WARWICK TOWNSHIP

Bucks County, Pennsylvania

COMPREHENSIVE PLAN UPDATE













2007



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Adopted: June 18, 2007

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INTRODUCTION

A comprehensive plan is a guide for the future development of a community. It examines the physical, social, and economic characteristics that come together to define what exists today and form a foundation for the future.

The comprehensive plan identifies major characteristics of land use, township environment, and recent development. The plan examines regional forces that affect the township and explains population changes and development trends. The plan sets the community goals and objectives for the future. To achieve the future goals, the plan examines past policies and land use controls and makes recommendations for guiding growth and development toward desired outcomes.

Warwick has engaged in township-wide planning since 1957 and last adopted a comprehensive plan in 1990, when nearly 60 percent of the land was used for farming or remained open. By 2000 the township had 6,062 additional residents and 2,111 new dwelling units. Growth in the commercial sector resulted in the township's first shopping center and other new businesses, changing the landscape of Warwick and transforming it from a rural area to a suburban community.

The 1990 plan focused on accommodating future growth. This plan provides a fresh analysis of available land and anticipated development, with goals and guidelines for future growth and change.

The Planning Process

The comprehensive plan update for Warwick Township began in 2005 with the township long-range comprehensive planning committee. The planning committee developed a resident survey and distributed it to township residents in the summer of 2005 to gain input into community goals. The results of the survey were reviewed and considered as part of the update process (see Appendix A).

The laws of the Commonwealth of Pennsylvania constrain what townships can do to manage and control development. The Pennsylvania Municipalities Planning Code outlines the rules for planning, zoning, and subdivision controls. Other state laws regulating sewage facilities, traffic controls, taxation, stormwater, and environmental protection all affect what a township can do to manage growth and development. These limitations have been taken into account in setting goals and a vision for the future.

Comprehensive Plan Components

The Pennsylvania Municipalities Planning Code, Act 247 (Pa MPC), provides guidelines for the content of comprehensive plans. The suggested contents are modified by each community that engages in planning so that the plan is tailored to individual municipal needs.

The plan begins with a brief history of the township and summary of recent population and housing trends. A statement of the community's growth principles is presented and each growth principle is supported by background policy analysis. Plan elements required by the Pa MPC such as natural resources and transportation are discussed in support of growth principles.

The final chapter of the plan, Implementation: Action Plan Summary, discusses the relationships among the plan elements so that the topics are linked into a package of integrated recommendations.

The plan brings together other township studies and reports such as the *Open Space Plan, Parks and Recreation Plan,* and the *Sewage Facilities Plan.* These plans are discussed and incorporated into the comprehensive plan update.

With much of the township land committed to development, the attention of township officials and residents will be on maintaining and enhancing a stable and desirable community with the necessary services and facilities to provide a safe and convenient living environment.

Township History

The first inhabitants of the area now known as Warwick Township were the Lenni Lenape. One of the township's arterial roadways, Old York Road, was once a Lenape trail. The township was established in 1773 by European settlers and was known as Middlebury. The first Europeans to settle the area were from Scotland and Ireland, who were the founders of the Neshaminy Warwick Presbyterian Church. Among them was Henry Jamison, whose name was given to the village at the intersection of Almshouse and Old York roads.

In 1777 the township was home for an encampment of General Washington and his troops. During the 13 days in August that the Continental Army stayed in Warwick, the Marquis de Lafayette formally took command, Count Pulaski was introduced to Washington, and Betsy Ross' flag first flew. The Moland house in Hartsville served as Washington's headquarters during the encampment.

The original boundaries of Warwick Township changed in 1819 when Doylestown Township was formed from part of Warwick, reducing Warwick to less than half its original size. Some land was transferred to Buckingham and Warrington townships.

The township's boundaries were partly planned by William Penn's surveyors. Master survey lines were drawn extending northwesterly from original settlements along the Delaware River to serve as boundaries for original land grants as well as courses for future highways. These lines serve as boundaries between Philadelphia (now Montgomery) and Bucks County and became the basis for a grid system in Bucks. These 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 Warwick Township.

The earliest settlers were farmers who lived on individual farms. As the population grew, villages were settled at Bridge Valley, Hartsville, Jamison, and Traymore. These villages were formed at crossroads and served as marketplaces and gathering places for nearby residents. Goods produced in the township were shipped by wagon to larger markets in Philadelphia. The village also served travelers moving between the Lehigh Valley communities of Allentown and Easton and Philadelphia.

The first census of the township in 1800 indicated that there were 859 people in Warwick. The population declined gradually to 472 by 1920, most likely due to emigration, sickness, war deaths, etc. The population started to grow again, and after World War II, steady growth started as people moved out from the city. In the period 1980–2000 the population grew substantially from 2,307 in 1980 to 11,977 in 2000.

Before World War II Warwick was a primarily agrarian community, with several vacation home communities along the Neshaminy Creek. As the township has grown it has increasingly become a magnet for those leaving Lower Bucks County to come to Central Bucks and a bedroom suburb for the metropolitan Philadelphia area.

Warwick's population has grown in the last 20 years and can be expected to grow in the future. Many residents are new to the township. The 2000 U.S. Census recorded that 48 percent of township residents had moved to Warwick between 1995 and 2000.

The housing stock is slightly more expensive than that in nearby communities and is generally less than 20 years old. The community contains a mix of single-family and multi-family housing. Recent additions of age-qualified housing after 2000 has changed the profile of the township population by adding more people in the 55+ age category.

Appendix B contains detailed population and housing data from the 2000 U.S. Census.



GOALS AND GUIDING PRINCIPLES

Community Development Statement

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 Warwick Township as it envisions the future.

Looking back, we know that the township has its roots in the pre-Colonial era and in an agrarian society. During the last decade, the township has responded to market forces to accommodate new commercial, office, and residential development. But the challenge for the next decade is to protect the community character, to provide good township services, and to continue to improve the way people live and travel in the township.

The Statement of Community Development establishes the township's direction on land use development issues.¹ It is the foundation for land use controls in the zoning ordinance and subdivision and land development ordinances and provides direction for township activities.

Community Goal

Manage development 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.

¹This statement complies with Section 606 of the Pennsylvania Municipalities Planning Code, which indicates that new zoning ordinances should reflect the policy goals of the municipality through a statement of community development objectives. Section 606 of the Code indicates that the statement of community development objectives may be supplied by reference to the community comprehensive plan. The five development principles serve as the community development objectives.

Guiding Principles

1. PROTECT THE CHARACTER AND SENSE OF COMMUNITY IN WARWICK

Vibrant communities are attractive, walkable, affordable and sustainable and meet the housing needs and preferences of residents. Warwick has a distinct history and character that defines the community's sense of place. By identifying what makes Warwick unique, the township can develop standards that foster attractiveness with economic vitality and a strong sense of place. Warwick should do its best to ensure that new construction respects the community's local character. Thriving town centers are important because they serve as places where people of all ages come together for entertainment and interaction with each other.

2. IMPROVE MOBILITY

Improving mobility means providing more transportation choices, designing functional transportation facilities that complement community character as well as carrying traffic, and encouraging housing to be situated near work and community facilities. Warwick should continue to create a network of trails and sidewalks that can be used by pedestrians and cyclists. Warwick can make walking, cycling, or other alternate travel methods feasible and desirable by promoting paths, by encouraging a mix of land uses, and by making streets pedestrian and bicycle friendly.

3. BUILD AND MAINTAIN A LIVABLE COMMUNITY WITH GOOD SERVICES AND FACILITIES

Adequate community services and facilities such as police protection and schools and amenities like parks are important community assets that should be provided.

4. Ensure the economic vitality of the community

To maintain and enhance Warwick's economic vitality, the township should have businesses and industry that provide jobs and tax revenue to support public services and the quality of community life. Good land use planning can direct nonresidential development to areas where it makes sense.

5. CONSERVE WARWICK'S NATURAL AND CULTURAL RESOURCES

Successful communities identify the areas that are most important to protect—such as farmland, forests, streams, scenic views or historic structures—and guide growth into areas better suited for development. Traditional landscapes and historic structures help define the township. Conservation of natural and cultural resources contributes to the township's character and community health.

WHAT WILL WARWICK LOOK LIKE IF WE ARE SUCCESSFUL IN PROMOTING THE GUIDING PRINCIPLES?

- New development will be accommodated in the township to allow for expected growth.
- New development will respect the natural environment.
- Neighborhoods and activity centers will be interconnected with streets and paths. Residents will be able to get to community centers, parks, and schools by a network of pathways. The trail system will be expanded.
- Special places, such as important farmland and historic sites, will be preserved for future generations.
- New nonresidential development will be limited to designated areas along York Road and will contain a mix of activities. It will be accessible by walking or biking. Businesses in designated commercial and industrial areas will contribute to making Warwick a balanced community by providing jobs and contributing to economic vitality.
- Jamison will become more of a village center by encouraging a mix of land uses, controlling driveways onto York Road, and improving pedestrian safety along York Road.
- New development will follow township guidelines to ensure legacy buildings rather than transitory architecture based on short-term commercial trends.
- Residents of all ages will have access to community services such as parks and police protection.



Principle 1 PROTECT THE CHARCTER AND SENSE OF COMMUNITY IN WARWICK

Vibrant communities are attractive and sustainable and meet the community needs of residents. Warwick's history and character create the sense of community. New development should respect the township's character. The township should use standards to encourage attractive development and a strong sense of place.

Warwick can continue to be a special place where residents enjoy living and businesses thrive. Properly managed new development can reinforce these goals.

Land Use Plan

The evaluation of existing land use provides the baseline for the comprehensive planning update. Existing land use patterns indicate how growth has taken place in the past and shows opportunities and constraints for future planning efforts.

Existing Land Use

Warwick Township contains 11.1 square miles of land. The table below provides a snapshot of land use acreages within the township in 1990 and 2005.

1990 and 2005 Land Use Characteristics

	1990		2005		1990–2005	
Land Use Category	Acreage	Percent	Acreage	Percent	Amount Change	Percent Change
Single-Family Residential	1,025	14.4	2,052	28.8	1,027	100.2
Multifamily Residential	42	0.6	135	1.9	93	221.4
Rural Residential	1,063	14.9	430	6.0	-633	-59.5
Residential Proposed	-	-	421	5.9	421	
Agricultural	2,637	37.0	1,296	18.2	-1,341	-50.9
Industrial	103	1.4	165	2.3	62	60.1
Commercial	29	0.4	147	2.1	118	406.9
Transportation & Utilities	369	5.1	675	9.5	306	82.9
Government & Institutional	257	3.6	186	2.6	-71	-27.6
Park, Recreation & Open Space	603	8.5	1,400	19.6	797	132.2
Woods or open but not farmed	1,003	14.1	227	3.2	-776	-77.4
Total	7,131	100	7,133	100		

Source: Bucks County Planning Commission, 1990 and 2005 Land Use Analysis

Notes

For 2005 land use mapping and statistics, subdivision and land development proposals that had received a building permit were considered constructed or subdivided, and the parcel and its respective acreage were included in the appropriate land use category.

- Discrepancies between 1990 and 2005 land use are due to detailed GIS mapping and aerial photography and changes in Board of Assessment classifications since 1990.
- 3. Residential proposed land use category contains parcels for which preliminary plans have been approved.

Most of the township (69.6%) is dedicated to single-family residential, agricultural, and park and recreation land uses. Single-family residential land, which are detached dwellings on lots less than 5 acres, are located mostly in the western and central areas of the township. An additional 5.9 percent of the township's land area, classified as Residential Proposed development, will be developed as single-family detached dwellings as Phase II of the Heritage Creek and the Ridings of Dark Hollow Road.

Agricultural land use¹ is concentrated in the eastern part of the township where soils are good for farming. The uses include crop and horse farms, a vineyard, and a greenhouse complex.

Park, recreation and open space land uses—almost 20 percent of the township—are located throughout Warwick Township. This land use category includes the six township parks, Bucks County's Dark Hollow Park along the Neshaminy Creek, Neshaminy Valley Country Club, open space parcels associated with residential developments, Bucks County Country Club, and other areas used for private recreation.

Multifamily dwelling types occupy 1.9 percent of the land area of the township, but also comprise a large share of the total housing stock. Multifamily units are defined by their structural characteristics and include attached units (such as townhouses) and units contained in a structure with 3 or more dwellings. Multifamily units can be owner-occupied, renter-occupied, or may also be sold as condominium units.

Rural residential uses include any parcel of 5 acres or more with a house on it.

Industrial land use, mainly the Warwick Commons Industrial Park, is concentrated in the southern corner of the township adjacent to Northampton Township.

Commercial land uses are located along York Road, in the village of Jamison, and in the village of Hartsville.

Transportation and utilities include road and utility rights-of-way and occupy about nine percent of the township land area.

Government and institutional land uses consist of private and public schools, churches, and municipal facilities located along or nearby the York Road corridor.

Development Trends

The most significant changes in land use between 1990 and 2005 occurred in the single-family residential and park, recreation and open space categories. Single-family residential land use increased by 100 percent as a result of new developments.

Acquisition and preservation of agricultural lands by the township, county and non-profit land trusts, and provision of open space in residential subdivisions, increased the

¹ The agricultural land use category is limited to parcels that are 20 acres or over for statistical and mapping purposes. Agricultural land under 20 acres is classified as either vacant or rural residential land uses unless otherwise confirmed.

park, recreation and open space category. This active preservation effort has helped offset the loss of farmland by permanently preserving several farms. Industrial land use increased by 62 acres (60 percent) and multifamily land use increased by 93 acres.

Land Use Issues

Agriculture

Agricultural land use occupies a significant portion of the township and plays an important role in the economy and township landscape. The most significant agricultural area is located in the eastern corner of the township. Bounded by the Little Neshaminy Creek to the south and the Neshaminy Creek to the north, it is a large contiguous area of farmland that remains relatively untouched by development. About half of this land has been preserved through township, county, and non-profit organization conservation efforts.

Programs that encourage the continuation of active farming are in place and include:

- Act 319 The Pennsylvania Farmland and Forest Land Assessment Act of 1974, also known as Act 319 or the "Clean and Green Act," permits preferential assessment to taxpayers owning land with agricultural use, agricultural reserves, and forest reserves. Approximately 1,580 acres (52 parcels) are covenanted in Warwick under Act 319.
- Agricultural Security Area Warwick has established an Agricultural Security Area, which property owners may enter on a voluntary basis if the minimum criteria for property size and prime farm soils are met. Enrollment in the security area gives farmers "right to farm" protection against nuisance laws and makes them eligible for preservation through the county's Agricultural Land Preservation Program. Warwick's agricultural security area contains 38 farms and 1194 acres.
- The Bucks County Agricultural Land Preservation Program Farmers who participate in this county/state program sell the development rights to their farm and sign conservation easements that prevent development in perpetuity. An easements has been placed on the Ritter Farm (52 acres) on Rushland Road.
- The township zoning ordinance contains standards to protect farmland by requiring protection of prime agricultural soils as part of cluster development in the RA district. The RA district also permits accessory uses that help support farming, including agricultural retails and temporary community events such as hayrides and corn mazes.

Residential Use

Approximately 36 percent of the township's area is occupied by residential uses. An additional 5.9 percent is proposed or under construction for residential uses.

Several neighborhoods such as Bridge Valley and Germinal Colony with older homes were built as vacation homes but have been converted to year-round use.

Age-Restricted Housing

Age-restricted housing is a newer form of residential development in Bucks County, resulting from favorable federal laws that allow for deviations from the Fair Housing Act and an increase in the number of aging baby boomers. Age-restricted housing typically restricts occupancy to at least one householder who is 55 or older, with restrictions on residents under 18. Approximately 1,100 units of housing designed for occupancy by those aged 55 or older have been built or planned in the township, which accounts for a significant percentage of the total housing stock.

While these units are popular among baby boomers, the need for new units may wane as the number of baby boomers declines and demand decreases. Demographic trends reveal that there will not be the large number of people in this age group, leading to speculation about the permanency of these communities.

The impacts of this type of development upon a community are numerous. While these developments attract households without school-aged children, avoiding educational costs, they affect the township in other ways. Many of the residents of such communities are still in the workforce, and some households have two workers. Work commutes add trips to the roadways. These households contribute earned income tax to the township, but as workers retire, their income and contributions to the township's tax base decline.

Additional proposals for development of age-restricted housing should be well-designed, well-located, well-built and adequately integrated into the existing transportation network and community. Development standards should not be relaxed: no density increases or reduced standards for streets, sidewalks, or parking should be permitted on the assumption that the initial residents of these developments will be less mobile by car or on foot than their younger counterparts. Granting of density increases or bonuses for age-restricted housing should be avoided. The possibility that it may someday be converted to residency by younger families with children should be considered.

Commercial Use

Commercial uses in Warwick are composed of retail shops and offices.

Retail

The majority of retail and service businesses are located in Jamison near the intersection of York Road and Almshouse Road, and along York Road. The township's only shopping center, Jamison Square, contains a supermarket and a variety of retail stores. In the past five years commercial uses have increased with several new banks and retail stores. National and regional franchisees have expressed interest in building facilities in the village.

In neighboring Warminster Township a number of retailing shifts in the 1990s resulted in numerous store closings. Ames, Rickels, Caldor, Pathmark, Staples, and other national and regional retailers closed and left vacant stores in the township's shopping centers, just a few miles from the new stores in Warwick. These vacant buildings show a weakness in discount and big box retailing that has resulted in a smaller number of successful chain stores.

To assure the success of existing stores and to avoid closed stores, this plan proposes to restrict commercial uses and zoning to what exists now and restrict the size of stores. Rezoning additional area allows for more commercial uses than are needed for the population, increases competition for existing stores, and increases the problem of closures. Big box retail should be controlled by regulating footprint size or overall square footage.

Office

The township has office uses in individual buildings and in an office park, the largest being the Heritage Building Company and the Commonwydds office park.

Additional office development in the township should be designed to fit the context of the village, contain a mix of uses to use land efficiently, and have a streetscape that is friendly to walkers and motorists.

Industrial Use

The township has several small industrial parks, including Warwick Commons and Warwick Industrial Park north of Mearns Road near Bristol Road, and the Mearns Road Business Campus southeast of Mearns Road. The Mearns Road business campus is partially completed and has on-lot water and sewer.

Government and Institutional Use

The township has a number of government and institutional uses such as public schools, places of worship, local emergency services, and government facilities. These public facilities are further discussed in the Community Facilities and Services chapter.

Planning and Zoning in Adjacent Communities

Land uses and development in adjacent communities affect Warwick Township. Regional forces and factors have an impact on what Warwick plans for the future. Some of the regional factors that cross municipal boundaries are:

- Highways such at York Road/Route 263, which connects Warwick with Buckingham to the north and Warminster to the south;
- Bristol Road, which is a common border with Warminster Township;
- Neshaminy Creek which flows through much of Bucks County;
- Development and preservation in surrounding townships.

Buckingham Township abuts Warwick along Sugar Bottom Road and is primarily residential. A new townhouse community lies across from Bridge Valley Elementary School. Individual residential uses abut Warwick south of York Road. The area of Buckingham which abuts Warwick is zoned R-1 Residential, AG-1 Agricultural, and PBR Planned Business Residential.

Doylestown Township, located to the north, shares the longest boundary with Warwick. The Estates at Doylestown subdivision abuts a small portion of Warwick opposite Mountain View. An older subdivision is located along Sugar Bottom Road and

abuts the Bridge Valley Elementary school. Both residential subdivisions are zoned R1 which permits single-family detached dwellings on lots of one acre or more. The largest land use along the boundary is the county's Dark Hollow Park which encompasses a section of the Neshaminy Creek. This area is zoned R1a which permits single-family detached dwellings on lots of 2 acres or more.

Ivyland Borough abuts a small portion of the township's southern corner along Bristol Road. The Ivybrook Corporate Campus, zoned I-C Industrial Commercial, abuts Warwick and permits commercial and industrial uses on lots of one acre or more. Residential areas zoned R-1 and R-2 lie west and south of the Corporate Campus and front on Bristol Road. Permitted densities of these residential areas are 4.3 and 1.7 units per acre respectively.

Northampton Township shares a boundary along the New Hope and Ivyland Railroad and the Little Neshaminy Creek. The boundary is covered by a variety of uses including an industrial park, low-density residential uses and vacant land. The corner of the township at Bristol Road has residential uses which abut each other. This area in Northampton is zoned R-2 which permits single family dwellings. A small area zoned AR Agricultural Residential is located directly northeast of the R-2 district. The Jacksonville Industrial Park zoned I-1 abuts single-family detached dwellings in Warwick.

The Hidden Meadows subdivision zoned R-1 lies between the Industrial Park and Almshouse Road. The balance of the abutting area, between Almshouse Road and the Sackettsford Road is zoned C-R Country Residential which permits single-family detached dwellings on lots of two acres or more.

Warminster Township shares a border along Bristol Road, where there is mainly residential development. The village of Hartsville is shared by the two communities, lying on either side of Bristol Road. Some nonresidential development along Bristol Road has been developed in both townships, either as conversions of residences or as new uses.

Warrington Township, where it adjoins Warwick, is mostly residential with several small areas of large residential lots, woodlots and three residential subdivisions (Forest Glen, Springbrook Estates and Orchard Hill) across Guinea Lane. Densities across Bristol Road in Palomino Farms and Highland Meadows are 1–2 units per acre higher than those in Warwick. A large vacant parcel of 20 acres abuts Warwick at the intersection of Bristol and Valley roads.

