES

Of the 854 survey responses, 77 percent contained written comments. Selected keywords were counted to determine the prevalence of each term used by respondents. The terms may have been used more than once by a respondent and the keywords are not necessarily related to any particular phrase or meaning (for instance, the term “Growth” can be positive or negative).

Table 20
Survey Keywords

Keyword	Times Used
Traffic	305
Development	182
Overdevelopment	123
Congestion	120
Building	108
Roads	97
Housing	71
Water	61
Growth	49
Taxes	45
Homes	45
Walmart	40
Rural	31
Schools	22
Density	22
Overpopulation	21
Sidewalks	19
Snow	15
Police	15
Park Road	14

The written comments clearly demonstrated the concerns of survey respondents. Approximately half used the term Traffic and Congestion. About 1/3 of the respondents used the term “Development” or “Overdevelopment,” and many used the term “Building.”

CONCLUSION

The survey was completed mainly by residents over 30 and almost half were baby boomers aged 50-69. The respondents were overwhelmingly home owners who traditionally have roots in the community, whether working and/or raising children in Warrington.

The responses indicate that respondents want to preserve features that define Warrington such as the rural character and farmland, wooded areas, and open space and natural resources. Respondents agreed that the township has an adequate variety of shopping and entertainment venues.

Growth in Warrington has brought significant issues, such as traffic and respondents disagreed with the assertions that the township needs more high density multifamily and/or townhouse dwellings and developments with a variety of mixed housing types.

Opinions were close to 50/50 about the need for more age-restricted housing and single-family homes on large lots.

Warrington Township Residential Questionnaire - 2016 Comprehensive Plan

TOTAL RESPONSES
854

Are you a resident or employee of the Township?

811 Yes 25 No 18 No Response

What is your age?

<u>0</u> 18-24 years	<u>97</u> 45-49 years	<u>61</u> 70-74 years	<u>126</u> No Response
<u>6</u> 25-29 years	<u>97</u> 50-54 years	<u>40</u> 75-79 years	
<u>24</u> 30-34 years	<u>84</u> 55-59 years	<u>20</u> 80-84 years	
<u>54</u> 35-39 years	<u>78</u> 60-64 years	<u>8</u> 85 or more years	
<u>87</u> 40-44 years	<u>72</u> 65-69 years		

Do you own or rent your home?

826 Own 14 Rent 14 No Response

Please tell us how you would rate your feelings on each of the stated topics throughout the Township

0 No Response

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	No Response
1. Warrington should maintain a rural character to include farmland	7	6	41	126	666	8
2. Warrington should expand its parks, recreational and ball field facilities	30	38	228	210	339	9
3. Warrington should promote protection of historic sites	12	14	103	232	487	6
4. CBSD influenced my decision to reside in the Township	99	51	183	148	330	43
5. Warrington has an adequate variety of shopping/entertainment venues	7	9	37	192	605	4
6. Traffic congestion is a major issue	4	26	63	168	589	4
7. Need more public transportation	153	140	342	113	99	7
8. Warrington should continue to maximize open space	46	18	62	131	582	15
9. Warrington should provide greater protection of natural resources	6	8	87	192	554	7
10. Recent approvals of new growth in commercial and residential developments has been acceptable	442	201	110	73	23	5
11. Warrington should develop a cultural center or facility	123	106	355	156	103	11
12. Public safety and security is adequate	18	43	179	463	145	6
13. Warrington should prioritize preservation of existing wooded areas	6	10	43	185	608	2
14. Warrington should prioritize expanding trails & bike paths	29	52	206	238	319	10
15. Need more residential developments with a variety/mixed housing types	588	139	75	30	18	4
16. Need more single family homes on larger lots	429	161	106	90	60	8
17. Need more high density multi-family apartments and/or townhomes	682	107	42	10	10	3
18. Need more senior or age restricted (+55) housing	442	129	179	62	34	8
19. Have adequate Police service	15	36	189	420	190	4
20. Have adequate Fire service	10	22	200	424	195	3
21. Have adequate Ambulance Service	9	19	218	419	185	4
22. Have adequate public water service	45	70	218	361	152	8
23. Have adequate public sewer service	11	26	235	411	163	8
24. Have adequate storm water management facilities	22	67	322	322	112	9
25. Have an adequately maintained township road system	107	207	206	268	55	11
26. Have adequate snow removal forces	39	119	185	374	130	7
27. Public sidewalks should be required for all new development	28	36	184	223	378	5

