

# QUAKERTOWN AREA COMPREHENSIVE PLAN UPDATE

Bucks County, Pennsylvania



*August 2007*

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*Photographs on Cover (clockwise from top left):*

Sheard's Mill Covered Bridge, Haycock Township

Main Street, Richlandtown Borough

Broad Street, Quakertown Borough

Traffic roundabout at Station Road and Old Bethlehem Pike, Richland Township

Trumbauersville Road, Trumbauersville Borough

Quakertown Elementary School (first location of the Quakertown Community

School District administrative offices, Quakertown Borough)

Unami Creek, Milford Park, Milford Township

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2007

*Prepared for:*

Haycock Township

Milford Township

Quakertown Borough

Richland Township

Richlandtown Borough

Trumbauersville Borough

Quakertown Community School District

*Prepared by:*

Quakertown Area Planning Committee

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# Chapter 1

## Introduction and Background

This document, an update to the *Quakertown Area Comprehensive Plan*, was prepared under the authority granted by the Commonwealth of Pennsylvania to municipalities to prepare comprehensive plans in accordance with the provisions of the Pennsylvania Municipalities Planning Code (MPC). Article III of the MPC provides requirements regarding the content and information that must be included as part of a comprehensive plan. Article VIII-A provides specific authorization for the governing bodies of multiple municipalities to adopt joint municipal comprehensive plans.

### **A History of Cooperation**

Cooperative planning in the Quakertown Area has a history that extends over 35 years, making it one of the earliest such efforts in Pennsylvania. Following discussions on the possible advantages of joint planning between the six municipalities within the Quakertown Community School District and the Upper Bucks Chamber of Commerce, the Quakertown Area Planning Committee was formed by resolution in 1972. Cooperating municipalities include Haycock, Milford, and Richland townships, as well as Quakertown, Richlandtown, and Trumbauersville boroughs. The seventh active participant is the Quakertown Community School District. Demands on the school district are directly affected by the location, scale, type, and timing of new development. Cooperation among municipalities and the school district allows informed school facilities planning and budget management.

The members of the Quakertown Area Planning Committee have a long-standing commitment to regional cooperation as evidenced by their many accomplishments.

- 1975 Adopted Quakertown Area Zoning Ordinance
- 1978 Adopted Quakertown Area Comprehensive Plan
- 1979 Adopted Quakertown Area Subdivision and Land Development Ordinance  
Adopted Comprehensive amendments to the Quakertown Area Zoning Ordinance
- 1981 Prepared Quakertown Area Linked Open Space Study
- 1982 Prepared Development Areas Analysis
- 1985 Adopted Wastewater Facilities Component to the Quakertown Area Comprehensive Plan
- 1986 Prepared Development Areas Analysis
- 1987 Prepared Quakertown Area Traffic Analysis
- 1991 Prepared Quakertown Bypass Feasibility Study
- 1992 Prepared Update to the Quakertown Area Comprehensive Plan
- 1994 Prepared Update of the Quakertown Area Zoning Ordinance
- 2003 Prepared Update of the Quakertown Area Subdivision and Land Development Ordinance
- 2003 Prepared Update of the Quakertown Area Zoning Ordinance (based on Growing Greener principles)

In addition to completion of these plans, studies, and ordinances, the cooperative planning program provides the forum for municipal officials and school district representatives to share ideas about regional challenges and municipal responsibilities.

## **The Quakertown Area**

Located in the western corner of Bucks County, the Quakertown Area encompasses 72.57 square miles (45,639 acres) and comprises approximately 12 percent of the total area of Bucks County. The area is bordered to the north and west by Lehigh and Montgomery counties, and to the south and east by the Pennridge and Palisades planning areas in Bucks County.

The highway system, which includes routes 309, 313, 663, and the Northeast Extension of the Pennsylvania Turnpike, connects the Quakertown Area to employment, shopping, recreation, service and residential areas in these surrounding regions. Likewise, people travel into the Quakertown Area for the same purposes. Route 309 and the Northeast Extension of the Pennsylvania Turnpike provide direct connections to Interstate 78, which has increased accessibility between the Quakertown Area and markets and employment areas in a much greater region.

The landscape of the Quakertown Area is quite diversified. With the exception of its three boroughs and their immediately adjacent areas, the Quakertown Area is mostly rural.

A variety of natural resources exist throughout this area including a large concentration of wetlands, such as the Quakertown Swamp, which is one of the more critical wildlife habitats in the county for a variety of species. This planning area also contains the greatest amount of park and recreational land in the county. A majority of this acreage is located in Haycock Township, with its extensive State Game Lands, a large portion of Nockamixon State Park and Lake Towhee County Park.

There are areas in the region that are actively farmed, which surround small rural villages. Steep, wooded, rugged areas, most noticeably in Haycock and parts of Richland, have experienced sparse and scattered development. The center of Quakertown Borough typifies a downtown central business district. Quakertown and Richland also contain suburban shopping centers. The Route 309 corridor is a typical example of highway strip-commercial development.