Wrightstown Township abuts Warwick in its easternmost corner. The land in Wrightstown directly abutting Warwick is used for single-family residential uses and is zoned CM Conservation Management. Farther east lies the village of Rushland which is zoned VR-1 Village Residential. Nearby land east of the village is occupied by a quarry zoned QA. The area south is farmland zoned R-2.

The majority of land uses and zoning districts in adjacent communities are residential. These adjacent areas abut residentially-zoned land in Warwick, which have similar densities.

Land in adjoining townships zoned or utilized for nonresidential purposes abuts land in Warwick, which is similarly zoned. The I-1 in Northampton and the L-I district in Warwick are compatible.

Opportunities exist for further coordination among these communities to establish corridor design criteria to enhance aesthetics and function. York Road is an historic corridor that was once a road for horse and carriage. The townships could work together on a joint design scheme marking the history of the road and coordinate right-of-way improvements linking sections of the roadway to enhance the appearance and function.

County and Regional Plans

The Bucks County Planning Commission and the Delaware Valley Regional Planning Commission (DVRPC) plans include Warwick and provide a context for planning at the municipal level and help to provide consistency among municipalities.

Bucks County Comprehensive Plan

The *Bucks County Comprehensive Plan* (1993) provides policy recommendations and guidelines to assist municipalities with managing growth, developing comprehensive plans (and related documents), and evaluating development proposals. The plan identifies planning tools to manage growth in a manner consistent with the sound planning practices centered on the development district concept, where growth is directed toward areas where infrastructure is available and away from areas with important natural and environmental features.

The Warwick Township comprehensive plan update is consistent with the county's growth management goals and objectives. Higher intensity developments are channeled into areas where public services can be efficiently and economically provided, preserving the township's significant natural, historic, and scenic resources.

Resource protection areas have natural and cultural resources that are important to preserve. Strategies for resource protection should focus on maximum protection and minimum disturbance.

Environmental performance standards play an important role in the township's zoning ordinance. The township's current natural resource protection zoning standards are consistent with those recommended by the county.

The township zoning ordinance provides for a variety of residential housing types and arrangements. The higher-density housing developments allow for housing opportunities in the township. The housing policies of the county and township are consistent.

DVRPC Year 2030 Plan

Destination 2030—the Land Use Element of the DVRPC Year 2030 Plan designates Warwick as a growing suburb, with an expectation for additional residential and nonresidential growth. With growth in population, jobs, and land consumption, suburban communities often face problems of traffic congestion, low-density leap-frog sprawl, increased

infrastructure demands, and dwindling open spaces. The following core planning principles are established in the plan:

- 1. Linking land use and transportation—A coordinated approach to land use planning and transportation, with municipal and county input, will be more effective in meeting community goals.
- 2. Creating and maintaining centers—Centers provide a focal point in the regional landscape that reinforces or establishes a sense of community for local residents.
- Promoting growth centers—Identify areas for new growth contiguous to existing developed area and provide land to accommodate expected increase in population and jobs.
- 4. Implementing smart growth and smart transportation approaches to achieve change—Several components of smart growth and smart transportation are proposed, such as corridor planning, multimodal/intermodal approaches, and context-sensitive planning.
- 5. Maintaining and preserving sensitive environmental areas and creating a green space network.

The Warwick Township comprehensive plan update is consistent with the DVRPC 2030 plan land use element. The core planning principles of the DVRPC plan are consistent with the township plan.

Future Land Use Issues

The following sections - future land use plan, residential areas analysis, and township image - address future growth in the township. The future land use plan establishes planning areas and policy for each area. The residential areas analysis determines how much residential growth can be accommodated.

Future Land Use Plan—Planning Areas

The Future Land Use Plan for Warwick provides a framework for managing new growth and enhancing existing land uses by designating two planning areas: Development Areas and Natural Resource/Agricultural Areas. The planning areas are consistent with the future land use map established in the 1990 Warwick Township Comprehensive Plan. These areas reflect development and growth patterns that have taken place since 1990, in addition to the growth management strategies expressed in the comprehensive plan. The plan addresses the planning and land use needs for the next ten years and also provides a mechanism for extending land use analysis to the year 2020. The following text describes the purpose and land use pattern recommended for the future land use planning areas.

A. Development Areas

Development Areas will accommodate new residential and nonresidential uses to 2015, or approximately 9 years from the date the comprehensive plan was prepared. The residential portions of the Development Areas can accommodate a variety of housing types at a variety of densities designed to comply with the requirements of the Pennsylvania Municipalities Planning Code "to provide for the use of land within the municipality for residential housing of various dwelling types encompassing all basic forms of housing, including single-family and two-family dwellings, and a reasonable

range of multifamily dwellings in various arrangements, mobile homes and mobile home parks."

The nonresidential planning areas are based on location considerations that will provide access to a wide range of shopping, employment, service, and other uses.

Within the Development Areas, the following areas are established:

Village Center Areas: Jamison and Hartsville. The village of Jamison, located at
the intersection of York and Almshouse roads, is the primary commercial core area.
Hartsville, at the intersection of Bristol and Old York roads, is a secondary
commercial area.

Portions of the Jamison village center are vacant or underused and provide sufficient opportunity for further development of retail, service, and related uses. Jamison should be the commercial center of the community, meeting the needs of Warwick residents.

Jamison is the heart of the township, and development there should be based on a common design concept. Development and design guidelines for Jamison, based on the 2003 study commissioned by the Township, include:

- smaller buildings set close to the roadway to reflect the size and location of development in the original village;
- human and walking scale;
- interior circulation network to discourage use of major arterials;
- parking lots that are small and arranged in clusters or pods between the buildings;
- open areas provided between clusters of buildings;
- residences as accessory uses on the second floor of commercial buildings and in the southeastern corner of the village center area on larger parcels;
- uses that provide entertainment, retail goods, and retail services;
- coordinated roadway improvements and access connections;
- pedestrian and bicycle paths;
- uses that do not promote walking, such as drive throughs or auto-oriented activities such as auto repair, should be restricted;
- avoid "strip commercial development."

The village of Hartsville at the intersection of Old York and Bristol roads has a mix of residential and commercial uses. Reuse and redevelopment of properties in the village help preserve the existing historic resources.

2. Planned Industrial Area. The industrial area along Mearns Road was established to provide for planned industrial development. It abuts similar industrial areas in Northampton and Warminster townships and Ivyland Borough and has good road access and potential for freight rail service. The township's Country Crossing sewage treatment plant is located here. Approximately half of the area is served by the treatment plant while the remaining parcels have on-lot sewage treatment. The potential for commuter rail by extending the R2 SEPTA line beyond Warminster, to connect to the New Hope-Ivyland Railroad is being evaluated.

- 3. Mixed Use Area. Adjacent to the Jamison village center, this area is most suitable for higher density residential and office uses. The area's proximity to York Road provides access to the regional highway network, but the efficiency of the roadway must be maintained by proper access and traffic management. Adequate buffering should help mitigate disturbance to dwellings from traffic. A system of interior roads and pedestrian ways among the properties in these areas will provide for safer and easier access without the need to use York Road.
- 4. Multifamily Residential Area. This area is intended to provide for the development of residential communities that will incorporate a variety of housing types at higher densities with amenities such as recreation and open space areas. Access to major arterials is provided in locations that maximize access and minimize disruption and enhance existing access points.
- 5. Suburban Residential Areas. The Suburban Residential Areas provide for residential development in the form of conventional subdivisions and clusters of single-family detached homes. The lot sizes and permitted densities will vary from low to moderate based on existing residential land uses and availability of public facilities. This area also accommodates institutional uses such as places of worship, schools, and township parks.

Most of the Suburban Residential areas has been developed, though vacant and rural residential parcels remain. Two small farms, Jones (TMP#51-3-17) and Reiff (TMP#51-31-3; 51-31 -4), have been preserved and cannot be developed. The development of single-family homes in the area will provide an appropriate and acceptable mix of housing types with the higher density, attached dwellings, and manufactured homes permitted within the Development Area.

B. Natural Resource/Agricultural Areas

Natural Resource Areas contain agricultural soils and environmentally-sensitive features, where protection and preservation are important. The Ritter farm and Heritage Conservancy parcels on Mearns Road preserve farmland. County- and Township-preserved properties along Rushland Road protect natural features and scenic vistas. The Dark Hollow Park preserves natural resource areas along the Neshaminy Creek. The Neshaminy Valley Golf Course is not developed but is not preserved. The vacant parcels not preserved in any way or those occupied by rural residential uses may be developed in the future.

Uses in the Natural Resource Area should be of the types and intensities that will not compete for services needed and intended for the Development Areas. The area's rural character should be maintained to provide balance with the existing development of the Development Areas. Residential development is permitted on lots of greater than two acres and must rely on individual on-lot water and sewer facilities.

Future development should take place in a manner that preserves agricultural soils and allows for continued agricultural practices. This policy is supported by a 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.

Within this planning area, agricultural protection is an important objective, and a balance has been established that permits reasonable provisions for those who wish to develop their land and those who wish to continue to farm.

Residential Development Area Analysis

The number of housing units in Warwick has increased significantly since 1990, going beyond what was anticipated by the 1990 comprehensive plan. A dwelling unit capacity analysis of vacant and rural residential parcels in the Development Areas and vacant land in the Natural Resource/Agricultural Areas was completed to determine capacity for future growth. Population projections for Warwick (see Appendix B) suggest a 2015 population of 17,070 people, or an increase of about 873 housing units. Agricultural lands in the Natural Resource area were not evaluated for growth potential because of the objective of this plan to preserve agriculture. If included, these areas further increase the development potential. The first step in the analysis is evaluating development proposed but not yet built.

Development Proposals Provide Future Development Potential

Numerous major subdivision proposals have received approval and are considered in determining the residential development capacity of the township. The analysis uses the year 2005 as a starting point because there is a reliable population estimate from the U.S. Census for that year. As of 2005, there were 511 residential units proposed in 24 developments which were approved but not occupied and which are counted as available capacity for growth post-2005. In analyzing land available for future development, any area contained in these proposed developments is excluded from the area for future development.

Development Proposals

Development	Dwellings/Type *
Studley	2 mf
Country Club Knoll	2 sfd / 54 mf
Handford	2 sfd
Mignon	3 sfd
Deerfield Estates	8 sfd
Gerth	2 sfd
Daly	2 sfd
Country Club Knoll II	6 sfd / 24 mf
Eisenhart	2 sfd
Ricelli	4 sfd
Haug	2 sfd
Nestlewood	4 sfd
Heritage Creek II	215 mf
Bridge Valley at Furlong	119 sfd
Morrison	5 sfd
Boyd	2 sfd
Giaimo	3 sfd
Luginbuhl	4 sfd
Lemaster	2 sfd
Pizzo	4 sfd
The Ridings of Warwick	30 sfd
Donidio Jr.	2 sfd
Borgeson	5 sfd
Bass	3 sfd
Total	511

^{*}sfd = Single-family detached mf = Multifamily

Why Can't We Just Say No to Development

Warwick's beautiful open spaces, convenient roadways, and high quality of life make it an attractive place to live. But growth and development are quickly changing the scenic landscape of Warwick Township. New housing developments are appearing all over the township and the problems of suburban sprawl are negatively impacting Warwick's way of life.

So if sprawl and development are changing our township in ways we don't like, why can't we just tell developers to go elsewhere? Moreover, why would we even try to accommodate them by zoning land for higher density uses? Two reasons prevent Warwick from stopping development altogether and even compel the township to accommodate it.

Warwick Township cannot keep property owners from gaining some economic use out of their properties. Widely known as the "takings clause," the Fifth Amendment of the U.S. Constitution states "nor shall private property be taken for public use, without just compensation." The U.S. Supreme Court has interpreted this clause in land use cases to mean that government cannot go too far in regulating the use of property. When a government regulation denies all economic use or value of a property, a "taking" results and compensation must be given.

In addition, every municipality must provide for basic forms of housing and all institutional, commercial, and industrial uses. In a series of court decisions, the Pennsylvania Supreme Court found that every community must provide for its "fair share" of each particular use. Municipalities within the path of development must meet minimum thresholds for the provision of these basic forms of housing, including multifamily development. If the amount of land zoned for a particular use is disproportionately small or if the use cannot be reasonably accommodated under the provisions of the ordinance, then the courts will hold the ordinance exclusionary, will grant relief, and permit the developer to build whatever he wishes, despite the municipality's zoning ordinance. Thus, to meet the fair share requirement, Warwick's zoning ordinance contains provisions for all basic forms of housing and other types of development. This chapter of the comprehensive plan includes an analysis of the amount of land zoned for housing to ensure the township has met the minimum threshold requirement.

Moreover, the township should not want to completely stop development and growth. A well-planned development area that allows different forms of development provides a stimulus to the local and regional economy. Residential growth provides new housing opportunities to those who would also want to take advantage of Warwick's high quality of life.

Growth and development have their negative impacts, however, and the Pennsylvania Municipalities Planning Code (MPC) authorizes the township to reasonably regulate and manage it. Warwick Township can develop comprehensive plans, enact zoning and subdivision and land development ordinances, develop capital improvements plans, create transferable development rights programs, cooperatively plan with other municipalities, and enact joint municipal zoning ordinances in cooperation with other municipalities. These basic tools enable municipalities to manage the intensity, type, and direction of development and growth.

This chart illustrates the future additions to the housing supply in Warwick to accommodate future growth. More than one-half (58%) of the new units will be in multifamily arrangements. Appendix B contains data showing that the proportion of housing in Warwick Township that is in multifamily arrangements is substantial. In 2000, the percentage of Warwick's housing supply devoted to multifamily types stood at 37.3 percent, higher than any of its neighboring municipalities and higher than Bucks County as a whole.

The future additions to the housing stock listed in the Development Proposals chart will maintain this high percentage of multifamily housing, raising the percentage to about 39 percent of all units. The developable land analysis shows additional potential for multifamily housing. This demonstrates that Warwick Township will meet its obligations to provide for a range of multifamily dwellings until 2015, when this can be re-examined.

Area for Future Development

The amount of land available for future development was calculated using existing zoning and an assessment of land available. Each parcel zoned and available for development within the Development Area was measured. Natural resource areas such as forests, wetlands, and steep slopes were deleted from the buildable area of these parcels in accordance with the resource protection standards in the township zoning ordinance. Forested areas, for example, must be preserved at a rate of 60 percent, with only 40 percent available for development. This is a conservative approach, leading to a lower estimate of development potential than could be achieved by preparing site-specific plans. Natural resource areas can be part of the development areas, and deducting them completely from developable land produces a conservative estimate of growth potential.

Fifteen percent of the remaining land (net buildable area) was subtracted to reflect land necessary for infrastructure such as streets, utilities, and stormwater. The density currently permitted in the respective zoning district in the Development Area and Natural Resource Area was multiplied by the net buildable area to find the available development capacity for each district. The table below shows the capacity for growth based on land available for future development by zoning district within the two designated planning areas.

Several parcels in the Natural Resource area are occupied by rural residential uses or have been approved for residential development. These areas, which include the Ridings at Dark Hollow Road and those along the southern and eastern sides of Almshouse and Dark Hollow roads, have been included in the Development area.

The capacity for growth shown above (394 units) and units from approved but unoccupied development proposals (511 units), will accommodate future growth of 905 units. Uncertainty always exists about the probability of proposed development being built and the possibility that development will not occur at the maximum permitted density on all tracts.

Capacity for Growth

Planning Area & Zoning District	Developable Acres ¹	Permitted Density (Dwelling units/acre)	Potential Dwelling Units (Capacity)
Development Area			
RA	72.85	0.5	36
RR	57.9	2.0	116
R-1	25	1.0	25
Village of Jamison			
C-1	21.3	2.0	43
C-3	14.8	6.0	89
VC	1.7	2.0	3
VC-II	10.7	2.0	21
Natural Resource Area			
RA-Developable parcels	50.24	0.5	25
RA-Neshaminy Valley Country Club	71	0.5	36
Total			394

Developable acreage includes only vacant and rural residential parcels over 1 acre minus resource protection area (e.g. streams and floodplains, wetlands, woodlands wetlands, steep slopes) and minus 15 percent of the site area to account for needed infrastructure that would be associated with future development.

The adequacy of current zoning to accommodate future population growth to the year 2015 is based on the following calculation:

2005 Population	14,538
2015 projected population (DVRPC)	17,070
Additional population	2,532
Household size	2.9
Housing units needed	873

Additional units can be accommodated within the natural resource/agricultural area, in village centers within mixed use developments, and infill development. The development analysis has excluded farmland and natural areas as potentially developable land because the township can meet its future development needs without a conversion of farmland for development. Owners of farmland may choose to sell for development in accordance with current zoning, accommodating more development.

Meeting the Needs for 2020

The need for future development potential is derived from population projections for 2015 (Appendix B). Further population projections, extending the outlook to 2020, have been prepared by the Delaware Valley Regional Planning Commission. These projections suggest a 2020 population for Warwick of 19,190.

The Municipalities Planning Code requires that municipalities review comprehensive plans every ten years. By the year 2015, the Township will have the benefit of the results of the 2010 U.S. Census. This will allow the township to re-examine the recommendations of this plan well before the end of its time frame in 2015, and to make whatever changes may be necessary to accommodate the 2020 projected population with a variety of housing options when a new 10-year Comprehensive Plan is prepared.

Implementation of Land Use Plan

Zoning, the major comprehensive plan implementation tool, should reflect the intent for development in the future and the reality of development in the township as it exists now. In several instances, development has occurred in ways not reflected by the current zoning ordinance.

Several township developments, such as Orchard Valley, Country Hunt Estates, Stover Mill, and Mountain View, were the result of developers' challenges to the zoning ordinance. These subdivisions and others are located in zoning districts with minimum lot size requirements that do not match existing lot sizes. Country Hunt and Orchard Meadow contain lots of the same general size but are zoned in two different districts, and there are nonconforming lots in each neighborhood.

There are two MF-2 Multifamily districts in the township: Country Crossing and a 150-foot-wide area along Mill Road in the rear of Stonebridge. The MHP Mobile Home Park district has been developed as an elementary school and a mix of housing types including townhouses, and is not used for mobile homes even though this was the purpose of the MHP district. Two additional Office Districts along York Road have been developed for townhouses and single units.

The 1990 plan designated a number of older neighborhoods as Neighborhood Conservation. The zoning districts for this area are RR, R1a and RA. These neighborhoods are within the Suburban Residential area (see Future Land Use Plan), and zoning for those with lot sizes over one acre should be reconsidered.

The area southeast of the village of Jamison and northwest of Rushland Road has been reclassified from Neighborhood Conservation and Rural Area to Suburban Residential Area by the Future Land Use Plan. This area contains the Germinal Colony, Creekland, and Jamison Park neighborhoods. The zoning for this area should be reviewed.

The area along Creek Road between Mearns Road and Heritage Creek was classified as Suburban Residential but has been reclassified as Natural Resource area because several parcels have been preserved for agriculture, are occupied by large lot residential uses or are used for recreation. The zoning for this area should be reviewed.

The multifamily developments of Heritage Creek 1, Country Crossing, and Stover Mill have been reclassified from neighborhood conservation and mixed use to multifamily residential area on the Future Land Use Plan.

The Comprehensive Plan recommends that existing zoning be evaluated to examine any mismatches between existing development and zoning and to revise as necessary to be consistent with planning decisions.

Sustainable Development

Future development in Warwick should be sustainable, which means conserving, preserving, and maintaining natural and historic resources, minimizing traffic impacts, minimizing demands on public services, and ensuring capacity and integrity of water supply and wastewater disposal. Design of structures that reflects the existing character of the township and incorporates sustainability principles is important. Sustainable

development will enhance natural resources, the township's history, and existing quality of life.

New growth in the township should meet the following principles of sustainable growth:

- 1. efficient use of land and water
- 2. efficient use of infrastructure and services
- 3. incorporation of mixed uses
- 4. provision of transportation options
- 5. human scale design
- quality design

Efficient use of land involves the preservation of land and natural resources. Compact development patterns preserve land for natural resources. Using infrastructure and services efficiently calls for minimizing the need for additional water and wastewater facilities, schools, and other township services. Extension of development areas is more effective than establishing growth areas in leap frog fashion.

Mixed-use development is development that incorporates residential, commercial, and institutional uses. Traditional development provides a single use on a single parcel. Mixed-use development lessens impacts by promoting walking, minimizing the need for parking, and enhancing transit use. Mixed-use development also helps to establish a community identity by providing a contrast to the predominant single-use zoning.

Transportation options focusing on alternatives to the automobile take advantage of existing transportation infrastructure and serve the demand for low-impact forms of mobility. Minimizing use of the personal automobile by encouraging development accessible to transit, bicycle, and pedestrian mobility will improve use of these modes, lessen the need for roadway improvement, and improve air quality.

Human-scaled development is more sensitive to existing development, including neighborhoods and historic resources. Buildings with small masses, with windows on all walls, porches, and other architectural elements all provide a scale that is friendly.

Quality design is that which reflects local architecture in mass and height and is built of materials that reflect local construction such as stone and wood. Buildings designed with corporate designs and color schemes detract from local character.

Township Character

The plan makes recommendations to enhance the township character and protect its image and heritage.

Districts

The township's heritage as a farming community with village settlements is important to preserve for future residents. The potential districts include the villages of Jamison and Hartsville. Jamison was settled as a crossroads village that served primarily commercial functions as it has continued to do so today. Hartsville is a historic village discussed further in the discussion about Principle 5, Conserve Warwick Natural and Cultural Resources.