Maps

Map 1

EXISTING LAND USE

Map 2

FUTURE LAND USE

Map 3

HYDROGEOLOGIC RESOURCES

Map 4

NATURAL AND HISTORIC RESOURCES

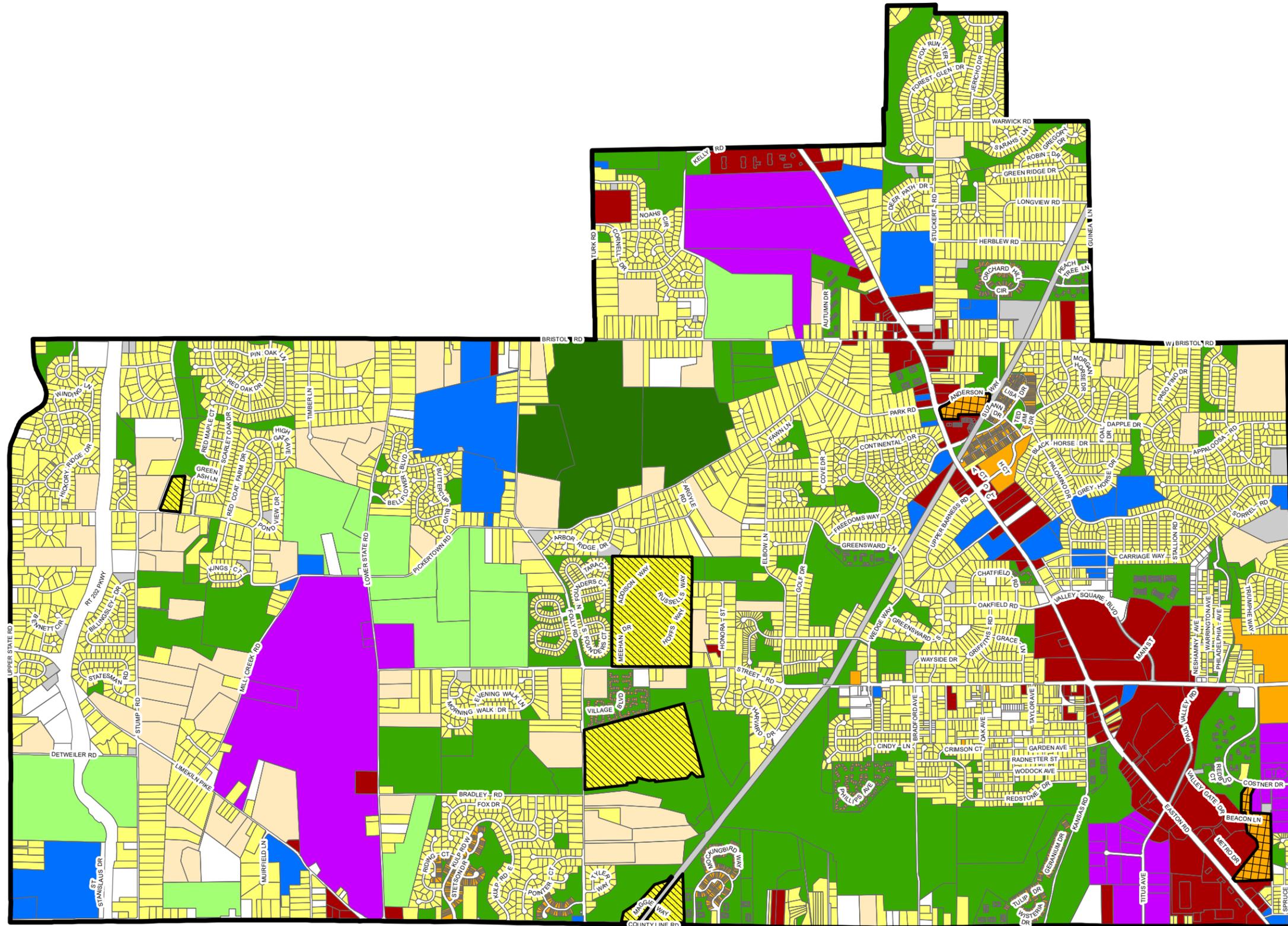
Map 5

COMMUNITY FACILITIES

Map 6

ZONING IN WARRINGTON AND ADJACENT MUNICIPALITIES

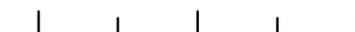
Map 1 Existing Land Use



- Agricultural
- Preserved Farmland
- Single-Family Residential