## **Purposes Of This Update**

A comprehensive plan should serve as a document that provides a foundation for local planning, a ready resource containing the policies that guide land-use decisions in a community. It can help a community to shape its future by guiding the formulation of zoning and subdivision ordinances, the acquisition of open space, transportation improvements, the protection of natural and historic resources, and the provision of community facilities. This update is intended to ensure that the Quakertown Area Comprehensive Plan continues to serve as such a resource.

Article III of the MPC sets forth the basic elements that a plan must contain, including the objectives of a community regarding its future development, a plan to meet the housing needs of current and potential residents and implementation strategies for the goals and objectives of the plan. This update reviews the comprehensive plan to guarantee that it still effectively meets these statutory requirements.

A comprehensive plan also represents a community's efforts to learn about current conditions, to determine how change is occurring, and to direct where it is headed. This plan seeks to answer four fundamental questions:



1. **Where is the Quakertown Area today?** What are its characteristics, both those that are assets and liabilities? To answer this question, the plan contains information and data about the Quakertown Area’s natural environment, built features, development patterns, and population.
2. **In what directions is the Quakertown Area headed?** What are the trends, forces, and pressures that shape current conditions and will continue to do so in the future? The plan looks at probable future conditions in the Quakertown Area by considering development patterns, the impact of changes in adjacent communities and the region, and the potential needs of existing and future residents.
3. **What does the Quakertown Area want to look like in the future?** What are the goals of the community and its residents? The plan contains goals and objectives developed as part of the planning process.
4. **How can the Quakertown Area reach its goals?** What steps does the community need to take to achieve its vision of the future? The plan contains recommendations for reaching its goals and indicators that can measure the effectiveness of those recommendations.

This update provides information on current conditions in the Quakertown Area and on the directions that growth and development seem to be following in the community. The goals and objectives have been adjusted as necessary to reflect community needs and desires. Implementation strategies and tools have been incorporated to help municipalities achieve those goals.

The comprehensive plan represents both a culmination of a thorough and ongoing planning effort and, in the case of the Quakertown Area, the reaffirmation of a community partnership that recognizes the need for and benefits of cooperative intermunicipal land-use planning. This update serves as another milestone in that ongoing effort, and as another reaffirmation of the Quakertown Area’s planning partnership. Through the goals, objectives, and recommendations in this plan, the municipalities hope to appropriately guide future development, effectively protect and manage the region’s resources, and maintain a high quality of life for its residents.

## **Time Frame of the Update**

This update to the *Quakertown Area Comprehensive Plan* documents and addresses the changes that have taken place since the last update in 1992 and provides direction for the future to the year 2017.

## **Structure of the Plan**

To achieve the purposes outlined above, the update contains the following elements:

1. **Introduction and Background**—This section provides an introduction to the plan, a background on the Quakertown Area and its regional planning committee, and an overview of the updated plan’s purpose, time frame, and structure.
2. **Community Development Goals and Objectives**—This element establishes the vision for the future of the Quakertown Area and sets the tone for the development of

the various components of the plan. Goals and objectives from the 1992 update were reviewed and revisions were made where necessary, based on input from Quakertown Area Planning Committee representatives and area residents through responses from the resident survey.

3. **Natural Resources**—This element identifies significant natural resources found within the Quakertown Area’s boundaries. It describes and evaluates existing regulations and, where appropriate, offers revisions and additional strategies that reinforce the protection of natural resources.
4. **Development Today and Projected Changes**—This section provides data from the 2000 U.S. Census and other sources to build a demographic profile of the current population and offers projections regarding anticipated population and employment growth to 2020. An up-to-date land-use inventory is included in order to determine the type, amount, location, and interrelationships of land uses found in the Quakertown Area.

This section also updates information on the housing characteristics of the Quakertown Area and the housing needs of present residents and of those individuals and families anticipated to reside in the Quakertown Area within the term of this comprehensive plan. It appraises the nonresidential development potential of the area and considers implications of such development on residential development, transportation resources, and community facilities.

5. **Transportation**—This component describes transportation facilities in the Quakertown Area. It analyzes the efficiency of the circulation network in moving goods and people throughout the region and evaluates improvements, such as traffic calming, signalization, and pedestrian crossings, to enhance vehicular and pedestrian circulation. It also examines the potential of improved public transportation and other alternatives to automobile use.
6. **Community Facilities and Services**—This section analyzes the general adequacy of existing community facilities to meet the needs of current and future residents and develops strategies to improve existing services, where needed. Community facilities and services that are evaluated include police, fire protection, emergency medical services, health care facilities, educational facilities, libraries and municipal facilities.