Jamison

Commercial uses dominate the north end of Jamison along York Road, between Almshouse and Fairway Drive, with highway commercial uses, small offices, and a shopping center. The south end of the village between Almshouse and Meetinghouse roads is a mix of commercial, rural residential, single-family, multifamily residential, and institutional land uses. Development opportunities remain as the village continues its transformation into a modern commercial village. The township should ensure that the proper zoning standards will be in place to create a well-designed commercial corridor.

Improvements along York Road in the form of plantings are also envisioned. Street trees and a planted median would lessen the width of the corridor and make it more attractive. The Village Center should be rezoned to village-type zoning as a means to implement the comprehensive plan.

Hartsville

The village of Hartsville contains several commercial uses and approximately one dozen single-family dwellings. Most of the buildings are over 50 years old and several are over 100 years old. There are also several historic buildings north of the village on Old York Road. These structures include the Moland House and houses used by colonial army officers. The village of Hartsville can be preserved and celebrated with design features such as special light posts, paving, and other features. Historic preservation zoning as discussed in the historic resources chapter can be adopted to protect the village and its environs. Design guidelines can also be used to regulate the appearance of individual structures. All of these activities should be done in concert with Warminster Township, which has jurisdiction over the other half of the village.

Gateways

Gateways provide a transition from one area to another and reinforce a local identity. A number of communities in Bucks County, such as New Britain (County Line and Upper State roads) and Northampton (Richboro) townships, have built gateway structures along the road at the entries to their communities. They involve signage, plantings, and in one case, a fountain and seating.

Warwick has placed signs along entrances to the township on major arterials. This effort could be expanded by creating gateways at the entrances to Jamison along Almshouse and York roads and at the corner of York and Meetinghouse roads on the side of the hill. Similar installations can be provided at other entrances based on the existing character of the site and surrounding area. A village of Jamison sign should mark the entrance to the business community.

Corridors

The township has three types of corridors with a distinct identity created by features that frame the corridor such as vegetation, landforms and structures. The three types of corridors that may be enhanced in Warwick Township are commercial corridors such as York Road, historic corridors such as Old York Road, and scenic corridors such as Rushland and Dark Hollow roads. These corridors perform circulation functions, but they also have distinct characters worthy of improving or preserving.

Commercial Corridor

The York Road corridor is designed to move traffic efficiently and provide access to adjacent parcels. The highway separates the two sides of the roadway from each other. The commercial signs, unscreened parking areas, utility poles, and numerous curb cuts can detract from the corridor appearance and efficiency.

New development and improvements in the corridor should relate to the natural setting and to architectural styles present in the community. Coordinated signage would end the pattern of installing signs that compete with one another for attention, could improve aesthetics, and would lessen confusion for motorists.

The road can be a unifying element that can make a visual statement and bring the two sides of the streets together as a boulevard. The appearance of the corridor can be changed by landscaping and access improvements. Trees can be planted to frame the corridor and link the two sides together. A streetscape plan is important to provide for a common design. Access improvements to coordinate driveway access points would enhance safety. A streetscape concept that addresses landscaping, signage, and access management should be implemented to improve the corridor and link these elements together in an attractive cohesive manner.

Historic Corridor

In addition to improving the aesthetic and functional characteristics of the township's roadway corridors, efforts may be undertaken to enhance their historic context. Old York Road was a Lenni Lenape trail and later was used by General Washington's colonial troops. Both Warminster Township and Hatboro Borough have discussed coordinated improvements to the roadway. Warwick may coordinate efforts to enhance the roadway by establishing a heritage corridor with signage, icons such as mileposts, and other improvements. Federal transportation enhancement funding may be available for these projects.

Rural Roads

The Township needs to balance the need for mobility with the companion desire to protect the character of the township, particularly its remaining rural and farming areas. Roads such as Rushland and Dark Hollow pass through rural areas and are not supposed to carry high traffic volumes or accommodate high speeds. Regulating uses, setbacks, and scenic vistas can be used to prevent development inconsistent with the existing uses, natural resources, or agricultural uses. It is recommended that the township designate Rural Preservation Roads, increase required setbacks, and adopt suitable maintenance practices to keep the roadside vegetation and tree canopy, narrow width, and country character.



Dark Hollow Road follows the path of Dark Hollow Creek from Almshouse Road down to the Neshaminy Creek.

Recommendations for Future Land Use

- Provide for village commercial and residential uses in the Village Center, in accordance with the township's village study.
- Plan and create pedestrian, bicycle and vehicular connections between developments
- Support sustainable development practices
- Develop a plan for gateway and corridor improvements along York Road to create a "greenscape."
- Coordinate plans for the corridor along Old York Road in coordination with Warminster Township.
- Designate and protect rural preservation roads.
- Protect historic resources (See principle 5).



Principle 2 IMPROVE MOBILITY

Improving mobility means providing more transportation choices, designing functional transportation facilities that complement community character as well as carrying traffic, and encouraging housing to be situated near work and community facilities. Warwick should continue to create a network of trails and sidewalks that can be used by pedestrians, cyclists, and motorized travel such as golf carts. Warwick can make walking, cycling, or other alternate travel methods feasible and desirable by promoting paths, by encouraging a mix of land uses, and by making streets pedestrian and bicycle friendly.

Transportation

Transportation and land use are interconnected. Roads provide access to homes and businesses. New developments and businesses create the need for new roads. Transportation improvements should be designed as multiple-use facilities that provide for pedestrians, bicycles, small motorized vehicles. public transit and automobile use.

Street System

The township's local roads are classified into the following categories defined by the township's Subdivision and Land Development ordinance. The classification of each roadway in the network is based on the function it serves and is classified as follows:

1. Thoroughfares

- a. Arterial highways are those which are primarily for throughways which carry fast moving and heavy traffic. Such streets or highways may have limited access and the authority for control of access or construction within their rights of way is vested with PennDOT. Arterial highways have average daily trips of 3,001+. York Road is a regional arterial highway. Almshouse and Bristol roads are arterial roads.
- b. Collector streets are those which carry traffic from other collector primary or secondary streets into the system of arterial or major highways. Collector streets have average daily trips of 1,001 to 3,000. There are numerous collectors in the township such as Guinea Lane, Rushland Road, Tulip Road, and Meyer Way.

2. Local Streets

a. Primary streets are those which carry traffic from other collector, primary, or secondary streets into the system of arterial or major highways. Primary streets have average daily trips of 501 to 1000. These roads include Brook Lane, Old York Road, and East and West Rockspray roads.

- b. Secondary streets are those which are used primarily for access to abutting properties and generally serve only internally developed areas. Secondary streets have average daily trips of 201 to 500. These smaller class roads include Bentley Drive, Hart Lane, and Hallowell Street.
- c. Residential streets are those serving areas of low population density where abutting properties are one (1) acre or more in area. Residential streets have average daily trips of 0 to 200. These streets include Heritage Drive, Persimmon Lane, and Windsor Lane.
- d. Cul-de-sac streets are those which are closed at one end and in general shall not be more than 500 feet long terminating in a turnaround with a minimum right of way radius of 50 feet and outer paving radius of 40 feet. Cul-de-sac streets have average daily trips of 0 to 200. Cul-de-sacs include Alexander Court, Magnolia Way, and Sunflower Circle.
- e. Marginal access streets are minor streets of the secondary class which are laid out parallel to and adjacent to arterial streets and highways and which provide access to abutting properties and protection from through traffic. A portion of Hallowell Street serves as a marginal access street off York Road.
- f. Alleys provide access to the rear of residential lots for service and on-lot parking. There are no alleys in Warwick.

PennDOT's Twelve Year Transportation Program

The Pennsylvania Department of Transportation (PennDOT) compiles projects for local transportation improvements in its Twelve Year Transportation Improvement Program for Highways and Bridges. The Twelve Year Plan is made up on three four-year elements. The first four-year element is the capital improvements plan for PennDOT which will be funded. The second and third elements are lists of projects with lower priorities for which no funds are budgeted.

The Transportation Improvement Program (TIP) is a four-year plan for improvements to the road and bridge network in the Philadelphia five county metropolitan area. Only those projects listed in the TIP have committed funding for improvements. To determine which improvements are most urgent and should be placed on the TIP, PennDOT receives input from the Bucks County Planning Commission regarding critical transportation deficiencies for municipalities. Further evaluation of the county's list is made by the Delaware Valley Regional Planning Commission. Priorities are then forwarded to PennDOT to be approved by the State Transportation Commission. These projects become part of the statewide Twelve Year Plan. The transportation improvement lists are updated by PennDOT every two years.

There is one Warwick Township project proposed:

PA 263/York Road Corridor Rehabilitation Overlay

- > Along Old York Road from County Line Road to Durham Road Route 413.
- > Pavement restoration and overlaying.

Future Needs

Working with PennDOT on PA 263/York Road Improvements

The Township will continue to work with PennDOT to achieve York Road improvements that reflect township goals and policies. These policies include:

- Preserving shoulders
- Making PennDOT aware of the need to accommodate pedestrian crossings.
- Achieving intersection designs to accommodate safe turning movements.

Establishing the Transportation/Land Use Connection

Land use patterns and intensity influence the roadway network. Likewise, the roadway network can influence the land uses and development pressures. 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.

This continuing cycle has been the traditional route by which most suburban areas have developed. Establishing the link between land use and transportation can provide numerous benefits for the community:

- Incorporating land use considerations into transportation planning can influence future development patterns and ensure that transportation facilities have adequate capacity to meet demand;
- Land use patterns that are matched to the transportation system can help relieve congestion and traffic on existing roads, which in turn reduces the requirements of constructing 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.

Regional traffic growth along York Road is beyond the immediate control of the township, but good roadway design can help to manage traffic and minimize the divisive nature of a large road.

The Township should consider the transportation implications of decisions changes of zoning and on developments and must coordinate these decisions with county, state, and regional governments.

Access Management

Warwick Township has several arterial roadways designed for large volumes and high-speed traffic with access to abutting properties restricted. Controlling the access to these roadways will allow them to perform their intended function. When access is not controlled, the number of conflict points with roadway traffic increases. This places serious demands on the roadway capacity, as well as making conditions unsafe for vehicles entering or exiting the highway. 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 includes techniques such as shared driveways, providing access to secondary roadways, driveway spacing, planted median strips, protected left turn lanes, and any other appropriate access control measures.

Access management planning should be responsive to the land use planning along a corridor. This plan promotes village-type development along the York Road corridor in Jamison. This type of development is marked by small buildings located close to the roadway with cluster parking lots. In addition the village is characterized by pedestrian and bicycle facilities and a coordinated streetscape with trees and signage. Access management planning should be complementary to this character.

The York Road Corridor Study was completed in 2001 and contains many of the elements of an access management plan. This plan focused on the York Road corridor and provided recommendations for improvements along its entire length. The plan contains specific recommendations for the intersection of York Road and Almshouse Road providing reverse access streets in the rear of frontage parcels. These streets will relieve some of the congestion of this intersection by routing some traffic around the intersection and providing access in the rear of frontage parcels. The network has been started by a roadway which serves the Heritage Building Corporation and Outback Restaurant. This roadway may be continued to Almshouse Road. A planned connection of Meetinghouse Road with York Road opposite Meyer Way is another reverse access opportunity. This system of roads would provide access to York and Almshouse roads in the rear of the frontage parcels and minimize access to the major arterials.

Access management considerations can be incorporated into the township zoning ordinance and subdivision/land development ordinance through regulations of: lot widths, setbacks, requirements for shared driveways, and requirements for coordinated planning of adjacent parcels.

Official Map

Where access is desired but no streets exist the official map provisions of Article IV of the Municipalities Planning Code may be utilized. The official map provisions permit designation of the location of streets, parks, and pedestrian ways and other public facilities on an official map. This tool permits reservation of land for facilities so that structures are not built in the reserved corridor. This reservation of land eliminates many impediments to planning of streets and prevents unnecessary costs such as demolition of structures and price inflation. This technique may be used to designate the location of a reverse access street in Jamison. When a parcel is developed that is designated for a portion of the street on the Official Map, the developer has to construct that portion.

Traffic Calming

The township has incorporated traffic calming measures into the community through the development process so that high speed, cut-through traffic is minimized. By addressing high speeds and cut-through volumes, traffic calming can increase both the real and perceived safety of pedestrians and bicyclists, and improve the quality of life within the neighborhood. Speed humps or traffic roundabouts slow down motorized vehicles. Other traffic calming measures include speed tables, chicanes, planted medians, roundabouts, and curb extensions.

The Township policies for traffic calming program are:

- Achieving safe, slow speeds for all vehicles;
- Improving the safety and the perception of safety for non-motorized users of local roads;
- Increasing roadway safety by reducing crash frequency and severity;
- Increasing the compatibility of all modes of transportation, specifically with pedestrians and bicyclists;
- Reducing cut-through vehicle traffic on local roads; and
- Reducing the need for traffic enforcement on local roads.

These goals are achieved by incorporating traffic calming into new developments.

Public Transit

Warwick is not served by public transit. Residential and employment densities are not high enough for transit service by SEPTA buses or trains.

A rail line owned by the New Hope–Ivyland Railroad functions mainly as a tourist train, with some freight service in Warwick. The rail line ends in New Hope Borough. Preliminary discussions have occurred regarding the viability of restoring commuter train service on the line to the Buckingham Valley station in Buckingham Township.

Trails, Pedestrians, and Bicycling Facilities

Every trip begins and ends with walking. Walking remains the cheapest form of transportation for all people, and the construction of a walkable community provides the most affordable transportation system any community can plan, design, construct and maintain. The township residents ranked trails and bike paths high in the resident questionnaire when asked about the need for recreational facilities.

The Township's subdivision and land development ordinance requires that new developments, both residential and nonresidential, are provided with sidewalks. Sidewalks and walkways can be used to get from one place to another as well as for exercise and recreation.

It is important that sidewalks be provided in the residential zoning districts, in the more rural areas where pedestrian use is anticipated, and in nonresidential areas where walking should be encouraged as an alternative to the use of the automobile. Sidewalks should be provided on both sides of existing and proposed streets. Sidewalk requirements should be enforced and not waived.

Sidewalks can be in the form of traditional concrete walkways or can be designed as macadam multi-use paths that can accommodate walkers, strollers, joggers, and children on bicycles.

Trails and paths are important and popular facilities in many communities. By requiring bike/hike connections as part of the development process, the township adds to its existing path system. The Township has established a trail system, which should be continued.

Recommendations for Transportation

The following recommendations will help Warwick address mobility:

- Incorporate land use considerations into transportation planning and ensure that transportation facilities have adequate capacity to meet demand.
- Continue to implement recommendations of the York Road Corridor Study.
- Continue to include traffic calming in new developments.
- Preserve and create rights-of-way for trails and pedestrian use.
- Require sidewalks or bike/hike paths as part of all new developments.
- Use an official map to provide for reverse access streets in Jamison and for future street planning.
- Work with PennDOT on Rt. 263/York Road improvements



Principle 3 BUILD AND MAINTAIN A LIVABLE COMMUNITY WITH GOOD SERVICES AND FACILITIES

Adequate community services and facilities such as police protection and schools and amenities such as parks are important community assets that should be provided.

Community services and facilities are often what attract new residents to a community like Warwick Township. 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.

Community Facilities and Services Provided by the 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
Township administration
Public works – maintenance of streets and public facilities
Stormwater management
Parks and recreation

Other important community services and facilities needed to make Warwick a good community to live in are: emergency services (ambulance and fire), schools, solid waste disposal, health care facilities, and utilities. Although, the township may have a role by providing financial support, governmental cooperation, or licenses, these services are provided by others. The township has no direct responsibility for some community facilities and services, but land use planning and zoning will have an impact on the location and extent of many services.

Police Protection

The township police department has offices in the rear of the township administration building at 1733 Township Green. The township offers Quick Response Service which involves first responder training for officers. The department cooperates with other police departments in the Central Bucks Special Response Team which has special responsibilities and training.

Forces affecting the department are population increases, new demands from more traffic and more commercial development, budget, the judicial process, and loss of federal funding.

The number of calls increases gradually every year and places increasing demands upon the department. A new emphasis on Homeland Security and state requirements have placed greater attention on public safety, requiring additional training and funding for training.

Special Response Team/North Team (SRT)

The SRT operates in cooperation with 19 police departments and the Bucks County Department of Corrections. The SRT provides specially trained tactical officers, a negotiation team as well as support and command staff for high-risk police operations. Funding for SRT is a shared expense among the participating municipalities.

Crime Scene Unit

The same municipalities that participate in SRT are forming this unit to respond to major crime scenes. The officers assigned to this unit have special skills and training in processing crime scenes and collection of evidence. This unit will be funded through shared expense among participating municipalities.

Bucks County Major Incident Response Team (MIRT)

The MIRT team is comprised of 110 police officers from police departments throughout Bucks County. The purpose of MIRT is to provide a large-scale police response to terrorist attacks, civil disobedience and natural or other types of disasters. Officers assigned to MIRT receive special training and operate under a unified command staff when activated. Funding for MIRT is provided mainly through Homeland Security.

Drug Enforcement Unit (DEU)

The DEU is comprised of officers with special training and experience in narcotics enforcement. Officers assigned to DEU are sworn as Special Bucks County Detectives to allow them to cross jurisdictional boundaries. Warwick DEU works in cooperation with the Bucks County District Attorney's Office and other state, federal, and local DEUs. Funding for DEU is through the District Attorney's Narcotics Forfeiture Fund.

Township Administration

The township administration supervises the operations of township government. The administration building is located at 1733 Township Green and was dedicated in 1997. Township administration has adequate space and staff, although the township's population growth may create demands for additional staff, which in turn may create demand for more space in the future. The administration needs are reviewed yearly to assure that residents receive a high level of service. The administration building is sufficient for current operation. Future needs will be assessed as required.

Public Works

The Public Works Department, located at Guinea Lane, employs nine people including a director and roadmaster, and is responsible for maintenance of roads, stormwater management facilities, street trees, township buildings, and parks. This number has been

increasing due to the number of streets within residential subdivisions dedicated to the township. The department also spends time responding to resident complaints associated with roads.

Parks and Recreation Department

The Park and Recreation department develops year-round recreation programs for all ages, preserves open space, maintains parks, and plans for parks and recreation. The department administers programs all year including a summer camp and trips, as well as special events through the year. Trips are offered jointly with Doylestown Township to maximize use of transportation. The department also oversees five township parks with a sixth park to be added in the near future, which are maintained by the parks maintenance staff with assistance from the Public Works department when needed.

Programs are offered at many facilities used for recreation: the two community rooms in the township building, the pavilion and fields at Community Park, the tennis courts at Jamison Hunt Park, and facilities at Guinea Lane park. The demands for the services and facilities have increased due to population increases and a desire for recreation close to home. Creative arrangements with the school district have made the Bridge Valley Elementary School indoor space available for recreation activities.

Stormwater Management

Warwick has adopted a stormwater management ordinance in accordance with the Little Neshaminy Stormwater Management Plan 1996 and the Neshaminy Creek Stormwater Management Plan 1992. New development must manage stormwater in accordance with these plans and township ordinances. Stormwater from the one-year storm must be detained for 24 hours to protect water quality, as well as controlling quantities of discharge, in the Neshaminy Creek and the Little Neshaminy Creeks. Stormwater runoff beyond the one-year storm may be released at different rates based on the location of a site within the watershed. Release rates vary for sites 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. Stormwater in older areas is channeled into storm sewers and directly into streams. Controlling runoff from older areas is a problem facing many communities.

New Pennsylvania requirements will be adopted by Warwick, with much great emphasis placed on infiltration of stormwater into the ground, protection of water quality, and reduction of stormwater volumes.

The design of stormwater facilities is changing, as the older basins with concrete channels and mowed grass have proved to be costly and ineffective. Alternative designs and maintenance regimens will be part of the stormwater planning and ordinance updates that are mandated by the state. Some communities including Warwick have undertaken retrofits of older basins to naturalize them and make older basins more functional.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) is a federal mandate created as an outgrowth of the Federal Clean Water Act (1972), which establishes local regulations to reduce pollutants in waterways. The purpose of the program is to reduce pollution, promote and require better stormwater management, and educate the public about water pollution.

To comply with federal laws, the township will require emphasis on infiltration, maintenance and long-term integrity of stormwater facilities, and township oversight of the stormwater system.

Services and Facilities Provided by Other Organizations

Fire Protection

The Warwick Township Fire Company provides primary fire protection service for the township and parts of Buckingham Township. The Hartsville Fire Company in adjacent Warminster Township assists with coverage to the southern corner of Warwick. The staff is all volunteer. The township levies a 5-mil tax to help support fire protection efforts.

The Warwick Company has a main station on York Road at its intersection with Mill Road. The company has 50 active firefighters which is a level adequate for current demand. Attrition of existing staff, fewer new volunteers willing to undergo extensive training, and the inability to offer time away from family and work leave squads with fewer qualified people. Many residents work outside the township and cannot provide assistance during the workday.

New equipment and a steady supply of volunteers may be needed to meet fire protection demands. The fire company faces staffing issues due to declining numbers of volunteers. The township has supported firefighting by allowing and training public works employees to answer calls during the day.

Future firefighting needs will have to be addressed in the region, as declining volunteers and competition for funding present problems for communities such as Warwick and its neighbors.

Ambulance Service

The township has no emergency medical services located within its borders, but it is served by ambulances in adjacent communities. The Warminster Ambulance Corps serves most of Warwick, with the Warrington Community Ambulance Corps and the Central Bucks Ambulance Corps in Doylestown serving the remaining area. The Warminster Ambulance Corps maintained a station at Yorktown Manor on York Road until September 2004 when they left because of insufficient call volume.