- Pending Single-Family Development
- Multifamily Residential
- Pending Multifamily Development
- Rural Residential
- Parks, Recreation & Open Space
- Commercial
- Industrial & Manufacturing
- Government & Institutional
- Transportation and Utilities
- Undeveloped/Vacant

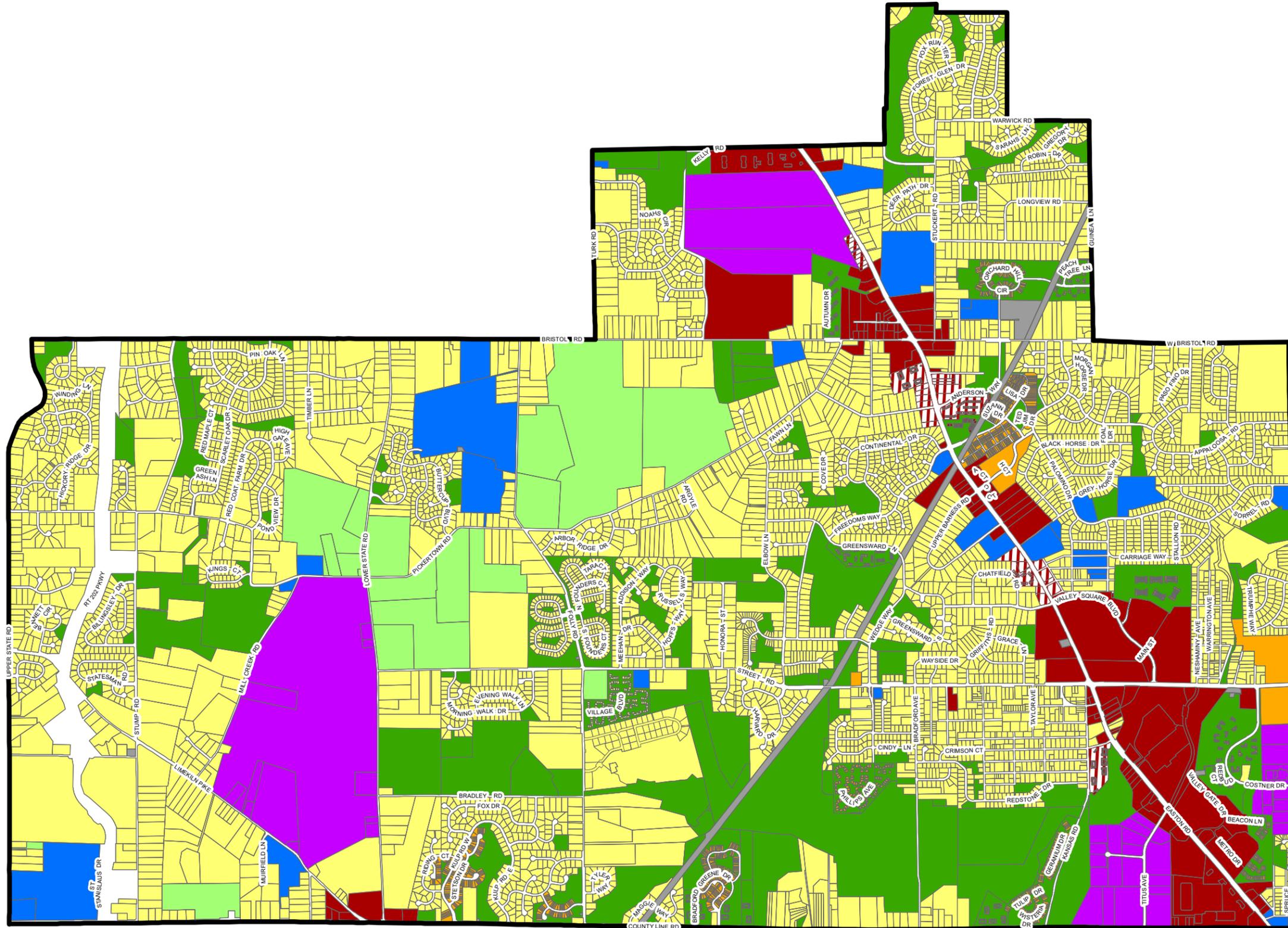
Warrington Township
Bucks County, Pennsylvania