This section also updates the information in the Sewer and Water Considerations component of the plan to address the adequate supply and protection of water resources serving the Quakertown Area. It also includes discussion and analysis of issues related to stormwater management within the Quakertown Area and to the adequacy of solid waste management for the area.

7. **Park, Recreation and Open Space**—This part identifies the park, recreation, and dedicated open space areas within the Quakertown Area. It analyzes these facilities with regard to existing and future needs by evaluating the need and demand for

additional active and passive recreational facilities, including greenway linkages along preserved open space, natural corridors, stream valleys, agricultural areas, and undeveloped areas that have been identified in the individual municipal open space plans and the Quakertown Area Linked Open Space Plan.

8. **Historic and Cultural Resources**—This component provides documentation regarding the historic and cultural resources in the Quakertown Area. It provides strategies to protect historic resources and policy recommendations and regulatory options to protect the unique features of historic sites and structures, including regulations and policies that encourage adaptive reuse and the rehabilitation of underutilized buildings.
9. **Planning and Zoning in Surrounding Municipalities**—This chapter discusses the compatibility of, and identifies the relationship between, conditions in the Quakertown Area and in adjacent municipalities. The county comprehensive plan is examined to ensure consistency with the plan for the Quakertown Area in goals, objectives, policies, and recommended actions.
10. **Future Land Use and Growth Management**—This element examines current zoning regulations and district boundaries for their appropriateness in light of existing conditions and assesses whether such regulations and boundaries serve to maintain and enhance the community. The relationships among land uses, the natural environment, transportation, community needs, and the interdependencies among all these elements of the Quakertown Area are examined to create a policy plan for the continued vitality of the area.
11. **Municipal Finance Considerations**—This element evaluates existing and future expenditures for the Quakertown Area municipalities and assesses potential revenue and funding sources available to assist local officials with the cost of implementing public improvements. It includes a preliminary capital improvements program process and model for the municipalities.
12. **Implementation of Recommendations**—This section lists and describes the policies and recommendations developed in each component of the plan along with a suggested time frame for accomplishing the recommendations. Both short- and long-term implementation strategies are included, to provide municipal planning commissions and officials with a set of guidelines to follow in making decisions and developing programs for implementing the comprehensive plan. This section also provides quantitative and qualitative indicators and benchmarks to give feedback to the municipalities on their progress toward attaining their goals.



## Chapter 2

# Community Development Goals and Objectives

The following community development goals and objectives shall serve as guidelines for conservation, growth, development, and land-use management within the Quakertown Area. The goals and objectives are organized by topics that correspond to each section of the comprehensive plan.

The goals are general actions that should be taken to achieve desired conditions within the Quakertown Area. Under each goal is a set of objectives that is a more specific list of guidelines for actions and program development.

In 2005, a resident survey was sent to all households in the Quakertown Area to solicit comments and identify issues of importance to the community. The results of this survey, included in Appendix A, were used to help shape the Quakertown Area's community vision through the development of these goals and objectives as well as plan recommendations.

This plan update continues to espouse the development area concept, whereby anticipated growth for a specific time period is directed into areas with existing infrastructure to support it, and/or into concentrated areas of existing development, such as the villages. A cornerstone of the *1978 Quakertown Area Comprehensive Plan*, this land-use concept was reaffirmed in the 1992 comprehensive plan update and continues to be affirmed in this update.

The development area concept makes the best use of existing land-use patterns and facilities and presents the most reasonable approach to implement the community development goals and objectives stated in this plan. A more comprehensive explanation of the development area concept is in Appendix B of this document.

The following are reaffirmations, restatements, or expansions of the goals and objectives stated in the Quakertown Area Comprehensive Plan of 1992.

### **Natural Resources**

**Goal:** Protect the people's right to clean air, pure water and the other natural resources of our environment and to guarantee a quality environment for present and future residents of the Quakertown Area.

### **Objectives**

1. Protect significant natural resources such as bodies of water, floodplains, wetlands, woodlands, steep slopes, and sensitive wildlife habitat.

2. Minimize negative environmental impacts by protecting specific natural features of the landscape through natural resource standards and low-impact design requirements incorporated in zoning and subdivision and land development ordinances.
3. Allow the location of natural features to help guide the type and intensity of land uses in the Quakertown Area.
4. Conserve the Quakertown Area's groundwater supply through sewage facilities planning, water resources planning, effective stormwater management, enforcement of sound development standards, and promotion of proper site design.
5. Require evaluation of environmental impacts of certain planning, zoning, and development decisions and minimize adverse environmental impacts through sound design and proper planning.
6. Ensure proper collection, treatment, and disposal of wastewater and remedy conditions where pollution exists. Water supplies must be managed wisely and protected from contamination and depletion. To achieve this, water that eventually becomes effluent should be used when feasible, to recharge the groundwater resources.