The township population has grown significantly and its age profile has changed due to the growth of age-restricted communities. Like all ambulance squads, the Warminster and Warrington corps are facing issues of cost recovery.

An emergency management group comprised of emergency service providers serving the township exists in Warwick. This group focuses on creating and implementing an emergency management plan. The emergency management group may be effective in planning for emergency service facilities.

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, had a 2004 enrollment of 19,586. Schools in Warwick are Warwick, Jamison, and Bridge Valley elementary schools. The Middle Bucks Institute of Technology is located on York Road.

Central Bucks school enrollments have been increasing in recent years due to housing growth, which has led to the construction of new schools and temporary enlargement of existing schools. The newest elementary school, Bridge Valley, has been designed for conversion to a middle school if the need arises.

School capacity figures for public schools are shown below.

A fee agreement exists between the school district and township so athletic facilities may be used for township purposes. The township and Bridge Valley Elementary School have an agreement that allows the township to use the recreational facilities of the school.

Middle Bucks Institute of Technology (MBIT)

The MBIT serves the Central Bucks, Centennial, Council Rock, and New Hope Solebury school districts by offering training in career and technical fields, health care, building trades, and motor vehicle repair. Advance Placement programs are also offered in health care and engineering. Adult education classes are offered in the evenings. The MBIT is studying the feasibility of building expansions and renovation of the existing buildings and facilities.

There are no private elementary or secondary schools in Warwick. Private schools, both religious and secular are located in nearby communities.

Public School Enrollments and Capacity

School	Construction date	Current Enrollments *	Enrollment Capacity
Elementary Grades K-6			
Warwick	1919, '58a, '62a, '90a	515	500
Jamison	1997	853	850
Bridge Valley	2004	732	1,150
Middle Bucks Inst. of Technology	1969	888	1,250

^{*} As of October 2004

The Central Bucks School District and MBIT have facilities that may be used for resident activities in coordination with the township. Off-hours use is an effective use of school facilities and taxpayer dollars, and continued coordination between the township

a = additions

and school district is important to ensure effective decisions on locations and meeting future facility needs.

Water and Wastewater

Much of Warwick is served by public water and wastewater disposal facilities. The Warwick Township Water and Sewer Authority provide the township with drinking water and wastewater disposal. The authority's office is located on the 3rd floor at 1733 Township Green above the administration offices. The day-to-day operations are overseen by the executive director who reports to a Board of Directors. Staff is maintained to meet operational demands. The authority is incorporated by the Commonwealth of Pennsylvania under the Municipal Authorities Act, and members of the Board of Directors are appointed to staggered five-year terms by the Warwick Township Board of Supervisors.

Water Treatment

The authority used groundwater to meet the needs for drinking water for its public water system until 1998. Use of groundwater was discontinued due to costs associated with treatment and concerns about withdrawals exceeding replenishment. The authority has since established a long-term contract with Aqua Pennsylvania, Inc. a publicly-traded water utility, to provide potable water to the Authority for its customers. Aqua Pa uses water from the Neshaminy Creek, which it sends to its treatment plant in Middletown Township, Bucks County.

Land use planning should take into account protection of groundwater resources for private and commercial wells. Potential pollutants should be kept away from wellheads, and standards for high-risk uses such as gasoline stations should be incorporated into township ordinances. Devices to mitigate spill risk may also be required.

Wastewater Disposal and Sewage Facilities Planning

The authority operates two wastewater treatment plants. Sewage flows from the northern part of the township are treated at a plant on Deer Run Drive adjacent to the Bucks County Country Club known as the Fish Creek plant, which first received sewage flows in 1998. The upgraded facility provides tertiary treatment with a capacity of 0.85 million gallons per day (MGD) and is undergoing improvements.

The sewage flows from the southern corner of the township are treated at the Country Crossing Treatment plant on Mearns Road. The plant opened in 1998 and provides tertiary treatment with a capacity of 0.32 million gallons per day.

The connection between land use planning and wastewater or sewage facilities planning in the Commonwealth of Pennsylvania is weak due to the structure of state laws. Townships are required to have a Sewage Facilities Plan, in accordance with Act 537. Land use planning regulations fall under the authority of a different state law, Act 247. Municipalities should make sound land use decisions about density and location of development, based on a broad list of planning factors, such as natural features, neighborhood character, transportation considerations, and overall development intensity, and then support those decisions with a consistent sewage facilities plan.

The township Act 537 Sewage Facilities Plan should be reviewed for consistency with current township land use policy and revised as needed.

Solid Waste Management

Most of the property owners and business owners in the township contract directly with private haulers to collect, transport and dispose of their solid waste. The three public elementary schools in Warwick and the Middle Bucks Institute of Technology recycle. Depending upon the hauler, municipal waste collected in Warwick 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.

Warwick Township has an operating mulching facility within its borders that is, at least in part, affiliated with the township. The facility, which is operated on the K & D Growers farm, accepts yardwaste from Warwick Township residents and landscapers in the region to make into mulch.

The Commonwealth of Pennsylvania set a goal in 1997 to recycle 35 percent of the municipal waste stream by 2003. Limited reporting on materials recycled makes it difficult to determine Warwick's recycling rate.

The township will have to address the statewide mandate for yard waste collection in the next few years.

Parks, Recreation, and Open Space Planning

The provision of community recreational facilities is recognized as an important function of local government. Most people spend a significant portion of their recreation time close to where they live or work. Open space, including parkland, is shown on the Warwick Township Open Space Map.

Township Parks

The township has many parks to provide for active or passive recreation. The township's parks, shown on the next page, have a variety of sizes, functions, and service areas.

Land devoted to parks, recreation, and open space now constitutes about 20 percent of total land area. This has increased substantially since 1990 when only 9 percent of land was available for parks and open space.

The Township has also facilitated or constructed trails and walkways, an important part of an overall recreation program designed to serve all age groups and activity interests.

Bucks County Parks - Dark Hollow

Bucks County owns land along the Neshaminy Creek north of Dark Hollow Road. The site is a county park land and contains about 400 acres in Warwick, with access for fishing and passive recreation. The park is designated as part of a "link park" which would stretch between Peace Valley Park and Tyler State Park.

Park and Recreation Planning

The Warwick Township Comprehensive Plan for Parks and Recreation 1991–2000 identifies park and recreation needs for the township. This plan was adopted as a component of the 1990 Comprehensive Plan and is being revised and updated.

Township Parks in Warwick

Park	Acreage	Park Type	
Township			
Warwick Park at Guinea Lane	37	Community	
Community Park	27	Community	
Moland House Park	71	Special use	
Hampton Chase	12	Neighborhood	
Hidden Pond	10	Neighborhood	
Jamison Hunt	12	Neighborhood	
Total	169 acres		
School ¹			
Jamison Elementary	13.3	School park	
Warwick Elementary	8.3	School park	
Bridge Valley Elementary	12.5	School park	
Total	34.1	·	
MBIT ²	114.65	School park	

¹ The land available for recreation at school sites is counted as only half of the total acreage because generally half of the school property is used for buildings and parking lots, etc.

Land Use Regulations for Parks, Recreation, and Open Space

The township subdivision and land development ordinance requires that land for open space and recreation purposes be provided as part of all residential subdivisions and land development and all planned residential development. Residential subdivisions and land developments must preserve 20 percent of the site area as common open space. A feein-lieu of land may be accepted if the size, shape, or contour of land is unsuitable for common open space.

The zoning ordinance also requires common open space, including land suitable for active recreation of 4 acres per 100 dwelling units. A fee-in-lieu of land may be accepted.

Since the Park and Recreation Plan was adopted in 1991, the township has accepted donations of land from developers and acquired new parks. The updated Recreation, Park and Open Space Plan provides an analysis of the needs for parks and recreation to serve the needs of residents of all ages and interests.

Open Space Planning

The Warwick Township Open Space Plan 1999 was adopted to provide the foundation for a township open space program and to secure funding from the Bucks County Open Space program. The township's efforts in open space planning have focused on preservation of farmland and natural areas, primarily along the Rushland Road corridor where large farms remain and where the land slopes dramatically toward the Forks of

² The land of the Middle Bucks Institute of Technology is available for public use only by special arrangement and is not counted in the total acreage.

the Neshaminy. The combination of farmland and wooded hillsides create a landscape that has been the focal point for both local and regional open space preservation efforts.

The 52-acre Ritter Farm on Rushland Road was preserved through the Bucks County Agricultural Land Preservation Program, funded by county and state grants. Warwick Township used its Bucks County Open Space grant money to preserve, through conservation easement, three other properties totaling 71 acres. The preservation of these farms conserves the land for food production and scenic views and helps retain Warwick's agricultural heritage.

The Township's own open space funding has been used to acquire easements on several large properties in the Forks of the Neshaminy area, through the use of conservation easements. The Heritage Conservancy has secured easements on other lands, contributing to significant preservation of the Forks area.

Future Park, Recreation and Open Space Planning

Preservation of open space has proven to be an effective tool in managing growth, protecting valuable resources, preserving land for farming, and reducing municipal and school costs. The cost of preservation is less than the cost of providing services and facilities for new development. The township has preserved about 490 acres of open space using township and county funding, taking advantage of its full allocation of county open space funds as well as the township open space bond. Township voters supported the November, 2006 referendum authorizing the expenditure of \$7 million by the Township for more open space preservation.

The 2007 Recreation, Park, and Open Space Plan sets goals and makes specific recommendations for action steps to meet future needs.

Recommendations for Park, Recreation and Open Space Planning

- Continue participation in conservation programs and partnerships, taking advantage of available funding and township dollars, to preserve key portions of important open space.
- Ensure that Township ordinances protect natural resource corridors and environmentally sensitive lands.
- Expand the township-wide trails system.
 - Require construction of paths as part of the development process.
 - Establish greenways along stream corridors such as the Neshaminy and Little Neshaminy creeks and establish trails to connect neighborhoods.



Principle 4 Ensure the Economic Vitality of the Community

To maintain and enhance Warwick's economic vitality, the township should have businesses and industries that provide jobs and tax revenue to support public services and the quality of community life. Good land use planning can direct nonresidential development to areas where it makes sense.

Local Businesses

The township land use policies affect businesses and their ability to thrive in local markets. By selecting suitable areas for retail, service, and industrial development, the township's plan can help build the economic capacity of a local area and sustain its economic future and the quality of life.

The township can shape development in nonresidential areas to meet the needs of township residents and to assist with the tax base by setting proper zoning regulations.

Economic and business development should be limited to areas so designated on the future land use plan. Types of businesses should be those that serve Warwick communities and the immediate surrounding area, as opposed to larger retail stores with a regional draw. The decline of retail developments a few miles from Warwick is a caution against overzoning for retail and service use. Other community goals of appropriate scale and appearance should become part of the economic development program, so that establishments fit into the community.

Recommendations for Local Business Development

- Limit areas designated for nonresidential, business uses.
- Encourage community-scale development, not regional development.
- Incorporate scale and aesthetic standards into township regulations.

Township Finance and Management

Township Finances and Budgeting

Township finances are linked to planning and development in several ways. Population growth creates demands for additional services and facilities, and township finances must keep pace to meet needs. The comprehensive plan

recommends expenditures for certain improvements. As the pace of development changes, income from revenue sources changes. Communities at the peak of development gain revenue from transfer taxes and permit fees, sources that dwindle as development slows.

Township Revenues

Warwick Township's general fund is the principal operating fund of the township. General fund revenues come from the earned income, real estate tax, and real estate transfer taxes. The levying of the earned income tax has shifted the tax burden away from real property tax.

The township tax burden is a small percentage of the overall tax burden for township residents. More than three-fourths of taxes go to the Central Bucks School District, with a much smaller percentage going to the County of Bucks. Warwick Township receives the smallest share of total taxes paid.

Township Expenditures

Township general fund expenditures fall into seven general categories: general administration, building maintenance, public safety, zoning and subdivision administration, public works, miscellaneous expenditures, and capitol projects.

The largest expenses in suburban communities such as Warwick are police protection and road maintenance. Factors causing increases in this area include costs of personnel, benefits, insurance, energy, and the need to expand services as population and traffic increase.

Future Trends in Municipal Revenues and Expenses

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

Revenues

The township's revenues will grow in the short term due to new development fees and enhanced property assessments. These developments need services, and real estate and wage taxes may not increase enough to cover the new costs. Specific revenues include:

Earned Income Tax—Revenues from the earned income tax will continue to increase as residential growth increases.

Real Property Tax—Revenues from the real property tax will rise as the total assessed value of property rises through new construction, rehabilitation, and renovation of older structures. New activity will be assessed at current rates.

Real Estate Transfer Tax—Revenue from transfer taxes will grow according to the pace of development in the township. The greater the number of transfers, the more revenue from this tax can be expected. Because the tax also applies to any transfer, there will be a certain amount of revenue generated by people moving out and moving in.

Licenses and Permits—Permits used to pay for the inspection of construction will rise and fall with the level of construction and development. Other license fees,

such as the cable television franchise license, will rise as new development comes to the township because the township charges a fee based on a percentage of the units served.

Fines and Fees—Fees used to pay for the processing of land development applications will rise and fall with the level of development but are designed to cover the costs of processing, not to generate revenue.

Expenditures

The township's expenditures will change over time as more residents and development create greater demand for public services. Aging facilities will require more frequent repair or outright replacement. Specific expenditures include:

Public Safety—Expenses due to public safety will increase as the township's nonresidential development continues to grow, as there are more opportunities for interpersonal conflicts and traffic violations.

Public Works—Public works expenses will increase with the township's efforts to construct additional infrastructure to serve new development. Roads will continue to wear and improvements will be needed to reduce intersection conflicts and manage congestion.

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

Licenses and Inspections—License and inspection costs will rise according to the pace of growth and development in the township and the aging of dwellings and other structures.

The township can benefit from the experiences of more developed townships by (1) considering the impact of development and changes in zoning on the township finances and (2) not relying on the temporary income of rapid development to fund expenses that are on-going and which will continue when development slows.



Principle 5 CONSERVE WARWICK'S NATURAL AND CULTURAL RESOURCES

Successful communities identify the areas that are most important to protect—such as farmland, forests, streams, scenic views or historic structures—and guide growth into areas better suited for development. Traditional landscapes and historic structures help define the township. Conservation of natural and cultural resources contributes to the township's character and community health.

Resource Protection Plan

Development without concern for the natural limitations can be costly to residents and to the community and can result in losing 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.

Critical Natural Features

Protecting important natural features means using the right land for development and using the land right. It means identifying areas where development makes sense, and setting rules for protection as part of development.

Geology

Why is geology important to township planning? Geology affects future planning and land use decisions through impacts on water supply and topography and soil characteristics. Groundwater supply depends on geology, surface characteristics, water use, and seasonal precipitation.

The geology of the township has been documented in *Geology and Mineral Resources of Bucks County Pennsylvania* (1959) and is described as Lockatong and Stockton lithofacies and a small dike, or intrusion, of diabase. These formations have helped give shape to the topography of Warwick. The capacity of underground aquifers to transmit and store water is directly related to the specific physical and chemical properties of the underlying geology formation. The descriptions and water bearing characteristics of each formation in Warwick are described on the next page.

Stockton—This formation is made of red, gray, and brown sandstone interbedded with shale, and is found along the western and southern portions of the township. It is nonporous and moderately resistant to erosion and weathering. It is highly fractured and considered a reliable source of groundwater.

Lockatong—This formation is composed of argillite, a very hard gray stone, and underlies much of the township north of the Little Neshaminy Creek and provides a rolling plateau. A relatively deep and narrow valley has been eroded into this stone by the Neshaminy Creek which forms the township's eastern boundary. Storage areas within the fractures are generally small and often obstructed by the formation itself that weathers to a dense clay-like soil that fills joints and prevents water flow. The Lockatong formation has a low capacity to transmit and store water and is not a reliable source of groundwater.

Diabase—This formation consists of a dense erosion-resistant crystalline which is the primary rock type underlying the township's western edge. A ridge of diabase lies beneath a portion of the Mountainview subdivision. This diabase dike is composed of hardened magma that protruded into a crack in the softer Stockton formation. Most diabase is too dense and fractures too narrow to provide well water on a reliable scale.

Topography

The township topography, formed by the erosion of underlying rock, is rolling with slopes generally less than 15 percent. Steeper slopes can be found along creeks where the water has eroded the surface. The highest elevation in Warwick is 380 feet above sea level in the western corner near Almshouse Road. The lowest point, at approximately 120 feet above sea level, is found along the Little Neshaminy Creek near Creek Road. Steep slopes greater than 20 percent are depicted on Figure 10, Natural and Historic Resources.

Because of severe on- and off-site impacts, development on steep slopes must be regulated through land use planning and performance standards to reduce erosion and flooding.

Watersheds

The Neshaminy and Little Neshaminy creeks have eroded the land surface over time and divided the lands in Warwick into two primary watersheds that contribute to the township's topography. The northern half of the township is drained by the Neshaminy Creek which flows southeasterly and also drains much of Bucks County to the Delaware River. Fish and Dark Hollow creeks and several other unnamed tributaries flow into the Neshaminy Creek. The Little Neshaminy Creek flows to the east and drains the southernmost half of the township and enters the main branch of the Neshaminy Creek near the township's eastern corner.

Soils

Soils characteristics can hinder or facilitate development. Soils that percolate quickly and absorb stormwater can support structures and are appropriate sites for development. Other soils drain slowly or due to their shallow depth may not be suitable for buildings with basements and cannot support the weight of structures. Consequences of

construction on poor soils include wet basements and subsidence. Understanding soils is important to directing Warwick's future growth.

Warwick's soils are primarily silt loam soils created by the erosion of the underlying rock formations. The soils in Warwick have moderate to severe limitations for development. Some of the soils are suitable for on-site sewage disposal, found in the southeast corner of the township. These soils are also susceptible to seasonal flooding or high water. The lowland soils along the stream valleys are floodprone with high water tables and are generally unbuildable.

In the lowland areas near the Little Neshaminy and Neshaminy creeks, Warwick has good soils for farming. Brownsburg, Lansdale, and Lawrenceville soils are some of the soils considered prime agricultural Class I soils. Some of the upland soils found in Warwick, such as Croton, Penn Klinesville, and Readington are Class II and III and of state-wide importance for farming. Municipalities can preserve good agricultural soils through zoning.

Soils are important to the planning process because they impact the level of development that may occur on a given site. Soil limitations need to be considered when construction is proposed in areas with wet soils, shallow water tables, or shallow depth to bedrock.

Woodlands

Numerous stands of mature trees remain in the township. Many trees were cleared by early settlers to create fields for agriculture. Those that remain are found primarily along the stream corridors and on the steep slopes. Some of the oldest trees that remain are located on lands that have remained undeveloped and on the grounds of historic properties. See Figure 10, Natural and Historic Resources.

Woodlands play an important role in maintaining natural systems. Benefits to the environment include water and air purification, regional and local climate control, erosion control, open space, and habitat for wildlife. Preservation of forests is also important to community aesthetics. In the past, most of the township was farmed, and the remaining woodlands are primarily along the streams and other areas that were left undisturbed.

Wetlands

Wetlands typically occur as bogs, marshes, and swamps. They are often saturated lands or areas that display a seasonal high water table. Some of the wetlands in Warwick Township are found along streams or creeks. Even in built-out and urbanized areas, wetlands are important because they help to improve water quality by filtering toxins, and they assist with groundwater recharge. They serve as natural retention basins for stormwater. After storm events, the slow release of stormwater from wetlands helps to reduce the amount of flooding of surrounding areas. They also serve as wildlife habitat.

Wetlands are identified by one or more of the three following indicators: soil type, wetland vegetation, and hydrology, all of which are evidenced by soil saturation and drainage characteristics. Wet and hydric soils in the township include Bowmansville–Knauers, Chalfont, and Doylestown soils. Wetlands are found throughout the township in concert with streams and ponds. Wetland areas (larger than 2 acres in size) are found

in the township along the Little Neshaminy and Neshaminy and Fish creeks. A tributary to the Little Neshaminy Creek which parallels Mearns Road also contains significant wetlands. Some smaller wetlands are farm ponds that are presently open water or are being filled in by vegetation. The wetlands over two acres in the township are shown in Figure 9, Hydrogeologic Resources.

Wetlands are regulated by the U.S. Army Corps of Engineers and the Pennsylvania Department of Environmental Protection (PaDEP) under the Federal Clean Water Act and various state laws. The Corps requires a permit to fill wetlands greater than one acre in size. State and/or federal agencies which permit wetlands disturbance may require that the loss of wetlands be mitigated by the creation of wetland areas elsewhere. Disturbance of areas near wetlands can affect the hydrology and diminish their value.

Floodplains

Floodplains are areas adjoining streams that accommodate floodwater. Floodplains exist along the stream banks of the Neshaminy, Little Neshaminy creeks and many of their tributaries in Warwick. The floodplain, as mapped by the Federal Emergency Management Agency (FEMA), is defined by the 100-year or base flood which has a one percent chance of being equaled or exceeded in a given year. The floodplains are shown in Figure 9, Hydrogeologic Resources.

Floodplain soils or alluvial soils indicate where flooding has occurred in the past. These soils are composed of a mix of other soil types that have eroded from the land and deposited along stream beds by stormwater.

Warwick participates in the FEMA National Flood Insurance Program which allows township residents who have homes in the floodplain to obtain federally backed flood insurance. The township has agreed to designate the floodplain and restrict development within its boundaries.