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Prepared by: Bucks County Planning Commission
2018

Map 2 Future Land Use



- Agricultural
- Commercial
- Corridor Residential/Office
- Industrial
- Institutional
- Parks, Recreational, Open Space
- Residential Single-Family
- Residential Multifamily
- Utility

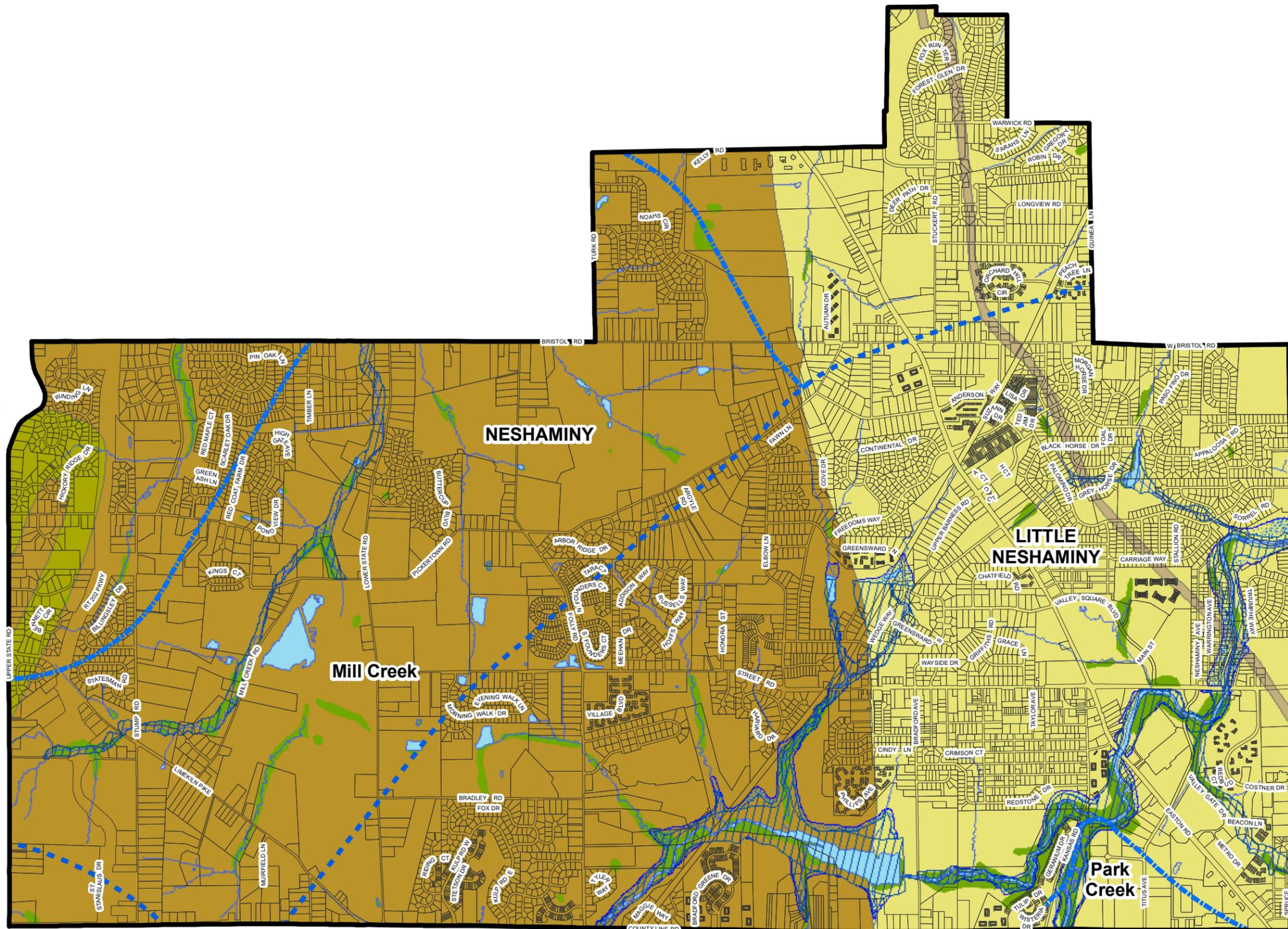
Warrington Township
Bucks County, Pennsylvania