## **Development Today and Projected Changes**

### **A. Residential Development**

**Goal:** Provide safe and adequate housing for present and future residents of all socio-economic characteristics.

#### **Objectives**

1. Ensure that zoning ordinances provide for a variety of housing types and that sufficient land is designated for higher-density uses to accommodate a fair share of regional housing growth between 2007 and 2017.
2. Promote the public health, safety, and welfare by ensuring a quality living environment that provides quality housing through sound zoning and subdivision and land development standards and modern building and fire codes.
3. Adopt flexible site development requirements and encourage the use of cost-effective technology and materials.
4. Evaluate and, if necessary, adjust the low- and moderate-income housing density bonuses in zoning ordinances in order to encourage developers to produce more affordable housing.
5. Permit mixed land uses that could provide opportunity for more affordable housing.

6. Encourage walkable communities that create a sense of community and promote a pedestrian-friendly environment.
7. Permit various residential options, such as accessory apartments, elder cottages, and continuing care facilities, to meet the needs of elderly and disabled residents.
8. Encourage efforts to preserve and rehabilitate existing housing stock and infill housing that is architecturally compatible with the surrounding neighborhood.
9. Require evaluation of zoning change requests to determine the impact on the mix of housing opportunities and accommodation of a fair share of regional housing growth.
10. Ensure that new higher-density residential development is located in areas with existing or planned infrastructure.
11. Ensure that new residential development in the aggregate includes a variety of housing types and intensities to provide for balance and diversity in the housing stock.
12. Cooperate with private efforts to provide affordable housing that is attractive, structurally sound, and integrated into the community.
13. Encourage use of cluster and mixed residential forms of development to protect vulnerable natural features, provide for open space, permit better site design, increase housing opportunities and minimize site development costs.

## **B. Nonresidential Development**

**Goal:** Encourage nonresidential development that is well integrated and compatible with the surrounding context and character of the area, and that has minimal impact on the highway network and other services.

### **Objectives**

1. Encourage concentration of convenience retail uses at selected areas near residential neighborhoods.
2. Discourage strip commercial development.
3. Permit industrial and commercial uses in designated areas with due regard for protection of neighboring land uses.
4. Require high standards to control nuisances such as objectionable odors, noise, smoke, and hazardous material of any kind.

5. Minimize potential conflicts of nonresidential land uses upon adjacent residential uses through appropriate land-use and zoning measures, in cases where mixed land uses are not desirable.
6. Encourage high-quality office, commercial, and industrial development to enhance the tax base within the region.
7. Concentrate nonresidential development in areas zoned for such uses that contain adequate water, sewer, drainage and highway facilities to support such development.
8. Promote standards that require the size, scale and architecture of nonresidential development to be consistent with the existing character of the area.
9. Promote adaptive reuse and redevelopment initiatives for abandoned industrial and commercial sites.
10. Require full evaluation of requests to expand nonresidential areas in order to determine the impacts on municipal services, the highway network and natural features of the landscape.
11. Support, encourage and assist joint efforts of nonresidential property owners, developers and businessmen to improve conditions in commercial and industrial areas.
12. Encourage continued use and revitalization of the Quakertown Borough center as an area of compatible mixed uses typical of a traditional town center.

## **Transportation**

**Goal:** Foster an efficient, comprehensive transportation system by protecting, maintaining, and improving the carrying capacity of the region's highway network; by making improvements that will eliminate or avoid hazardous transportation conditions for motorists, bicyclists and pedestrians; and by expanding the mass transit and non-automotive options for travel within the Quakertown Area.

### **Objectives**

1. Link transportation planning efforts with future land-use planning.
2. Continue to promote access-management techniques that protect the function of arterial roadways, and encourage traffic calming measures to increase the safety of motorists, pedestrians, and bicyclists.
3. Require an evaluation of the impact on the capacity of the road system for major developments, conditional uses, special exceptions, and zoning change requests.



4. Make provisions for safe pedestrian and bicycle movement, which will relieve some need for automobile use.
5. Develop a capital improvements program for needed highway improvements.
6. Develop funding programs whereby costs of needed improvements are shared by municipalities, the Commonwealth, adjacent municipalities, and developers.
7. Implement the recommendations of the *Quakertown Area Transportation Improvement Project* (May 2000).
8. Participate in efforts to improve the Routes 313/663 corridor through the central and upper parts of Bucks County.
9. Participate in efforts to improve public transit service to reduce pressure on the road system.

## **Community Facilities and Services**

### **A. Water and Sewer Facilities**

**Goal:** Ensure an adequate supply of potable groundwater and plan for adequate sewage facilities to meet the present and future needs of the region.