Water Quantity and Quality

The water quality of streams is affected by runoff from a developing community. Nonpoint source pollutants from stormwater runoff include gasoline, motor oil, and road salt on paved surfaces. Runoff from residential yard surfaces contains herbicides, pesticides, and fertilizers.

Construction sites contribute to stream pollution by erosion and sedimentation carried in runoff washing into storm drains. The runoff transports suspended solids and toxins that may harm organic and aquatic life in streams as well as polluting groundwater. Sediments can accumulate and clog storm drains, stream channels, and flood control dams. Controlling water quality of stormwater runoff and including remediation to address stream maintenance and stormwater management systems are mandates of the state and federal government that the township must address.

Groundwater, like surface water in streams, is an important natural resource. Although Warwick uses surface water as a potable source for its public water system, it is important to protect groundwater as the backup source for this system as well as the primary source for households that use individual wells. Groundwater also provides for base stream flow during dry periods.

Groundwater contamination is costly to remediate and it is difficult to restore water quality.

Contamination of groundwater has occurred in several areas of the township due to failing on-lot sewage systems, leaking underground storage tanks, and industrial pollution. Several older neighborhoods such as the Germinal Colony and Creeklyn on Valley Road had numerous failing on-lot systems. Contamination from leaks or pollution has occurred at service stations at York and Almshouse roads. Provision of public sewer has solved some groundwater problems associated with sewage systems. Volatile organic compounds from underground tanks and industrial sites, which are being remediated at the site of contamination and by air strippers at wellheads, are being monitored by the PaDEP.

Policies, Planning, and Practices to Conserve and Protect Natural Resources

The best way to preserve and protect areas of critical natural features is to limit the encroachment in these areas. Existing township ordinances have performed well in conserving resources and minimizing the impacts to critical natural features from development.

The zoning ordinance restricts the disturbance of critical natural features from intrusion by development as follows:

	Minimum	Maximum
Resource	Protection Standard	Intrusion Permitted
Flood Plains	100%	0%
Flood Plains Soil	100%	0%
Steep Slopes		
8 to 15%	60%	40%
15 to 25%	70%	30%
25% +	85%	15%
Woodlands	80%	20%
Env. sensitive woodlands	90%	10%
Streams, Watercourses,		
Wetlands, Lakes & Ponds	100%*	0%
Wetland margin	80%	20%
Lake or Pond Shorelines	80%	20%

^{*}Except that roads and utilities may cross these features where design approval is obtained from the Township and PaDEP and where no other reasonable access is available.

The Stream Protection Area standards in the zoning ordinance prohibit alteration of the area within 25 feet of the centerline of an intermittent stream and 80 feet of a perennial stream. Where natural vegetation does not exist within the stream protection area, an applicant shall plant native species or allow reestablishment of native species through natural succession.

The zoning ordinance also contains a Riparian Corridor Conservation District which protects all streams and tributaries including perennial and intermittent streams leading to those streams. The corridor preserves vegetation along streams so that it may act to filter stormwater, shade streams and cool waters and fortify stream banks against erosion.

The riparian corridor extends 75 feet from the edge of an identified waterway. The corridor's two zones each have different standards based on proximity to the stream. Zone One, 25 feet from the waterway, permits nature preserve and passive recreation. Zone Two, which extends 50 feet from zone one, permits nature preserves and passive recreation, existing agricultural uses, and required yards. Among the uses prohibited are clear cutting of trees, storage of hazardous material, and paved surfaces such as roads and parking lots

The zoning ordinance requires that trees be replaced when removal exceeds 20 percent. The township subdivision and land development ordinance also has tree protection standards which protect trees during construction.

The township subdivision and land development ordinance and stand-alone ordinances address soil erosion and sedimentation. Erosion and sedimentation control plans are required to be submitted for land developments, and the township coordinates review of the plans with the Bucks County Conservation District, which regulates erosion and sedimentation in accordance with Title 25 of the PaDEP rules and regulations. The subdivision and land development ordinance promotes general erosion and sedimentation control principles such as protecting and enhancing natural vegetation, stabilizing disturbed soils, trapping sediment until stabilization of soils, and requiring grading plans.

Bucks County Natural Areas Inventory

The Bucks County Natural Areas Inventory indicates that the township has two unique resources: the Forks of the Neshaminy and Dark Hollow. These sites are of countywide and statewide significance due to their overall quality and diversity and importance of their resources. Dark Hollow extends just south of Mill Road to Dark Hollow Road. The park features steep forested slopes, rock outcrops, and floodplain forests, and wetlands. Many large trees and several locally rare plant species are found there.

The Forks of the Neshaminy is located along the Neshaminy Creek, between Mill Road and the intersection with the Little Neshaminy and along the Little Neshaminy between Grenoble Road and the intersection with the Neshaminy Creek. The site contains forested slopes and floodplains and contains unusually undisturbed creek valleys.

This plan recommends that these sites be protected and managed so that the quality and diversity of resources are preserved for future generations and for the functioning of the natural systems.

Future Protection/Conservation Needs

In addition to maintaining the protection of natural features through the current zoning and subdivision and land development ordinances, stand-alone ordinances, and participation in and implementation of Bucks County Natural Areas Inventory Program and the river conservation plans, the township should consider some new initiatives.

Low-Impact Development

The conversion of prime agricultural soils, erosion, clearing of woodlands, filling of wetlands, and improper land uses in sensitive floodplain areas are some of the principal

negative impacts of development. The challenge for municipalities becomes how to plan and manage growth while preserving natural resources. One opportunity to help achieve this goal is the implementation of low-impact development (LID), an overarching approach to development that uses various land planning, design practices, and technologies to conserve and protect environmental resources.

Standard suburban-styled residential layouts are often based on maximum unit yield without regard to a site's natural features and environmental sensitivities. LID 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 of the LID theory is for municipal officials and developers to work together during the initial planning process to identify resource protection opportunities that are inherently site-specific for each project. The LID approach should be considered the first step in resource protection, strengthening complementary ordinance regulations. Developers should be encouraged to use LID techniques by incorporating them into the subdivision and land development and zoning ordinances.

Site Analysis and Resource Conservation Plan

Site Analysis and Resource Conservation Plan requirements combine elements from "standard" subdivision ordinance requirements with conservation design principles, both for natural resources and cultural features (i.e., historic resources). Such requirements would not affect the development potential of a site, but would encourage better site planning essential to ensuring the preservation of natural resources while addressing potential biodiversity and habitat conservation.

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 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, versus just indicating what impacts would result after the development is built.

An "existing resources" inventory would be required to provide 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, areas identified by the Pennsylvania Natural Diversity Inventory, solar access and orientation, and other features on and off the site. Narrative would be provided to indicate ways the applicant would respect the existing valuable resources described in the site analysis.

The resource conservation plan would require that the layout of the lots or development occur so that the areas identified as being important in 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 preapplication meetings and site visits with the township officials before full-scale engineering work is started.

Waterway Planning

Warwick shares waterways with Warminster, Doylestown, Buckingham, and Northampton townships. The Neshaminy and Little Neshaminy creeks provide a greenway for recreation and wildlife and drainage for stormwater. The township may coordinate activities for recreation and natural resource protection to enhance the function of the creeks in ways that will be greater than the sum of individual municipal actions. Linking this waterway as a continuous greenway will allow for recreation, wildlife, and natural resource enhancement. Coordinated activities such as riparian corridor plantings will benefit the individual site and the waterway throughout its length.

Recommendations Natural Features Protection

- Maintain natural resource protection standards in zoning and subdivision and land development ordinances.
- Amend township ordinances to incorporate low-impact development techniques and to require a Site Analysis and Resource Conservation Plan.
- Coordinate planning for the Little Neshaminy Corridor with Warminster and Northampton townships and the Neshaminy Creek with Doylestown and Buckingham townships.

Historic Resources in the Township

Historic buildings contribute to the township character and vitality, and neglect or loss of historic buildings and structures is a threat to the identity of the township. The Pennsylvania Municipalities Planning Code requires that zoning ordinances protect historic resources.

Individual Resources

A 1992 survey conducted by the Bucks County Conservancy created a list of properties with historic structures greater than 50 years old. The survey also evaluated the resources to determine their historic or architectural importance and potential eligibility for state or national historic registers. The properties are located throughout the township with several clustered in or near Hartsville and Jamison.

Two of the individual historic resources in Warwick are on the National Register of Historic Places due to their significance in the history of the nation: The Moland House, which served as the headquarters of George Washington and the Colonial Army in 1777, and the Eight Arch Bridge. A number of resources are also located along the major arterials. Other resources such as farmhouses are found among residential subdivisions which were once farms.

Villages

The villages in Warwick are small and originally contained no more than a dozen buildings. Hartsville and Jamison retain identity and character due to the massing of the buildings and location on major arterials.

Hartsville lies in both Warminster and Warwick townships and is generally intact due to the construction of the York Road bypass around the village. The village can be traced back to the late 1700s and is named for Revolutionary War Colonel William Hart. The fieldstone structures and uses in the village are primarily residential, with some commercial uses.

Jamison is located at the intersection of York and Almshouse roads. Some of the original structures have been removed for new development. The remaining structures are generally built of wood and were constructed in the 1800s. The village is named after Henry Jamison who settled in Warwick in the early 1700s after emigrating from Ireland.

Criteria for Listing on the National Register of Historic Places

The National Parks Service's standards for evaluating the significance of properties were developed to recognize the accomplishments of all peoples who have made a significant contribution to our country's history and heritage. The criteria are designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the National Register.

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, association, and

- That are associated with events that have made a significant contribution to the broad patterns of our history; or
- That are associated with the lives of persons significant in our past; or
- That embody the distinctive characteristics of a type, period, or method of
 construction, or that represent the work of a master, or that possess high
 artistic values, or that represent a significant and distinguishable entity
 whose components may lack individual distinction; or
- That has yielded or may be likely to yield, information in prehistory or history.

Source: http://www.cr.nps.gov/nr/listing.htm

Landscaping, lighting, pavement, vehicular circulation patterns, speed limits, pedestrian circulation, and parking can help protect village character and identity in an increasingly suburban environment. Additional ways to set villages apart is to set standards for signs, architectural improvements, property maintenance and changes in use such as conversions and adaptive reuse.

Locally Important Resources

In addition to the historically significant sites deemed eligible for listing on the National Register, resources of local importance exist in Warwick. The stone farmhouses that dot the landscape recall the township's agrarian past and contribute to the community character.

A county-owned farm north of Dark Hollow Road was once the North American headquarters of a political movement founded in the 1930s known as the Technocrats. The headquarters contained a library, as well as dental and medical facilities. The group drew followers from all over the U.S. and Canada to its annual meetings on the farm. This farm is part of the Dark Hollow Dam property owned by Bucks County.

The Bridge Valley Heights area on Sugar Bottom Road at York Road was a summer vacation spot that contained amusements such as swan boats on the Neshaminy Creek. Creeklyn along Valley Road was once a summer residence for notable Philadelphians. The Germinal Colony area on Almshouse Road was once a Jewish summer camp for those of Russian and German descent. The camp contained significant infrastructure improvements such as running water from a wooden water tower and a hospital. These summer communities consist of a grouping of structures which when considered as a whole, are more significant than the individual structures by themselves. The communities also provide us with the opportunity to observe remnants of the lives of past visitors and residents of the township.

Numerous archeological resources exist in the township. Evidence of Lenni Lenape villages along the stream valleys has been found in Warwick. The colonial regiments which camped near the Moland House also left behind remnants of their stay.

Current Planning and Zoning Policies

The Pennsylvania Municipalities Planning Code acknowledges the importance of historic resources and requires that historic resources be protected through the zoning ordinance. Section 603.(G)(2) states that zoning ordinances shall provide protection of natural and historic features and resources.

The Warwick Township zoning ordinance does not specifically address historic resources. Resources are found in most zoning districts and are treated the same as other structures. The majority of the parcels in the Jamison village area are zoned C-1, C-2 and C-3 which permits a variety of commercial uses. Hartsville is zoned C-1 which permits commercial uses on lots of 10,000 square feet. These zoning districts require yard setbacks, and permit uses which may not be appropriate for the existing layout of buildings on the lots. Some of the structures in the villages are used for nonconforming single family residences.

Future Needs

A particular challenge facing preservation efforts for Jamison is development of vacant parcels. New development should be similar in scale and appearance to preserve the character of the existing village. A plan for development of this village is discussed in *Principle 1: Protect the Character and Sense of Community of Warwick*.

In previous efforts the township has focused on its most historically significant site, the Moland House. This resource has been preserved and the lands around it have been protected from intrusions. The focus should now be on other resources throughout the township and developing a history of life in the past. One example of this is to work to preserve the structures along Old York Road and the appearance of the corridor itself which was a major thoroughfare from Philadelphia to New York until the 1960s.

Protecting villages or collections of historic resources is important because the whole is greater than the sum of its parts. Villages show how a historic settlement pattern is structured and how building and structures relate to each other. The ensemble of buildings are as important as the individual structures themselves. Zoning can protect this pattern and set a standard that requires that any new development be sensitive to the existing context. For instance, in villages, buildings are set close to the road. Zoning provisions can establish a build to, or maximum building setback line, ensuring that the new structures will fit within the context of the existing buildings.

Preserving individual historic resources can be done with zoning by creating historic preservation zoning for individual resources scattered throughout the township, and historic district zoning for the villages.

Historic preservation zoning would permit different treatment of historic resources such as allowing additional uses and setting standards for rehabilitation, additions, and change of use and demolition. Historic buildings are sometimes large and costly to maintain but offer a charm and character unlike modern structures. Allowing different uses than those allowed by base zoning may make preservation economically feasible for owners. Permitting uses such as bed and breakfast, museum, or retail shop would encourage preservation. Standards for rehabilitation and additions and change of use standards tailored to historic buildings will control alterations to these structures so that their character is maintained. Demolition standards prohibit destruction without proper notification and by neglect.

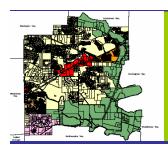
Design guidelines consist of recommended design options for alteration or rehabilitation of existing buildings and construction of new buildings. Guidelines are helpful for an effective heritage protection program whether or not the community contains any property listed on any historic register.

Recommendations for Historic Resources

 Coordinate village planning efforts for Hartsville and improvements to the Old York Road corridor with Warminster Township. Adopt design guidelines for historic village of Hartsville in coordination with Warminster Township. Adopt historic preservation zoning to encourage preservation of historic buildings and to allow for additional use opportunities. Adopt historic district zoning to protect the villages in Warwick and ensure that new development is consistent with existing building placement and style.

IMPLEMENTATION:

ACTION PLAN SUMMARY



IMPLEMENTATION: ACTION PLAN SUMMARY

The goal of this plan is to provide direction for the future. The principles and objectives provide the framework of the township's plan to achieve its goal. For each of the objectives, implementation strategies have been identified. The time frames are ongoing, short-term, medium-term and long-term. Ongoing efforts are those currently being undertaken and which should continue into the future. A short-term effort should continue soon after plan adoption. Medium-term efforts should start 3–5 years after plan adoption. Groundwork laid by short- and medium-term efforts must take place before many of the long-term efforts can be implemented 5–10 years after plan adoption. The recommendations are organized in a manner based on the five development principles and respective objectives in Chapter 2 Community Development Statement.

Each principle and its objective are complementary and interrelated. The policy espoused in each principle supports that of another principle. This interconnectedness ensures that action towards one principle will support other principles and minimize unnecessary implementation effort.

Community Goal

Manage development 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.

Principle 1. Protect the character and sense of community in Warwick

Description: Vibrant communities are attractive and sustainable and meet the community needs of residents. Warwick's history and character create the sense of community. New development should respect the township's character. The township should use standards to encourage attractive development and a strong sense of place. Warwick should do its best to ensure that new construction respects the community's local character. Thriving town centers are important because they serve as places where people of all ages come together for recreation and community interaction.

Objectives

Preserve, maintain, and enhance the traditional character of the township while accommodating a reasonable level of new development.

Recommendations of Action

Use zoning tools to **protect open space and natural features**. Require contiguous open space and strict adherence to ordinance standards.

Support **accessory farm uses** through land use policies, such as roadside stands for products sold on local farms.

Continue township **farmland preservation efforts** through acquisition of development rights.

Identify and establish **special setbacks and treatment for rural roads.** Designate and protect rural preservation roads.

Limit the area of commercially zoned land to what exists now; reject requests to expand retail commercial zoning except for small-scale neighborhood commercial areas serving residential developments.

Provide for village commercial and residential uses in the Village Center, in accordance with the township's village study.

Plan and create **pedestrian**, bicycle and vehicular connections between developments

Support **sustainable development practices** by amending the zoning and subdivision ordinances

Protect historic resources through zoning regulations: additional use opportunities; encourage preservation and reuse.

Accommodate township's share of regional population growth by permitting development of housing at a variety of densities, types, and sizes.

Encourage village commercial and residential uses in the Village Center.

Maintain land use plan that accommodates future population growth through 2015/2020 and allows for adequate share of multifamily housing.

Objectives

Recommendations of Action

Consider transfer of development rights as a preservation tool.

No new age-restricted housing zones.

Promote **compact mixed use development** that is conducive to pedestrian and bicycle travel, as well as alternative vehicles.

Make community improvements that bring people together and promote interaction. These improvements include sidewalks, bike paths, street interconnections among developments, and active recreation areas for organized activities. Plan and create trails, pedestrian, bicycle, and vehicular connections between developments and through the township.

Use the development process to establish a **perimeter path along existing roads** when new developments are approved.

Develop a plan for **gateway and corridor improvements along York Road to improve the function and appearance** of Jamison.
Plan should reflect Township goal of **"Greenscaping" York Road.**

Work with business association and neighboring townships to promote and coordinate improvements to York Road corridor.

Recognize and support a **heritage corridor** incorporating Old York and Meetinghouse roads, Moland House, and Hartsville.

Provide buffers and special setbacks along reverse frontage lots to protect the view from roads.

Amend the zoning ordinance to restrict the size of big box retailers.

Ensure that new growth in the township meets the planning principles

Encourage **mixed use** development.

Avoid waivers of land development requirements such as sidewalks, landscaping.

Principle 2. Improve Mobility

Description: Improving mobility means providing more transportation choices, designing functional transportation facilities that complement community character as well as carrying traffic, and encouraging housing to be situated near work and community facilities. Warwick should continue to create a network of trails and sidewalks that can be used by pedestrians and cyclists. Warwick can make walking, cycling, or other alternate travel methods feasible and desirable by promoting paths, by encouraging a mix of land uses, and by making streets pedestrian and bicycle friendly.

Objectives

Foster an efficient, comprehensive transportation system by protecting, maintaining, and improving the carrying capacity of the township's street network, and by expanding the options for travel within the township.

Recommendations of Action

Incorporate land use considerations into transportation planning and ensure that transportation facilities have adequate capacity to meet demand.

Ensure that developers incorporate transportation improvements into land development projects.

Coordinate access points on York Road and consider reverse access in areas where redevelopment can occur.

Continue traffic calming steps within new developments.

Preserve and create **rights-of-way for bicycle and pedestrian use.** Amend ordinances to use the development process to maximize the provision of paths and landscaping.

Use an **official map** to provide for reverse access streets.

Make connections to existing trails when opportunities arise.

Principle 3. Build and maintain a livable community with good services and facilities

Description: Adequate community services and facilities such as police protection and schools and amenities like parks are important community assets that should be provided.

Objectives

Guide the form, location, and timing of new development in order to protect the natural environment, enhance the man-made environment, and establish living and working environments that are properly provided with a full range of necessary services and facilities.

Recommendations of Action

Continue to **support through taxation the emergency services providers**; monitor state legislation and goals for fire and ambulance services.

Maintain the cooperative relationship between the township, Middle Bucks Institute of Technology (MBIT), and school district.

Continue to keep pace with township current and future staff and facility needs within budget limitations.

Address the **Act 537 Sewage Facilities Plan** to ensure its consistency with planning policies.

Continue **residential yard waste disposal program** in conjunction with the K and D Growers yard waste processing facility.

Continue **best management practices** for maintenance and retrofitting existing stormwater management basins.

Maintain **good stormwater management practices** and compliance with state and federal requirements. Establish regular maintenance program for stormwater management facilities.

Continue to require all new utilities to be located underground.

Provide park and open space areas for active and passive recreation for township residents of all ages.

Follow through with the recommendations of the Township's 2007 Recreation, Parks, and Open Space Plan.

Provide a system of trails which connect neighborhoods and major activity centers throughout the township. Complete trails planning and work on construction.

Establish **greenways along stream corridors** such as the Neshaminy and Little Neshaminy Creeks.

Principle 4. Ensure the economic vitality of the community

Description: To maintain and enhance Warwick's economic vitality, the township should have businesses and industries that provide jobs and tax revenue to support public services and the quality of community life. Good land use planning can direct nonresidential development to areas where it makes sense.

Objectives

Promote nonresidential development including commercial land uses such as professional and business office facilities as well as light industrial uses that serves the needs of the township first and ensures a balanced tax base.

Ensure efficient and economical provision of township facilities and services that are consistent with conservation and development policies.

Recommendations of Action

Limit commercial and industrial development to specific areas and avoid strip commercial development

Require a **fiscal impact study** and traffic impact study for zoning change requests.

Principle 5. Conserve Warwick's natural and cultural resources

Description: Successful communities identify the areas that are most important to protect—such as farmland, forests, streams, scenic views or historic structures—and guide growth into areas better suited for development. Traditional landscapes and historic structures help define the township. Conservation of natural and cultural resources contributes to the township's character and community health.