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2018

Map 3 Hydrogeologic Resources



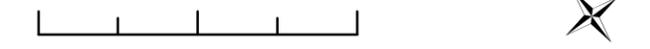
- - - PRIMARY WATERSHED BOUNDARY
- - - - Secondary Watershed Boundary
- 100-Year FEMA-Designated Floodplain
- 500-Year FEMA-Designated Floodplain
- Wetlands

Geology

- Brunswick lithofacies
- Diabase
- Lockatong lithofacies
- Stockton lithofacies

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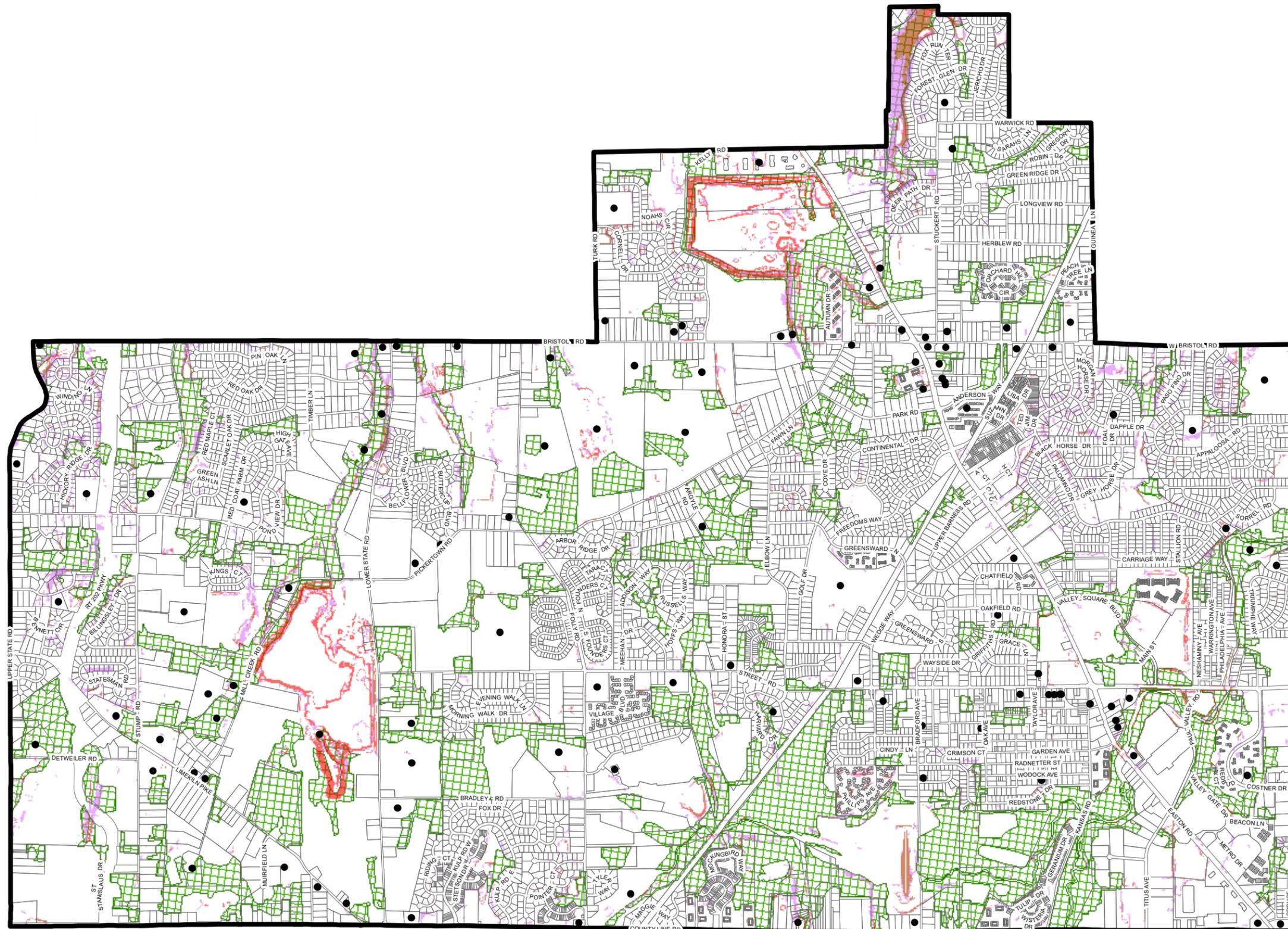
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Source:
Floodplains- FEMA, 2015
Wetlands- National Wetlands Inventory, 2009