#### **Objectives**

1. Base sewer and water facilities planning (capacities and service areas) on projections and land-use goals of this comprehensive plan and guidelines of the municipal Sewage Facilities Plan (Act 537).
2. Coordinate expansion of these services with planning for all critical infrastructure.
3. Provide for the efficient use of areas currently served by public sewer and water facilities and avoid the extension of these services until the areas around existing lines are fully developed.
4. Plan for the reliable supply of water, considering current and future water resources availability, uses and limitations, and provisions to protect water supply sources.
5. Provide the balance of aquifer withdrawals and recharge so that the long-term safe yield of the aquifer is not exceeded.
6. Ensure that, in efforts to recharge groundwater resources, the quality of water is acceptable.
7. Promote intermunicipal cooperation for water service and wellhead protection.

8. Affirm that uses permitted under zoning ordinances are based on goals and land-use guidelines included in this comprehensive plan as well as changing municipal needs as identified by elected officials and planning commissions and that access to sewer and water facilities does not justify a change in land use.

## **B. Stormwater Management**

**Goal:** Require effective management of stormwater runoff to promote the health and welfare, and safety of the community by reducing the danger of flooding and improving water quality and groundwater recharge.

### **Objectives**

1. Manage stormwater runoff created by new development activities, taking into account the cumulative watershed-wide stormwater impacts from peak runoff rates and runoff volume.
2. Preserve existing natural drainage and watercourses and provide proper maintenance of all stormwater management facilities.
3. Maximize groundwater recharge where appropriate and attainable throughout the watersheds and encourage the use of best management practices to increase recharge and improve water quality.
4. Ensure that the stormwater management regulations of the municipalities are consistent with their respective Act 167 stormwater management plans.
5. Ensure that the Quakertown Area municipalities are in compliance with the stormwater discharge regulations of the National Pollutant Discharge Elimination System.

## **C. Municipal and School District Services**

**Goal:** Provide needed and desired services within constraints of fiscal abilities.

### **Objectives**

1. Strengthen the tax base by encouraging the development of a variety of complementary nonresidential uses in appropriate locations.
2. Provide adequate public safety and protection that makes the Quakertown Area a safe and desirable community in which to live.
3. Consider the emergency and health-care needs of all present and future residents to adequately plan for the provision of needed facilities/services.

4. Adopt sound emergency management practices.
5. Avoid duplication of facilities and services, and reduce the cost of procurement of materials through cooperation with surrounding municipalities.
6. Require that developers contribute a fair share of costs of new services and facilities that result from rapid growth in the Quakertown Area.
7. Explore other possibilities for municipal cooperation, such as the sharing of equipment and resources, bundling major purchases of vehicles, road maintenance materials and other supplies, or creating joint agencies to provide services (such as police or public works) in an effort to promote efficiency and reduce spending.
8. Cooperate with the school district to encourage appropriate locations of new or expanded facilities.

## **D. Solid Waste Management**

**Goal:** Provide for environmentally sound, adequate, and comprehensive management of solid waste to protect the health, safety, and welfare of present and future residents, as well as the natural environment of the Quakertown Area.

### **Objectives**

1. Cooperate in the management of solid waste with Bucks County and other participating municipalities under Act 101 of 1988, as amended.
2. Promote recycling and composting efforts as a means to facilitate waste reduction.

## **Park, Recreation, and Open Space**

### **A. Park and Recreation Planning**

**Goal:** Provide recreational opportunities, including active and passive recreation facilities, for municipal residents of all ages.

### **Objectives**

1. Implement park and recreation plans in municipalities that have prepared and formally adopted such plans and encourage preparation of park and recreation plans in other municipalities.
2. Cooperate among participating municipalities and the school district to offer a wider range of facilities and programs than a single municipality can provide and avoid the unnecessary duplication of facilities and programs.

3. Coordinate planned trail connections between open space areas, recreation lands, and appropriate community facilities and points of interest on a regionwide basis.
4. Recognize that in rapidly growing areas, such as the Quakertown Area, parks and recreation facilities are important improvements and are vital aspects of any development proposal. Ordinance requirements for these improvements and fees to provide municipal-scale facilities are appropriate methods of addressing recreational needs of the Quakertown Area. Such requirements, under the provisions of Section 503(1) of the Pennsylvania Municipalities Planning Code, should be included in municipal subdivision and land development ordinances.

## **B. Open Space Planning**

**Goal:** Promote open space preservation that contributes to the rural character of the Quakertown Area.

### **Objectives**

1. Continue to implement the goals of the adopted municipal open space plans.
2. Preserve open space and farmland in strategic locations throughout the Quakertown Area.
3. Revise the *Quakertown Area Linked Open Space Plan* to re-evaluate areas of appropriate linkages by considering all open space and preserved areas within the greater Quakertown region, and to promote accessibility to such linkages.
4. Refer to the *Quakertown Area Linked Open Space Plan* and any applicable municipal open space plan during review of subdivisions and land development proposals and discuss with developers incorporation of identified links into development plans.
5. Require useable open space in residential developments that is adaptable for active or passive recreation.
6. Support state and federal programs that result in the continuation of open space in the municipalities and evaluate potential funding sources for open space acquisition.
7. Promote the preservation of agricultural land through sound land-use policies and regulations.
8. Encourage farmland and open space preservation through conservation easement, purchase, donation, and other viable options.
9. Promote private initiatives in conjunction with public funding sources to protect strategic open space lands.