Objectives

Preserve the areas critical to the protection of natural resources and their functions.

Protect historic individual resources, villages and scenic corridors in the township to retain a sense of place.

Recommendations of Action

Maintain **natural resource protection standards** in zoning and subdivision and land development ordinances.

Promote efficient use of water resources through conservation, infiltration, and reuse. Protect water quality by addressing failing wastewater systems and mandating stormwater practices that protect water quality.

Adopt ordinance amendments that **require developers to assess the natural features** and provide documents and opportunities for early input by the township. Minimize grading and impervious surface.

Coordinate village planning efforts for Hartsville and improvements to the Old York Road corridor with Warminster Township, addressing signs, gateways, and land uses. Adopt design guidelines for historic village of Hartsville in coordination with Warminster Township.

Adopt historic preservation zoning to encourage preservation and discourage demolitions of important buildings. Adopt historic district zoning to protect the villages and ensure that new development is consistent with existing character

Work with Historical Society to develop a business plan for the future use of the Moland House and a plan for the maintenance of the Eight Arch Bridge.

APPENDIX A

RESIDENT SURVEY MAY/JUNE 2005

The Warwick Township Long Range Planning Committee and the Township Board of Supervisors authorized the mailing of a resident survey which was sent out in late July 2005. The surveys were to be returned to the township by August 5. A total of 5,800 surveys were mailed.

The 1,442 surveys returned represent a 24.9 percent response rate. Responses were recorded and are shown below in the original survey document format.

Please check where appropriate:

1. Are vou:

a Warwick Township property owner (resident)? 95.8% a non-resident property owner? 0.62%

a business owner? 0.35%

a resident non-owner (renter)? 2.36 %

other 0.49%

2. Based on the attached map on page 3, and list of neighborhoods and landmarks, please check the area of Warwick in which you reside. (See attached map)

A - 36.4%

B - 9%

C - 33.9%

D - 19%

3. How long have you lived in Warwick?

> Less than 1-year 5% 1 - 5 years

37.5%

6- 10 years 27.5%

11 – 15 years 12.4%

16 - 20 years 9.22% Over 20 years 7.8%

4. Why did you choose to live in Warwick? Please check all that apply:

Raised here from childhood Convenient to work

1.9% 12% 5.7%

School system Near friends and family

19.8% 15.7%

Low taxes

14.9%

Reasonably priced homes

16%

Good place to raise children

Retirement 23

Other (specify) Most frequently used keywords: 55+ Community 64.

Liked area/homes 41

5. Where are members of your household employed? (Please check boxes that apply.)

Self

Other Adult All Adult household members household members

a.	Within Warwick	4.3%	6%	4.5%
b.	Bucks County (not Warwick)	29%	43%	30.6%
C.	Montgomery County	17%	21%	17.3%
d.	Philadelphia	10%	10.5	10%
e.	New Jersey	6.8%	5.6%	6.7%
f.	Unemployed	4%	3%	4%
g.	Retired	24%	9.69%	22.7%
ĥ.	Other (Please specify)	4.4%	4.8%	4.4%

How many members of your household fit the following age categories (including yourself): 6.

Self

0.5% Young Adults (19 – 25)

54.9% Adults (26 – 54)

18.6% Young Seniors (55 – 65)

24.3% Mature Seniors (65 +)

Other members of household

9.9% Pre-school (Age 0-5)

15% Elementary school (Age 6-12)

13.7 Secondary school (Age 13-18)

Young adults (19-25) 11%

29.7% Adults (26-54)

8.7% Young Seniors (55 - 65)

12% Mature Seniors (65 +) 7. If you were willing to pay additional taxes for services and/or programs which 5 of the choices below would you choose?

Open Space Preservation Condition of Township Roads	1 (12.8%) 2 (10.9%)
Ambulance Services	3 (10.3%)
Better environmental practices	4 (9.2%)
York Road Streetscape Beautification	5 (8.7%)
Street trees and Buffers	6 (8.2%)
Recreational Opportunities	7 (8.1%)
Walkways and Trails	8 (7.8%)
Historic Preservation	9 (6%)
Moland House	(3.6%)
Other Historic Structures	(3.5%)
(e.g. Hartsville buildings, 8 Arch Bridge)	
Public Transportation	10 (5.6%)
Job Opportunities	11(5.2%)

Other (Please specify) None

How would you describe the quality of life in Warwick (Quality of life is defined as the level of well-8. being or lifestyle and conditions in which you live)?

Excellent 22.6% **Very good 53.9%** Good 19.3%

Fair 2.8%

Poor 0.3%

9. What one thing would improve the quality of life in Warwick Township?

Most frequently used keywords:

Taxes 236 Open Space 53

Less traffic 31 Less congestion 31

Total responses 340 Wawa 9

10. Other than a change in employment, what would make you leave Warwick?

Most frequently used keywords:

Taxes 463 **Development 90** Age 3 **Total responses 556**

11. Are you satisfied with the commercial development and retail services along the York Road corridor?

> Yes 63.3% No 31.1% No response 5.6%

11a. If no, why not? Most frequently used keywords:

Development 53 Pharmacy /drugstore 31 Warminster 20

Bank 20 Total 131

12. Is there any commercial or retail service lacking in Warwick?

Most frequently used keywords:

Drugstore/pharmacy 184 Wawa 130 Restaurants 81 **Bookstore 15 Total responses 395**

13. Warwick Township has faced increased commercial development along York Road in the past several years. Commercial development may continue to be auto dominated with buildings set back from the road behind parking lots and each parcel having individual driveway access to York Road. Another option is future commercial growth having the form of a traditional village with smaller structures, mixed uses (e.g. apartments over stores), sidewalks and coordinated driveway access points. Which scenario do you prefer?

Conventional auto-oriented development 19% Village type development 72.7% No response 6.7%

14. The eastern corner of Warwick along Rushland Road is primarily farmland. The township has worked to buy development rights and preserve many of the farms as open space but some farms are not protected. Should the township pursue additional efforts to get more open space through the development process (i.e. require that a greater percentage of the development site be preserved as open space)?

Yes 81.9% No 13.6%

14a. Should the township spend more money on open space preservation?

Yes 70.9% No 22.7%

15. The township will be undertaking a park and recreation study later this year. Are there any critical issues/facilities/programs that should be considered?

Most frequently used keywords:

Pool 69 Trails 53 Dog park 24 Bike paths 14 Total responses 160

16. The township has a website, resident email list, a quarterly newsletter, and cable channel. Do you feel communication with residents is adequate?

Yes 85% No 6.9% No response 8%

17. Please use the remaining space to offer your opinions about the topics addressed above or any other issues you believe that the long-range comprehensive plan committee should consider:

Most frequently used keywords:

Taxes 128 Development 21 Open space 9 Total responses 159

Please contact the township for further information:

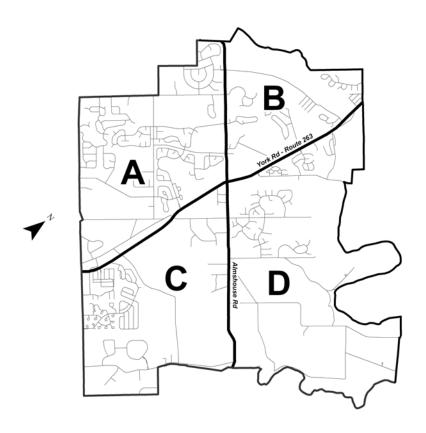
Email: Igrant@warwick-township.org Website: www.warwick-bucks.org Telephone: 215-343-6100

Please reseal with tape and return to Warwick Township by August 5, 2005

(Do not include location map)

WARWICK TOWNSHIP BOARD OF SUPERVISORS 1733 Township Greene Jamison, PA 18929

Warwick Township Residence Location map



Township Building Country Hunt Estates

Foxwood Estates Mountainview Robinwood Farm Windrush Yorktown

Guinea Lane Park Courts at Woodfield

Hartsville Manor Orchard Valley Farms Warwick Estates Woodrose Manor Yorktown Manor

Ashton Preserve Community Park

Hidden Pond Silver Fox Run Warwick Woods Woodfield Estates

В

Bucks County Country Club Creekwood Creeklynn Estates at Bucks County CC Sovereign Estates Estates at Warwick Lea Fairfield Greene Bridge Valley Heights Berlinger Estates



Mearns Road
Country Crossing
Stover Mill
Heritage Creek
Warwick Manor
Germinal Colony
Neshaminy Valley
Golf Club



Rushland Road
Estates at Dark Hollow
Hampton Chase
Jamison Hunt
Mill Ridge
Warwick Greene
Bridge Valley Estates
Country Club Knoll

Resident Survey for Warwick Township's Comprehensive Plan

Help create a vision for Warwick's future!

Please fold here, seal with tape, and return.

WARWICK TOWNSHIP 1733 Township Greene Jamison, PA 18929

Postage Paid
Warwick Township

APPENDIX B

DEMOGRAPHIC AND SOCIOECONOMIC TRENDS



Appendix B DEMOGRAPHIC AND SOCIOECONOMIC TRENDS

Population and Housing Trends

The information in this chapter describes population and housing growth in the past and into the near future.

The previous two decades have been a period of significant growth for Warwick. Since 1980 the township population has grown 156 and 103 percent for each 10-year period. Bucks County's population gained only 10.4 percent between 1990 and 2000. Warwick's rate of growth was the highest of any municipality in Bucks County between 1990 and 2000.

The estimated population for 2005 was 14,538, a 21 percent increase since 2000. This compares with a county increase of only 4 percent. While the 2000 Census data do not completely reflect current conditions in the township, it is the most comprehensive data available.

The municipalities surrounding Warwick show a mixed pattern of population change between 1990 and 2000. Warminster and Doylestown townships, the two more fully developed communities, lost population or stayed nearly stable.

Four other nearby municipalities—Buckingham, Northampton, Warrington and Wrightstown townships—grew at a pace exceeding the countywide increase. These are once-rural municipalities that have undergone rapid growth. Warwick has grown due to the availability of water and sewer, vacant land, and access by way of York Road and Almshouse Road. Proximity to major sources of employment, shopping, and entertainment such as central New Jersey, Montgomery County, and Philadelphia has also made it an attractive place to live.

Figure B-1 lists changes in population for Warwick. Table B-1 compares population change for Warwick, its neighboring townships, and Bucks County.

20,000 14,538 Number of Persons 15,000 11,977 10,000 5,915 5,000 2,307 2,138 1.810 1960 1970 1980 1990 2000 2005 Year

Figure B-1. Warwick Township Population Growth

Source: U.S. Census 1960-2000

Table B-1. Population in Warwick, Surrounding Townships, and Bucks County, 1990 and 2000

Municipality	1990 Population	2000 Population	Percent Change
Buckingham Township	9,364	16,442	75.6
Doylestown Township	8,575	8,227	-4.1
Northampton Township	35,406	39,384	11.2
Warminster Township	32,832	31,383	-4.4
Warrington Township	12,169	17,580	44.5
Warwick Township	5,915	11,977	102.5
Wrightstown Township	2,426	2,839	17
Bucks County	541,224	597,635	10.4

Source: U.S. Census, 1990 and 2000

Households

Household¹ size has been declining nationwide in recent years due to a number of factors: later family formation, declining birth rates, rising divorce rates, and more people living alone. Household data is shown in Table B-2.

The average household size and family size in Warwick continued to drop, but only moderately. The average household size in 2000 was 3.04 persons, down from 3.09 in 1990. The township average household size is larger than the county's which was 2.69 in 2000.

The number of households in the township totaled 3,933 in 2000. That figure represents a 105 percent increase over the 1,914 households counted in 1990.

A household is one or more persons living in a single housekeeping (dwelling) unit. A family household consists of a householder and one or more persons related to the householder by marriage, birth, or adoption.

About 51.9 percent of Warwick households had at least one child under age 18. Just over 13.1 percent had at least one member age 65 or older. The corresponding numbers for Bucks County were 37.7 percent and 23.3 percent, respectively.

Households in the township were larger than the countywide average, somewhat more likely to have children under age 18. The data indicate that the township's households have more young children than those of Bucks County in general, creating demand for education and other youth-oriented services.

Table B-2. Characteristics of Warwick Households, 1990 and 2000

Characteristic	1990	2000
Number of Households	1,914	3,993
Average Household Size	3.09	3.04
Average Family Size	3.36	3.38
Family Household	1,644	3,267
Married Couple Families	1,481	2,923
Nonfamily Households	270	666
Householders Living Alone	213	517

Source: U.S. Census, 1990 and 2000

Population Characteristics

The township's population has been aging, and this trend can be expected to continue. The median age in the township has been climbing steadily upward, rising from 31.2 years in 1980 to 33.7 years in 1990, to 34 years in 2000. The median age in Bucks County was slightly higher, at 37.7 years. As the township's population continues to age, the demand for specialized services and housing for the elderly will heighten.

Regionally and nationally, the population has been aging, propelled by the baby boomers, members of the massive postwar generation born between 1946 and 1964. But a notable feature of Warwick's population is growth in the baby boomer cohorts, the 35 to 54 age categories as of the 2000 census. This cohort constituted slightly more than a third of the township's population in 2000 and likely represents those that moved into the township and bought houses after 1995.

The township's greatest percentage gains came in its elderly population, those age 65 and older. That group more than doubled in size between 1990 and 2000, but because of the overall population increase, the percentage stayed about the same. The number of those over 65 has undoubtedly increased further due to the completion of Heritage Creek, a large age-restricted retirement community along York Road.

The township's largest gain in population (1,047) was among adults age 45 to 54, which increased by almost 200 percent in the decade. Nevertheless, baby boomers in the 35 to 44 age bracket formed the largest single segment of the township's adult population — 22 percent—in 2000.

Children 19 and under accounted for 34.8 percent of the population. Younger adults aged 20–34 were 17 percent of the population and are in the childbearing cohort which will have impacts on the township in the near future. Seniors age 65 and older accounted for only 5.82 percent of the population in 2000.

Table B-3 shows changes in the age distribution in the township from 1990 to 2000.

Table B-3. Changes in Age Distribution in Warwick, 1990 and 2000

	19	90	20	00	
Age	Number	Percent	Number	Percent	Percent Increase
Under 5	682	11.5	1,102	9.2	61.6
5 to 9	577	9.7	1,198	10	107.6
10 to 14	420	7	1,144	9.5	96
15 to 19	319	5.4	724	6	127
20 to 24	272	4.6	376	3	38
25 to 34	1,268	21.4	1,687	14	33
35 to 44	1,157	19.5	2,644	22	128
45 to 54	543	9.2	1,590	13.3	192
55 to 59	182	3	484	4	166
60 to 64	174	2.9	330	2.7	89
65 to 74	225	3.8	433	3.6	92.4
75 to 84	75	1.3	215	1.8	186
85+	21	.3	50	.42	100
Total	5,915		11,977		

Source: U.S. Census, 1990 and 2000

The population of Warwick was mostly white and native-born as of the 2000 census. The share of white township residents was 95.9 percent, and residents born in the U.S. numbered 93 percent. The population was 50.9 percent female and 49.1 percent male.

The largest single minority racial group was Asian (of any race), which represented 2.1 percent of the population. Black or African Americans represented 1.0 percent of the population.

Township residents had incomes and levels of educational attainment that were significantly higher than those for the county as a whole, according to the 2000 census. The median Warwick household income was \$81,711. The median income for Bucks County was only \$59,727. In addition, 35 percent of the township's households earned greater than \$100,000 which is exceeded by only 15 percent of communities in the county. Nearly 95 percent of township residents were at least high school graduates, and 42 percent held bachelor's degrees or higher. The education attainment rate is higher than Bucks with 88.6 percent of residents having earned a high school diploma with 31.2 percent with bachelor's degrees or higher.

Occupation is the kind of work a person does to earn a living. Most Warwick residents pursued white-collar occupations, with 47.7 percent employed in managerial, professional, sales, or office work. Another 30.4 percent worked in sales and office occupations followed by 8 percent who worked in service occupations, 7.1 percent in production or transportation, and 6.8 percent in construction, extraction, or maintenance.

Industry is the type of activity at a person's place of work, the sector of the economy to which a particular occupation belongs. The largest share of township residents, 42.2 percent, worked in professional, management scientific, administrative, and educational services followed by 16.3 percent in manufacturing. Retail Trade employed 13.7 percent of Warwick residents.

The overall picture is that Warwick residents have more education, greater household incomes, and are employed in industries and occupations that pay higher salaries than

those of Bucks County as a whole. These factors drive demand for both public and private goods and services.

Origin of Warwick Residents

To determine the origin of residents, the 2000 census queried people on whether they had lived in the same house in 1995. Almost half of the 5,244 residents who had moved did so from another location within the township. Of those who moved in from outside, about half were from other places in Bucks and a third from other parts of the state. Almost 13 percent of the residents moved from another state, and 3 percent immigrated from overseas. Table B-4 shows the data for resident origin.

Table B-4. Origin of Warwick Residents over Age 5, 1995

Place of Origin	Number	Percent
Bucks County	2,592	49.4
Pennsylvania	1,809	34.5
Other states	667	12.7
Outside USA	176	3.4
Total newcomers	5,244	100.0
Total, all residents	10,858	

Source: U.S. Census, 2000

This data indicate that many Warwick residents are new to the township.

Employment and Travel to Work

Census data on residents' travel to work are useful in transportation and housing planning. The location of workplaces and the duration of daily commutes help explain traffic patterns. People generally prefer to live no more than a half-hour travel time from where they work so changes in the employment base within that radius will have an impact on the local housing market. Employment and commuter patterns may have effects on community life that include the tax base, real estate markets, traffic flow, school enrollments and volunteerism.

Place of work and travel time census data suggest that although more than half of Warwick residents commute to jobs outside the county, many residents work in places that are nearby. While nearly all employed township residents worked within Pennsylvania, the percentage of those who commuted to jobs outside of Bucks County far exceeded the countywide share. Out-of-county commuters numbered 45.3 percent in Warwick, compared to 30.3 percent in Bucks County. This may be explained in part by the township's location adjacent to Montgomery County. Comparative workplace data for township and county residents are in Table B-5.

Table B-5. Place of Work for Residents of Warwick and Bucks County, 2000

	Warwick		Bucks County	
	Number	Percent	Number	Percent
Total	6,294	100.0	303,586	100.0
Worked in PA	5,716	90.8	260,009	85.6
Worked in Bucks County	3,126	54.7	168,090	55.4
Worked outside Bucks County	2,590	45.3	91,919	30.3
Worked outside PA	578	9.2	43,577	14.4

Source: U.S. Census, 2000

The travel time to work for little more than half of employed township residents was over the 30-minute range that is considered the "commutershed," the preferred maximum commute to work. Only 47 percent of township residents commuted less than 30 minutes. Their average commute was just over 30 minutes compared to a countywide average of 28.6 minutes. The most frequently reported travel time to work was the 45 to 49 minutes cited by 14.4 percent of township residents. Travel-to-work times for township and county residents are in Table B-6.

Table B-6. Travel Time to Work for Residents of Warwick and Bucks County, 2000

	Warwick		Bucks (County
	Number	Percent	Number	Percent
Total	6,294		303,586	
Did not work at home	6,162	98	292,794	
Less than 5 minutes	90	1.4	8,034	2.7
5 to 9 minutes	422	6.8	27,990	9.6
10 to 14 minutes	655	10.6	40,247	13.7
15 to 19 minutes	808	13.1	41,549	14.2
20 to 24 minutes	624	10.1	38,526	13.2
25 to 29 minutes	306	5	17,358	5.9
30 to 34 minutes	809	13.1	34,176	11.7
35 to 39 minutes	194	3	9,429	3.2
40 to 44 minutes	317	5.1	12,362	4.2
45 to 59 minutes	888	14.4	29,993	10.2
60 to 89 minutes	847	13.7	23,241	7.9
90 or more minutes	202	3.2	9,889	3.4
Worked at home	132	2	10,792	3.7

Source: U.S. Census, 2000

Housing

Housing Unit Growth

Due to a number of factors including availability of land and public sewer capacity, low interest rates, declining household size, a quality school district and an expansion of the Philadelphia metropolitan area, Warwick's housing stock grew significantly between 1980 and 2000. In this period, the number of housing units increased by nearly 413 percent, going from 790 to 4,050 with the bulk of the increase occurring from 1990 to 2000. The number of additional units grew most significantly between 1980 and 1990 and between 1990 and 2000 with 1,149 and 2,111 units respectively. Housing growth between 1960 and 2000 is shown in Figure B-5.

4,500 4,126 4,050 4,000 3,500 Number of Units 3,000 2,500 1,939 2,000 1,500 790 1,000 609 500 0 1960 1970 1980 1990 2000 2005 Year

Figure B-2. Warwick Township Housing Growth, 1960-2005

Source: U.S. Census 1960-2000

Housing Types and Housing Choice

Warwick contains a mix of housing types, most are of recent vintage. Construction since 1980 accounts for 85 percent of the township's dwelling units. The age of housing is detailed in Table B-7.

Table B-7. Housing Age in Warwick

Year Built	Number	Percent
2000 to 2004	914	18.41
1990 to 3/2000	2,285	46.03
1980 to1989	1,016	20.47
1970 to 1979	214	4.31
1960 to 1969	105	2.12
1940 to 1959	260	5.24
1939 or earlier	170	3.42
Total	4,964	100.00

Source: U.S. Census, 2000 and township permit figures $\,$

While the single-family detached dwelling predominates, there are a number of other residential unit types. 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 B-8 outlines changes in housing type.