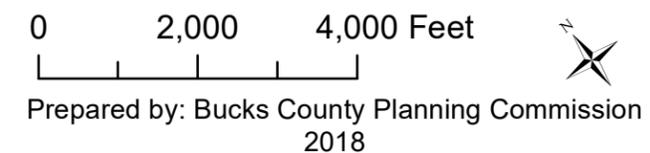
Map 4
Natural & Historic Resources



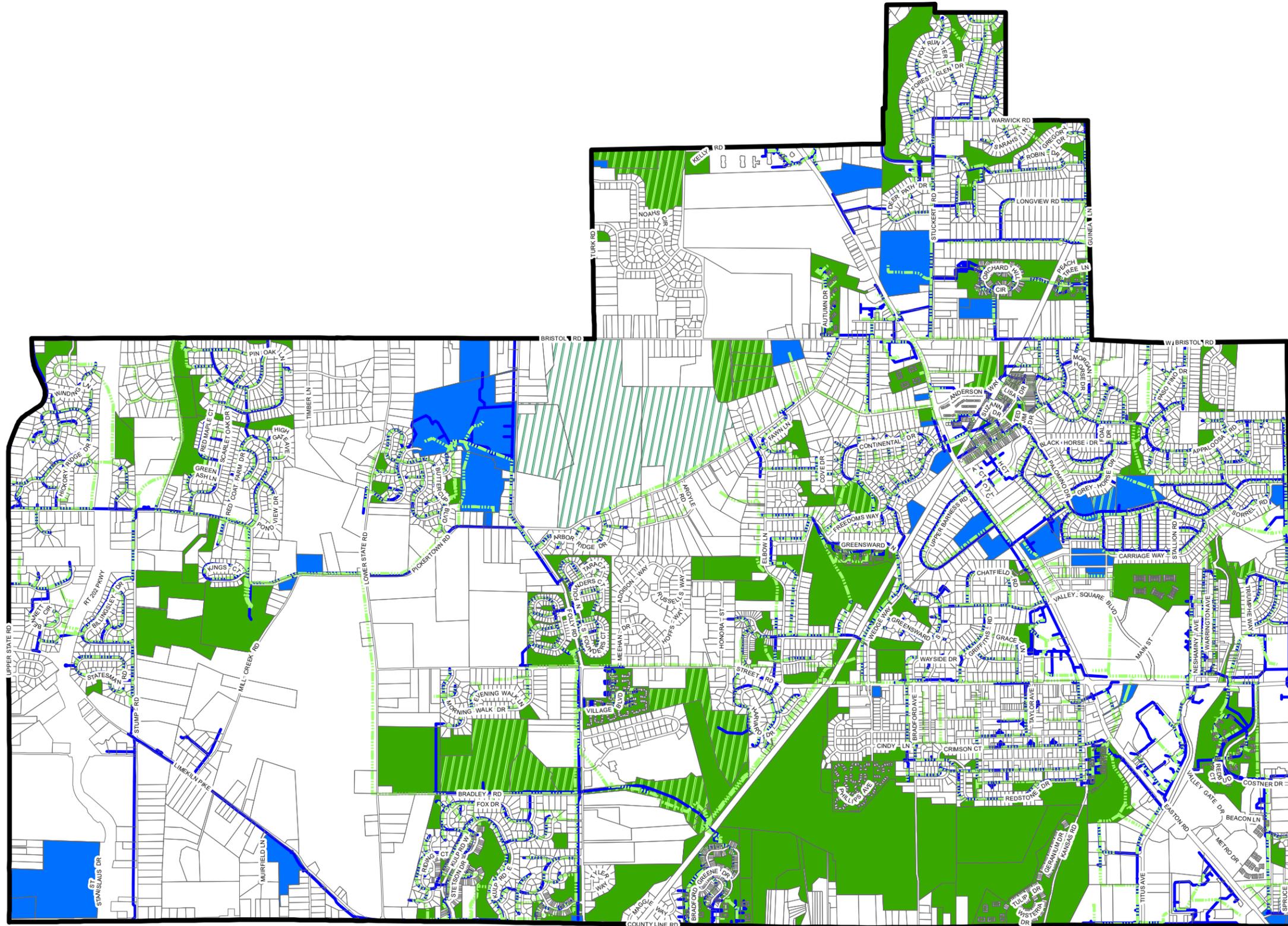
-  Woodlands
- Steep Slopes
 -  8 to 15 Percent
 -  15 to 25 Percent
 -  Greater than 25 Percent
-  Historic Resources