## Historic and Cultural Resources

**Goal:** Preserve significant historic and cultural resources and scenic views and vistas throughout the Quakertown Area.

### Objectives

1. Support efforts that will protect and enhance historic and cultural structures and areas of the Quakertown Area.
2. Protect the character and enhance the quality of the Quakertown Area's villages through appropriate land planning techniques and ordinance standards.
3. Foster local, state, and national registration of structures and sites that are of historic significance and protect, by similar means, the immediate area surrounding these landmarks.
4. Protect scenic views and roadways from the negative impact of future development through appropriate regulatory measures.
5. Promote private initiatives in conjunction with public funding sources to protect strategic historic and cultural resources.
6. Protect historic neighborhoods with the use of historic district overlay zoning.

## Future Land Use and Growth Management

**Goal:** Guide the form, location and timing of growth in order to protect the natural environment, enhance the built environment and establish living and working environments that are properly provided with a full range of services and facilities.

### Objectives

1. Recognize that a certain amount of growth is inevitable and imminent. It is the intent of this update in the continuing planning process to provide areas sufficient to accommodate the anticipated need for a variety of housing types and densities and for nonresidential uses for the period from 2007 to 2017.
2. Direct more intensive residential and nonresidential development into *development areas* where supportive services and facilities can be economically and efficiently provided.
3. Limit development in *reserve areas* to low-intensity, rural uses where, during the time frame of this planning period, supportive services and facilities cannot or should not be provided.

4. Recognize that, other than areas used or intended for higher-density housing and intensive nonresidential uses, the Quakertown Area is essentially rural or semi-rural in character. Planning efforts shall protect this character while providing for anticipated new development in appropriate locations.
5. Ensure that land designated for more intensive residential and nonresidential uses are areas currently served or are intended to be served by infrastructure.
6. Base any further expansion of higher-density residential or non-residential areas on demonstrated need for expansion and on specific and committed improvements in infrastructure and services.
7. Recognize that responsibility for improvements to the Quakertown Area's road system is shared by municipalities, the Commonwealth, and developers.
8. Develop programs and procedures that will coordinate the provision for all infrastructure and services.
9. Coordinate provision of services with new development and take steps to resolve existing deficiencies in services and facilities up to meet needs of current residents.
10. Recognize that changes in federal and state funding programs have decreased funds available for services and facilities at a time of increased demand due to the rate and magnitude of development and develop new methods of funding services and facilities to meet needs of current and future residents.
11. Where appropriate, encourage traditional neighborhood developments, which are pedestrian-oriented, mixed-use communities that allow housing to be placed near work and community facilities, thereby reducing reliance on the automobile.

## Chapter 3

# Natural Resources: Policies and Protection Standards

The natural features of the landscape contribute to the quality of life in the Quakertown Area. Farmland, woodlands, steep slopes, stream valleys, and gently rolling open spaces are some of the resources that are both visually attractive and have important functions in the ecology of the region. If these features are to remain assets, land-use decisions must consider protection of specific natural resources.

Environmental features are best protected by limiting development, encroachment, grading, or intrusion into areas containing these natural features. Since enactment in 1975 of four zoning ordinances based on the model Quakertown Area Zoning Ordinance (adopted by Haycock, Milford, and Richland townships and Trumbauersville Borough), specific natural features have been regulated by municipal standards. These ordinances have established maximum, quantifiable encroachment standards based on the capacity of the natural feature to withstand effects of clearing and grading.

The intensity and location of buildings and site alterations are limited by these standards, which are intended to accommodate disruption with minimal impacts on the site and areas beyond its boundaries. These ordinances also require a site capacity calculation, a procedure for site evaluation that limits the impacts of site development.

Development practices that include concern for natural limitations of the land often benefit both the builder and the community. For example, development that preserves floodplains and wetlands protects property and saves money. Proper grading in steep slope areas and the protection of natural forest cover helps avoid soil erosion and sedimentation in drainage systems, reducing the costs of treating stormwater runoff and maintaining stormwater facilities. Low-impact development techniques that minimize intrusions into sensitive resource areas reduce the need for extensive infrastructure and revegetation of the site. These and similar costs are minimized when development takes place within the natural limitations of the land.

### **Constitution and Statutory Precedent**

The basis for the protection of natural features is found in the Commonwealth's Constitution, in judicial decisions and in the Pennsylvania Municipalities Planning Code (MPC). In 1968, the constitution was amended by a vote of the people of Pennsylvania to state in Article 1, Section 27:

The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and aesthetic values of the environment. Pennsylvania's public natural resources are common property of all people, including generations yet to come.