Table B-8. Housing Units by Type in Warwick, 1980, 1990, 2000

	1980		1990		2000	
Housing Type	Number	Percent	Number	<u>Percent</u>	Number	<u>Percent</u>
Single-family detached	645	81.6	1,421	71.7	2,538	62.7
Buildings of 2 or more units						
(townhouse multifamily or apartments)	143	18.1	595	30.1	1,512	37.3
Mobile homes/other	2	0.3	4	0.2	6	0.1
Total	790	100.0	1,981	102.0	4,050	100.0

Source: U.S. Census, 1980-2000

The number of single-family detached units rose by nearly 290 percent and the number of multifamily units rose by 957 percent between 1980 and 2000. That increase in multifamily units reflects the completion of the townhouse developments such as Deer Run and Windrush. Because the cost of attached housing tends to be less than the cost of single-family detached housing, this shift in the housing stock has broadened the range of housing prices in the township.

The number of multifamily housing units rose from 595 to 1,512 between 1990 and 2000, and the proportion of multifamily housing compared to other types increased, indicating that the Township has met its requirement to accommodate a variety of housing types.

In 1990, just under 89 percent of township housing was owner-occupied and the remaining 11 percent was renter-occupied. But by 2000, 95.5 percent of housing in the township was owner-occupied and 4.5 percent was renter-occupied. Those figures differ from the Bucks County numbers of 77.4 percent and 22.6 percent, respectively.

The mix of housing options in Warwick is broadly comparable to what exists in neighboring Bucks County municipalities and the county as a whole and offers more variety than some. Table B-9 compares the township's housing stock with those of neighboring municipalities and the county.

Table B-9. Housing Types in Warwick, Surrounding Townships, and Bucks County, 2000

	Warwick	Doylestown	Buckingham	Northampton	Warrington	Warminster	Wrightstown	Bucks County
Single-family detached	2,538 (62.7%)	4,070 (65.4)%	4,961 (84.6)%	10,146 (67.4%)	4,329 (68.6%)	7,860 (67.4%)	927 (94%)	144,555 (64.1%)
2 or more units (townhouse, multifamily, apartments)	1,512 (37.3%)	1,985 (31.9%)	730 (12.4%)	2,982 (22.7%)	1,979 (31.3%)	3,772 (32.4%)	53 (5.4%)	75,058 (33.3%)
Other (mobile homes)	0.0%	172 (2.8%)	270 (4.6%)	0.0%	6 (0.2%)	13 (0.1%)		5,794 (2.5%)
Total	4,050	6,227	5,861	13,142	6,314	11,651	986	225,498

Figures may not total 100% due to rounding

Source: U.S. Census, 1990–2000

Warwick's share of multifamily units exceeds the percentages in neighboring communities and Bucks County as a whole.

The township has three age-restricted housing developments: Heritage Creek, Yorktown Manor, and Yorktown. The projects contain a total of 1,124 units which constituted more than 25 percent of the total units in 2000.

Housing Costs and Affordability

The cost of housing in Warwick 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. The following provides a summary of housing cost information for owner-occupied housing and renter-occupied housing.

Owner-Occupied Housing—The median value of owner-occupied housing in the township in 2000 was \$203,400, according to the census. Other recent data on the costs of homes sold in 2004 reflect the median price of \$295,500. Prices have been rising areawide. Median sales price and median housing value data for Warwick is shown in Table B-10. Similar data for adjacent communities is shown in Table B-11.

Table B-10. Housing Cost Data—Warwick, 2004

Total units sold	241
Price range	\$155,000-\$925,000
Average price	\$339,367
Median price	\$295,000

Source: TREND Multiple Listing Service

Table B-11. Median Sales Price, 2004 and Median Housing Value, 2000 in Warwick, Surrounding Townships, and Bucks County

	2004	2000 census
Buckingham Township	\$484,750	\$266,500
Doylestown Township	\$354,250	\$253,200
Northampton Township	\$335,000	\$219,100
Warminster Township	\$255,000	\$160,500
Warrington Township	\$295,000	\$199,900
Warwick Township	\$295,000	\$203,400
Wrightstown Township	\$695,000	\$251,700
Bucks County	\$260,000	\$163,200

Sources: TREND Multiple Listing Service, U.S. Census, 2000

Renter-Occupied Housing—Housing occupied by renters accounted for 4.5 percent of all Warwick housing units in 2000. That figure represents a sizable decline from the 1990 figure of 11 percent, although the ratio of rental units in the township remained among the highest in the immediate area.

The vacancy rate for Warwick rental housing in 2000 was 3.8 percent. That is a low vacancy rate. A rate in the range of 5 to 7 percent is considered "normal" to allow for market turnover. A total of 177 units were renter-occupied, and the median rent was \$1,081 per month, up from \$718 in 1990. Rents in the township were among the lowest in the immediate area, but higher than the countywide median. Table B-12 provides 2000 data on median rents and proportion of rental units for Warwick, surrounding townships, and Bucks County.

Table B-12. Renter-Occupied Housing Units in Warwick, Surrounding Townships, and Bucks County, 1990 and 2000

Lacalita	Percent Renter-occupied	Percent Renter-occupied	Median Rent
Locality	Units-1990	Units-2000	2000
Buckingham Township	12.3	7.7	\$832
Doylestown Township	12.3	16.4	\$1,160
Northampton Township	8.7	6.9	\$1,131
Warminster Township	26.8	25.7	\$701
Warrington Township	28.2	19.5	\$829
Warwick Township	11.0	4.5	\$1,081
Wrightstown Township	13.0	11.7	\$877
Bucks County	24.3	22.6	\$736

Sources: U.S. Census, 1990, 2000

Estimated Population and Housing Growth

The U.S. Census Bureau has estimated that Warwick Township's 2005 population was 14,538. Warwick exceeded growth projections during the 1990s and reached its 2020 projection in 2005. Proposed development has been much slower in recent years, with few new dwellings proposed in the past 3 years.

Future Population and Housing

Warwick Township's population and housing stock will grow in the future, although this growth is limited by the amount of land available 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. As indicated by the residential areas analysis described in the plan, the upper limit of growth in Warwick will be based on no zoning changes except those made to recognize existing development patterns.

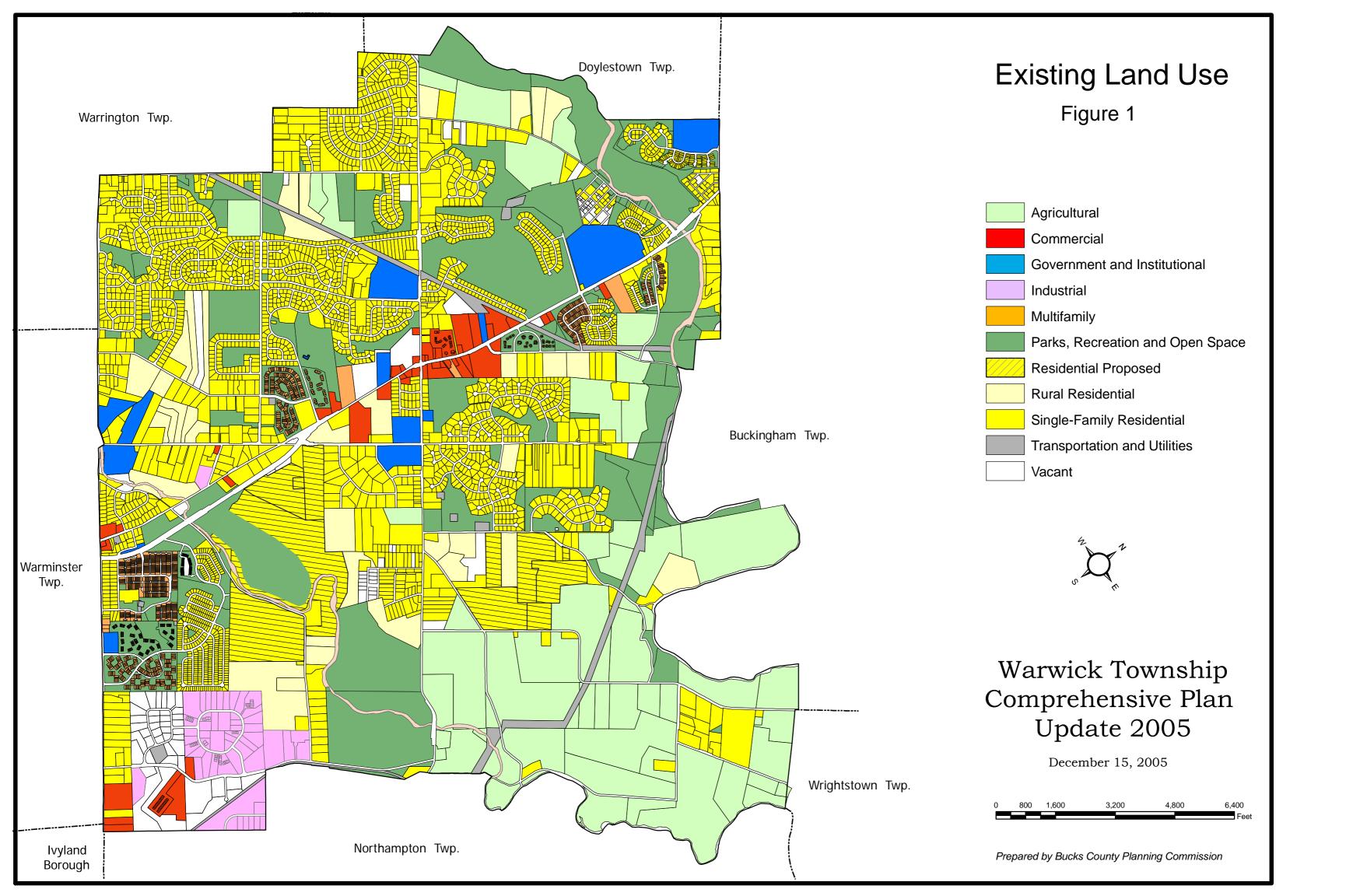
Approximately 905 new housing units can be accommodated in the zoning districts designated by the Future Land Use Plan under current zoning for the time period between 2005 and 2015. This analysis does not include lands used for farming within the Natural Resources area. Although these areas are zoned for residential development and can accommodate additional growth, it is the objective of the Comprehensive Plan to direct growth to areas where existing development, services, and roadway capacity can support it.

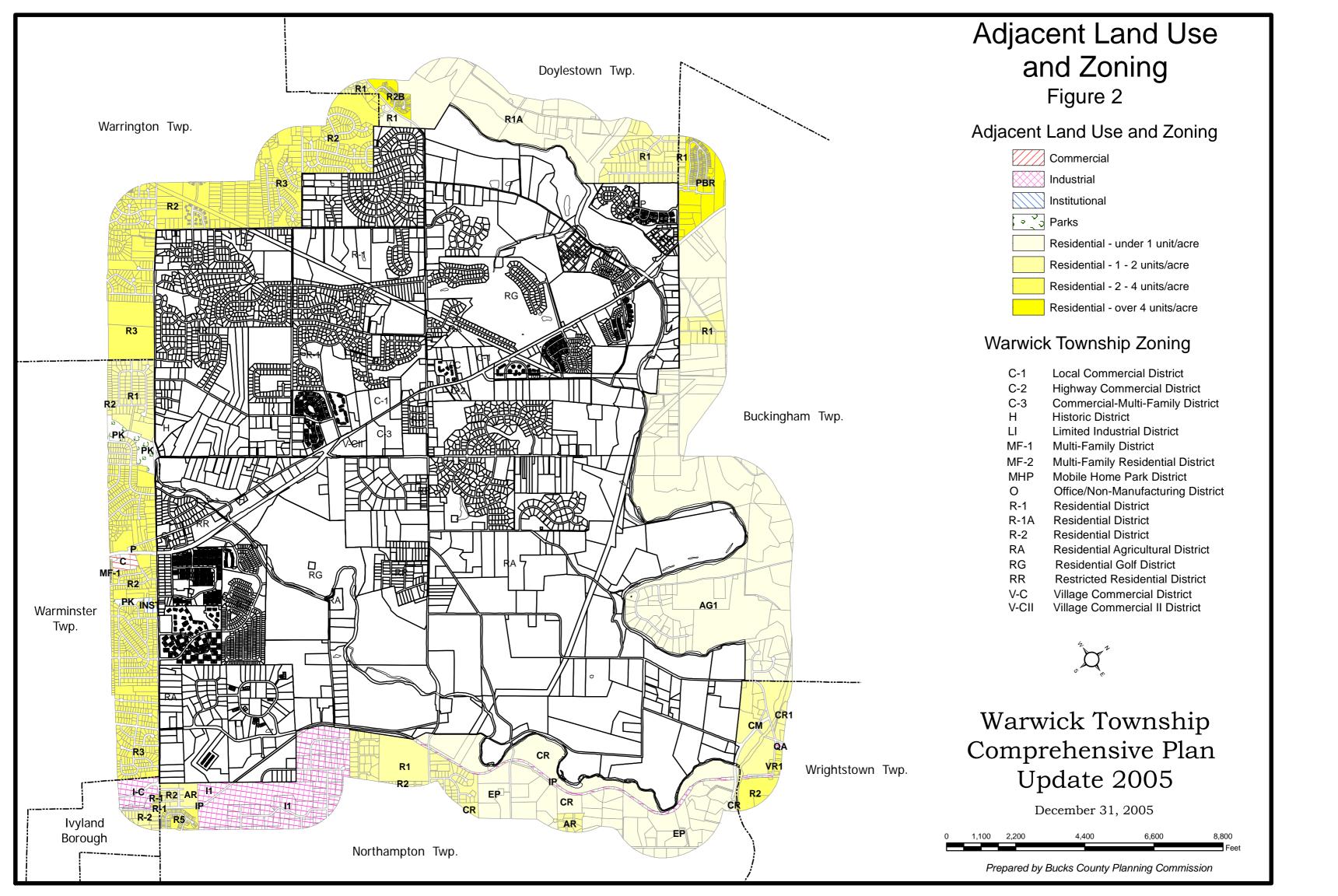
The adequacy of current zoning to accommodate future population growth to the year 2015 is based on the following calculation:

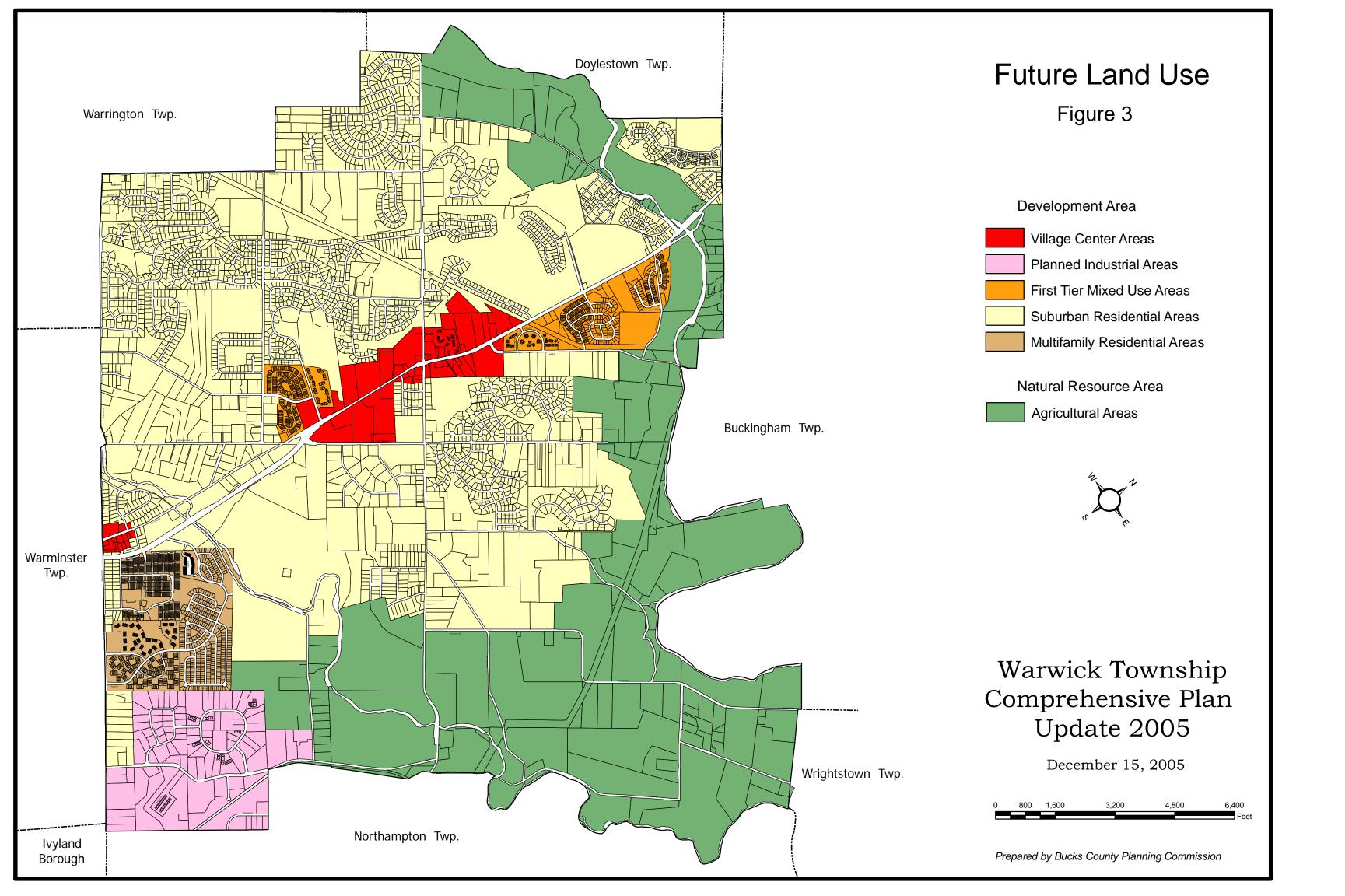
2005 Population	14,538
2015 projected population (DVRPC)	17,070
Additional population	2,532
Household size	2.9
Housing units needed	873

Additional units can be accommodated if needed within the agricultural area, in village centers within mixed use developments, and infill development. Projections prepared by the Delaware Valley Regional Planning Commission suggest a population for Warwick in 2020 of 19,190 people. After the 2010 U.S. Census numbers are available, the township will have adequate time to evaluate the need for changes in land use planning and zoning before the time frame of this Comprehensive Plan expires.