Warrington Township
Bucks County, Pennsylvania

Source:
Woodlands- DVRPC Land Cover Data Set, 2010
Steep Slopes- DCNR PAMAP Program, 2008



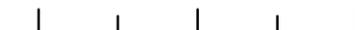
Map 5 Community Facilities



- Protected Open Space
- Protected Farmland
- Parks & Recreation (County & Township)
- Government & Institutional
- Sewer Lines
- Water Lines

Warrington Township
Bucks County, Pennsylvania

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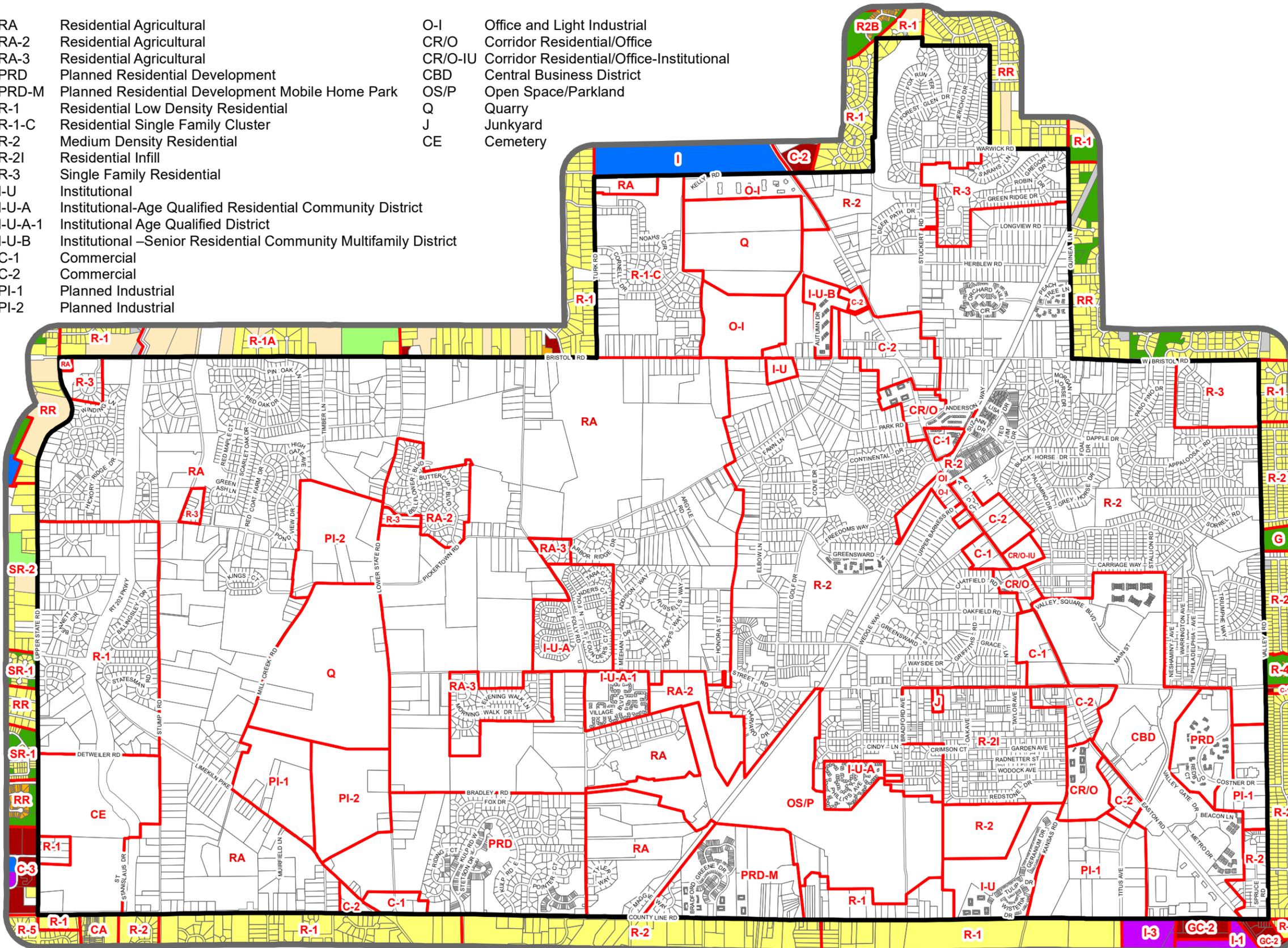
Warrington Zoning

- | | | | |
|---------|--|---------|---|
| RA | Residential Agricultural | O-I | Office and Light Industrial |
| RA-2 | Residential Agricultural | CR/O | Corridor Residential/Office |
| RA-3 | Residential Agricultural | CR/O-IU | Corridor Residential/Office-Institutional |
| PRD | Planned Residential Development | CBD | Central Business District |
| PRD-M | Planned Residential Development Mobile Home Park | OS/P | Open Space/Parkland |
| R-1 | Residential Low Density Residential | Q | Quarry |
| R-1-C | Residential Single Family Cluster | J | Junkyard |
| R-2 | Medium Density Residential | CE | Cemetery |
| R-2I | Residential Infill | | |
| R-3 | Single Family Residential | | |
| I-U | Institutional | | |
| I-U-A | Institutional-Age Qualified Residential Community District | | |
| I-U-A-1 | Institutional Age Qualified District | | |
| I-U-B | Institutional –Senior Residential Community Multifamily District | | |
| C-1 | Commercial | | |
| C-2 | Commercial | | |
| PI-1 | Planned Industrial | | |
| PI-2 | Planned Industrial | | |

Map 6
Zoning in Warrington
and Adjacent Municipalities

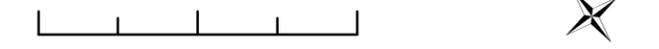
Land Use

- Preserved Farmland
- Agricultural
- Single-Family Residential
- Multifamily Residential
- Rural Residential
- Parks, Recreation & Open Space
- Commercial
- Industrial & Manufacturing
- Government & Institutional
- Transportation and Utilities
- Undeveloped/Vacant



Warrington Township
Bucks County, Pennsylvania

0 2,000 4,000 Feet



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2018