The Pennsylvania courts have had to evaluate how this constitutional provision would be applied and who would assume the role of protector of these rights of the people. The Commonwealth Court has stated that, although various state departments have certain responsibilities, the local

governments of the Commonwealth have been delegated authority for land-use planning and preservation of open space and natural features under the MPC.

The constitutional mandate must rely on various statutes of the Commonwealth for implementation. The state laws specify responsibility for different aspects of natural resource protection.

The Commonwealth Court has also stated that, in exercising this responsibility, municipalities must permit reasonable development of property while managing public natural resources. The court emphasized that controlled development, rather than no development, should be the focus and is the responsibility of local governments.

### **MPC Mandates**

The Pennsylvania legislature, through the MPC, has charged local governing bodies with the responsibility for protecting citizens' health, safety and welfare through comprehensive planning and land-use regulation. Over the years, particularly in the 1978, 1988, and 2000 amendments to the MPC, natural resources protection has been emphasized increasingly. The MPC includes the following provisions:

*Section 301(a)(6).* The municipal comprehensive plan shall include a plan for the protection of natural and historic resources to the extent not preempted by federal or state law. This clause includes, but is not limited to, wetlands and aquifer recharge zones, woodlands, steep slopes, prime agricultural land, floodplains, unique natural areas, and historic sites.

*Section 503(2)(v).* A subdivision and land development ordinance may include provisions for ensuring that land which is subject to flooding, subsidence, or underground fires either shall be safe for the proposed use or that these areas shall be set aside for uses that do not endanger life or property.

*Section 603(c)(7).* Zoning ordinances may contain provisions to promote and preserve prime agricultural land, environmentally sensitive areas, and areas of historic significance.

*Section 605(2)(ii), (iii), and (vii).* Where zoning districts are created, all provisions shall be uniform for each class of uses or structures, within each district, except that additional classifications may be made within any district for the regulation, restriction, or prohibition of uses or structures at, along, or near natural or artificial bodies of water, places of relatively steep slope or grade, or other areas of hazardous geological or topographical features, floodplain areas, agricultural areas, sanitary landfills, and other places having a special character or use affecting or affected by their surroundings.

*Section 606.* The zoning ordinance shall include or reference a statement of community development objectives relating to the need for protecting natural resources.

*Sections 609.1(c)(3) and (4) and Sections 916.1(c)(5)(iii) and (iv).* In evaluating a substantive challenge to the validity of a zoning ordinance by a landowner, the governing body or the zoning hearing board shall determine the suitability of the site for the intensity of use proposed by the site's soils, slopes, woodlands, wetlands, floodplains, aquifers, natural



resources, and other features. It shall also evaluate the impact of the proposed use on the site's soils, slopes, woodlands, wetlands, floodplains, natural resources, and natural features, the degree to which these are protected or destroyed, the tolerance of the resources to development and any adverse environmental impacts.

## **Critical Natural Features**

Through the 1978 Quakertown Area Comprehensive Plan and its subsequent update in 1992, conservation goals and development guidelines that protect environmentally sensitive areas were adopted. A systematic approach to protection policies and standards has been included in zoning ordinances.

Specific natural features are identified. Encroachment, intrusion, building or regrading is limited or prohibited in such areas based on the resource's tolerance to development. Development in certain natural resource areas will result in hazards to life and property. Development or clearing in other areas of natural features will degrade the natural resource or destroy it.

Specific areas of concern are discussed below. Definitions of resources are in Appendix C.

## **Hydrological Resources**

### ***Floodplains and Floodplain (Alluvial) Soils***

Floodplains are relatively flat or low-lying areas adjacent to surface waters where flooding has occurred in the past and will likely occur in the future. During periods of heavy rains and high stream flow, floodplains provide temporary storage for floodwaters, reducing flooding threats to adjacent areas and providing a slower, more consistent flow of water. Some floodplain areas absorb and store large amounts of water and become a source of aquifer recharge.

Floodplain soils or alluvial soils are eroded soils deposited from previous floods along the banks of streams or other watercourses. The natural vegetation supported by moist floodplains helps trap sediment from upland surface runoff, stabilizes stream banks for erosion control, and provides shelter for wildlife and proper stream conditions for aquatic life.

Smaller streams and watercourses have not had floodplains identified by the Federal Emergency Management Agency (FEMA). In these areas, floodplain soils are used as indicators of floodplains.

There are approximately 5,791 acres of floodplains in the Quakertown Area (roughly 12.7 percent of the total area). Many of the region's scenic areas are found within the floodplain of stream valleys with their lush vegetation, steep slopes, and attractive open space. Floodplains are shown in Figure 1 at the back of this document.