MAPS

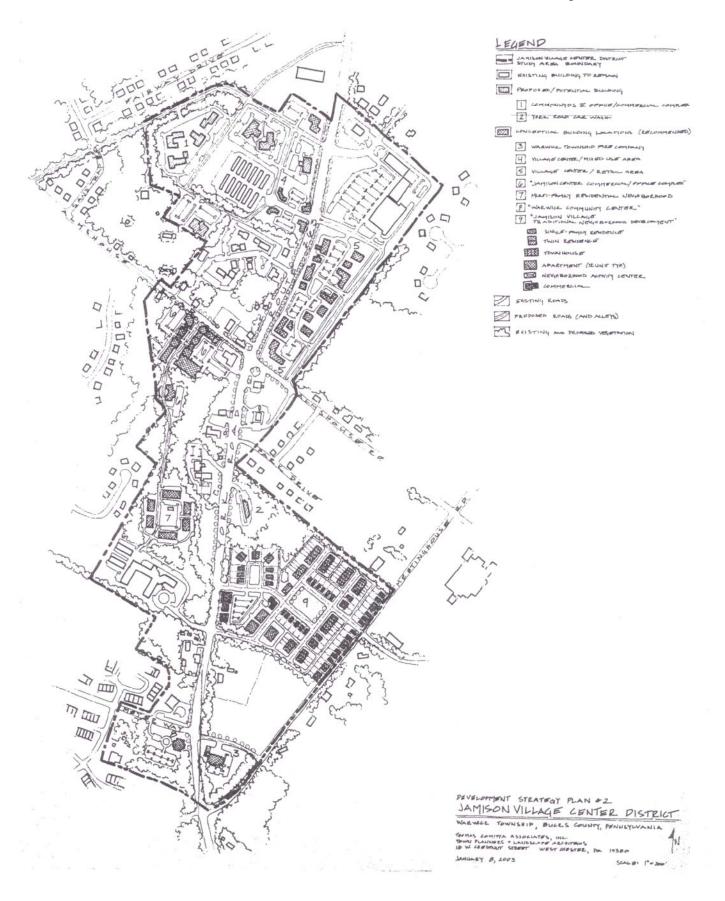


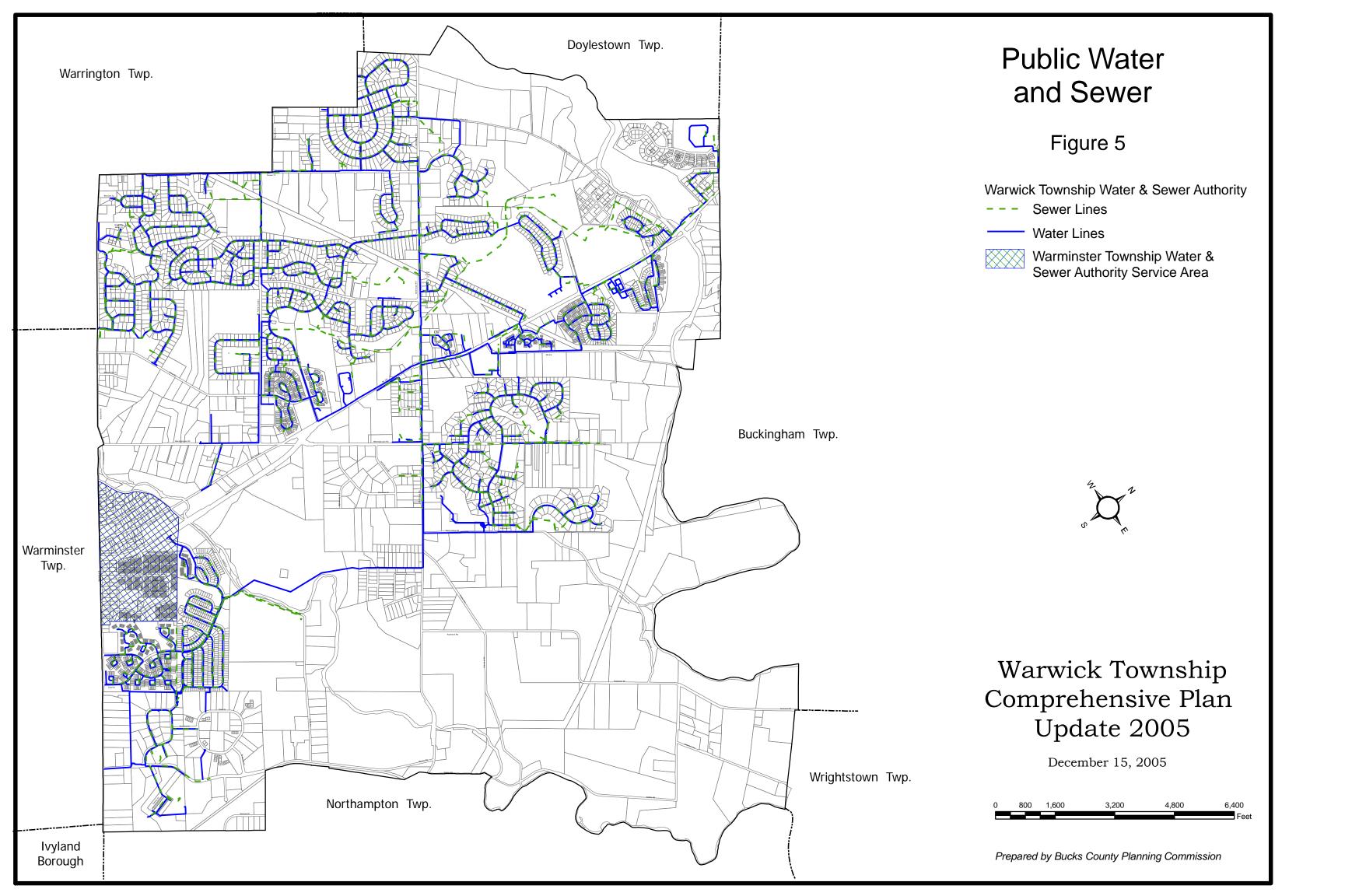


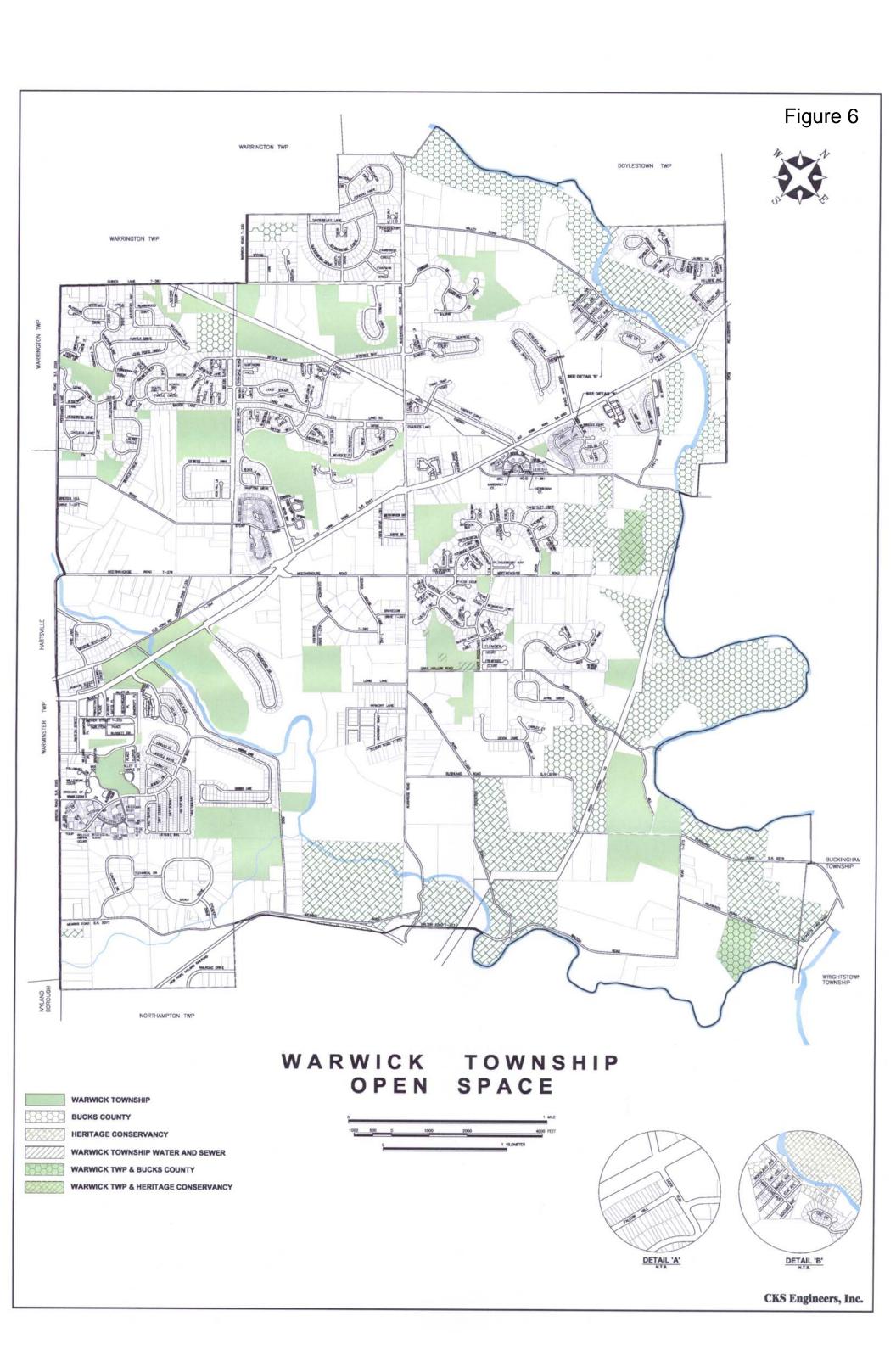


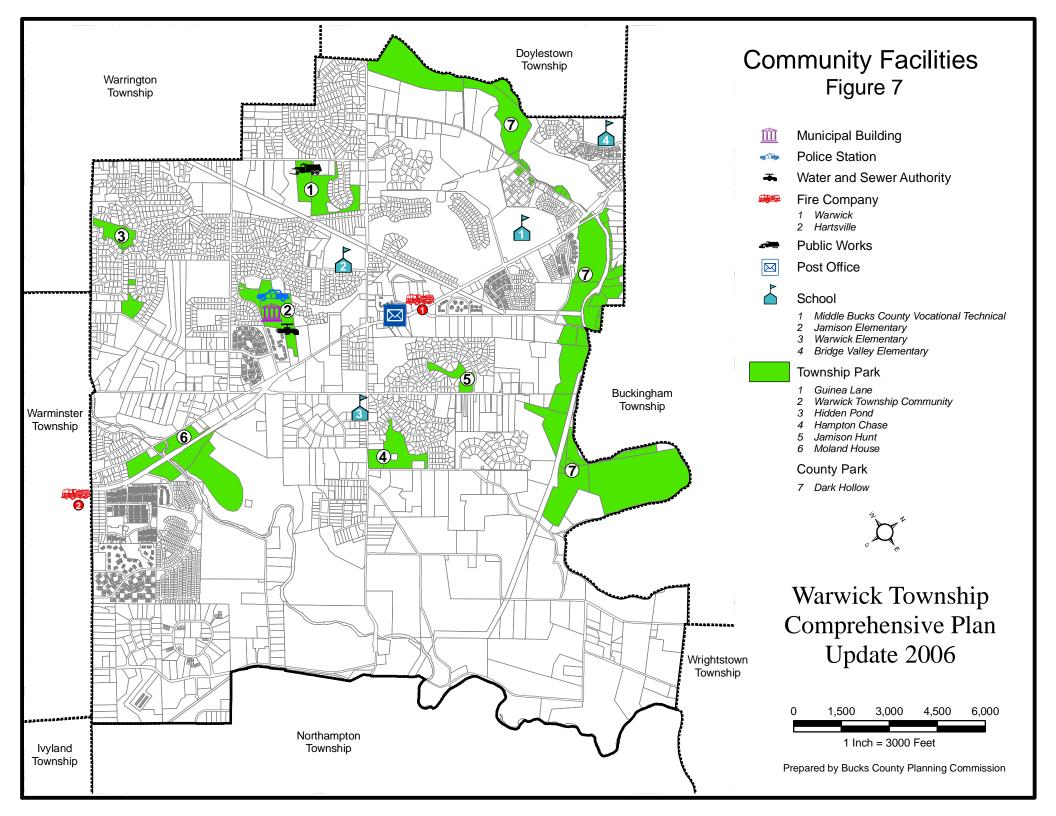
Jamison Village Center District

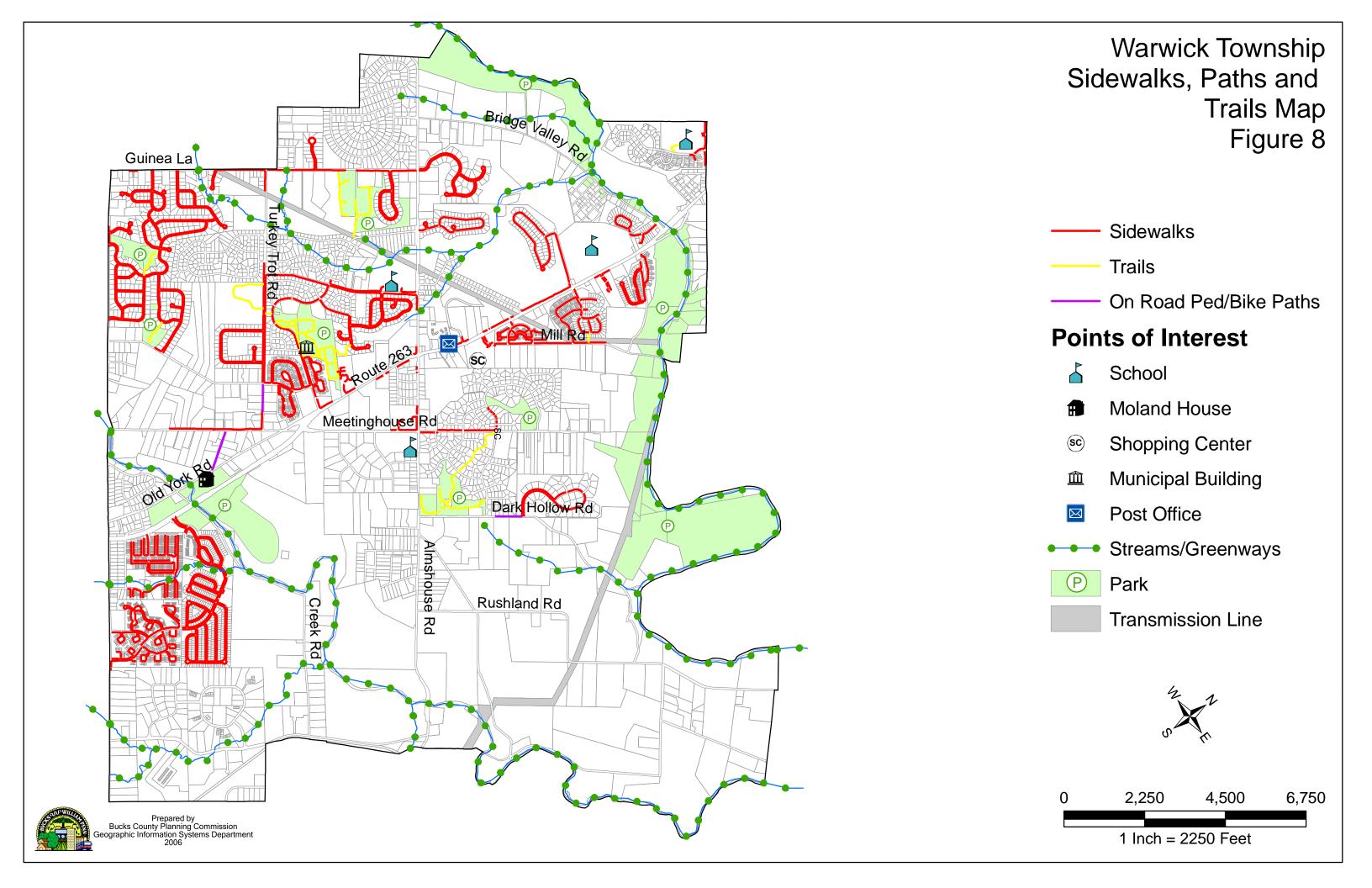
Figure 4

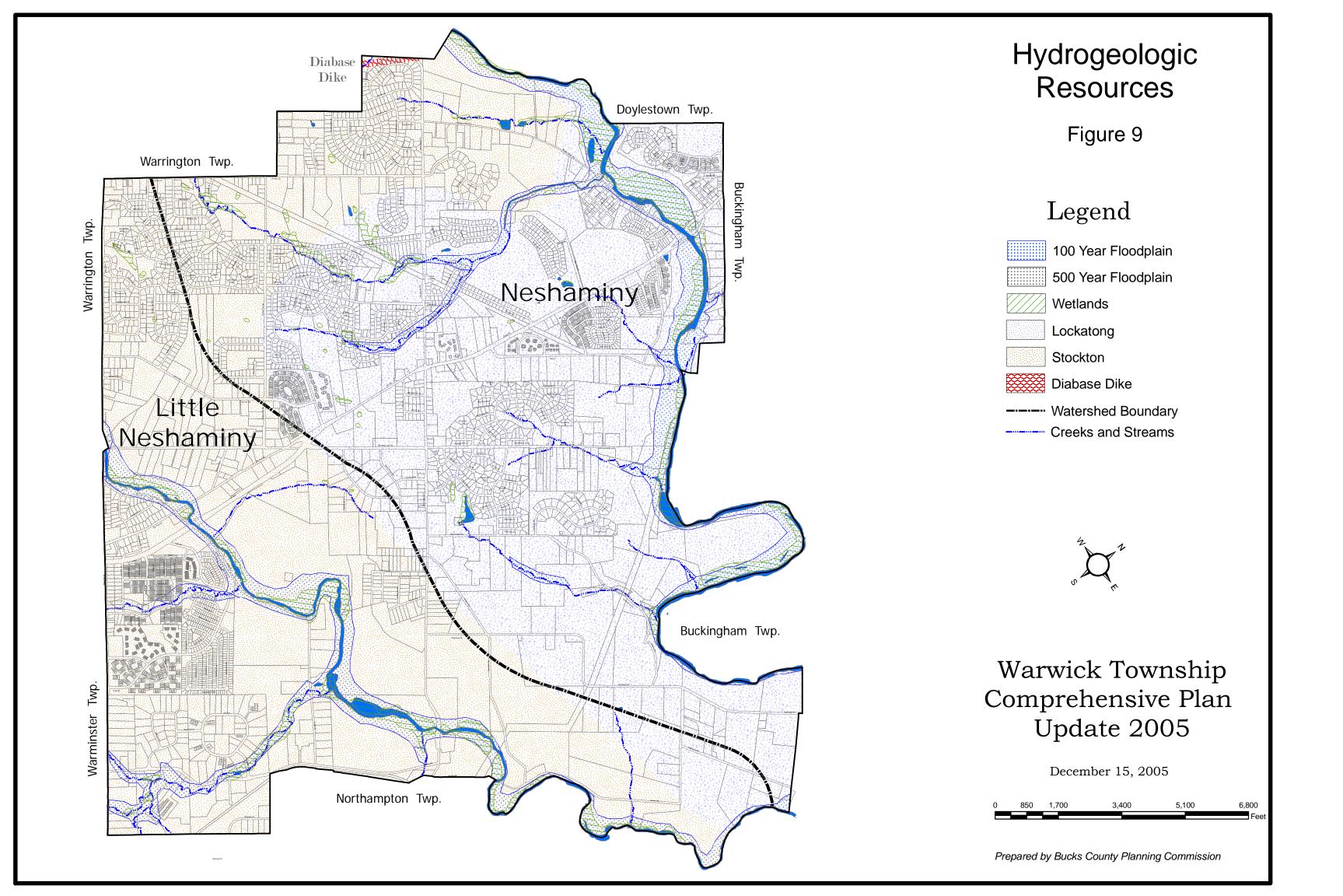














Natural and Historic Resources

Figure 10

Legend

Wooded Areas



Steep Slopes



- More Significant Historic Resource Survey Site-Long Form
- Most Significant Historic Resource Natural Register Site

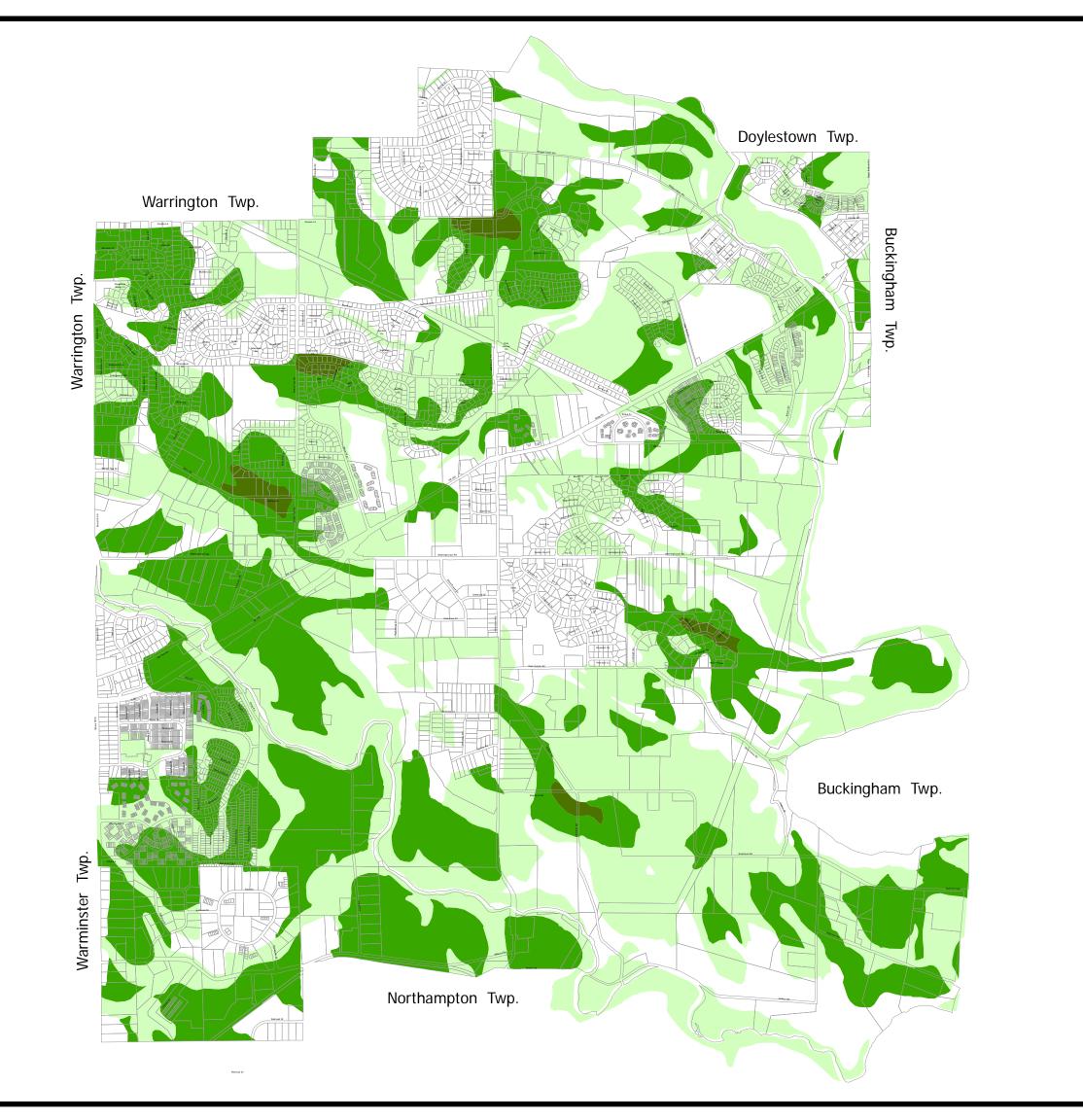


Warwick Township Comprehensive Plan Update 2005

December 15, 2005



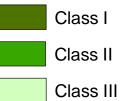
Prepared by Bucks County Planning Commission



Prime Agricultural Soils

Figure 11

Legend





Warwick Township Comprehensive Plan Update 2005

December 15, 2005



Prepared by Bucks County Planning Commission