The Pennsylvania Floodplain Management Act (Act 166 of 1978) requires municipalities identified by the Flood Insurance Administration as having floodprone areas to participate in the National Flood Insurance Program (NFIP), which is administered by FEMA. Under the administration of the state Department of Community and Economic Development, floodprone municipalities are required to adopt ordinances that meet NFIP standards for regulating development in the floodplain.

The major objective of floodplain regulation is to reduce flood hazards. Structures built in the floodplain not only face risks of flood damage but become obstructions that raise flood levels and increase water velocities. This is especially true in the floodway portion of the 100-year floodplain, where high velocity flows occur.

Development within the flood fringe, while permitted by the NFIP, is discouraged. Filling in fringe areas can cause loss of major areas that store floodwaters, increases flood levels and increases the rate and amount of runoff. Development in this flood fringe can also increase the magnitude and frequency of normally minor floods.

Floodplain limitations do not preclude all development. Agricultural uses, private and public recreational uses, (e.g., golf course, ball fields, day camps, picnic grounds, tennis courts, wildlife and nature preserves, swimming areas, bicycling and horseback trails, hunting and fishing areas, hiking trails), yard areas for residential and nonresidential uses, and temporary uses such as circuses and carnivals are permitted. Uses permitted by special exception include utilities, public facilities, and improvements such as bridges, streets, transmission lines, and pipelines; water-related uses such as docks, piers, and marinas; pervious parking areas; and the storage of materials and equipment, provided they are not buoyant, flammable, explosive, or polluting.

Any residential or nonresidential use granted a variance to permit construction within the 100-year floodplain must have its lowest floor elevated 1 1/2 feet above the 100-year flood elevation. The structure must also be anchored to prevent flotation, collapse, and lateral movement. Fill activities are limited since the cross-sectional area of the floodplain cannot be reduced by more than 3 percent (1 1/2 percent on either side of the centerline of the watercourse).

Floodplain (alluvial) soils are important in areas where the floodway and flood fringe areas have not been identified and calculated under the NFIP. In these unmapped areas, the floodplain soils indicate where flooding has occurred in the past. Unless a hydrological study is undertaken to prove that flooding has not occurred in recent times, these floodplain soils should be considered part of the floodplain. In 2002, the Natural Resource Conservation Service issued a comprehensive new soil survey with new soil classifications.

FEMA encourages municipalities to preclude development and filling of flood fringe areas. With the exception of Richlandtown Borough which does not have floodplain areas needing protection, all of the other Quakertown Area municipalities meet FEMA's minimum standards. It is recommended that the municipalities continue to retain these minimum standards in light of the topography and drainage characteristics in this region. Also, references to the 1975 soils survey and its soil classifications in municipal ordinances should be updated to reflect the 2002 soil survey and its new soil classifications.

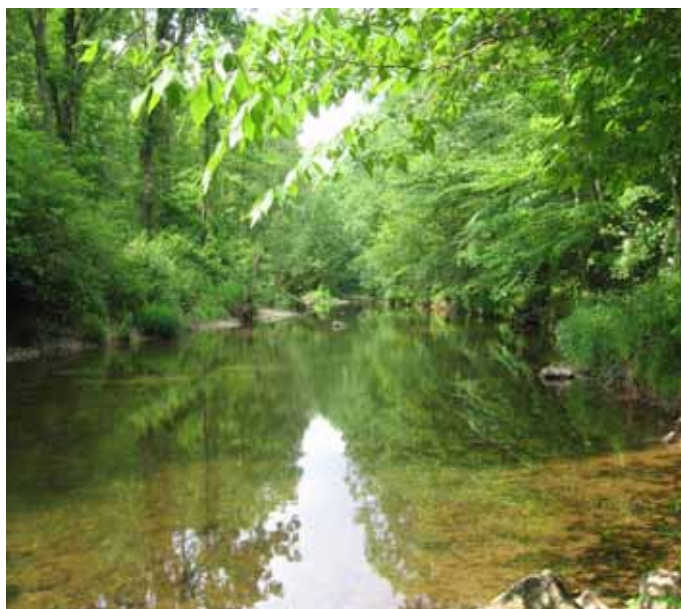
### ***Watercourses***

The Quakertown Area contains three primary watersheds—Tohickon, Perkiomen, and a small area of the Delaware River (North) (See Figure 2). The dividing line between the Tohickon and Perkiomen watersheds generally parallels the municipal boundary between Milford and Richland townships. All Quakertown Area municipalities are located either completely or partially in the Tohickon Watershed while most of Milford and Trumbauersville, and portions of Richland and

Quakertown, are located within the Perkiomen Watershed. Very small areas in the northwestern portion of Haycock and northeastern portion of Richland are within the Delaware River (North) Watershed.

Originating in the northern portion of Bucks County, the Tohickon Creek Watershed drains approximately 108 square miles, 43 square miles of which are located in the Quakertown Area, and eventually discharges its stream flow into the Delaware River at Point Pleasant in Plumstead Township. Within the Quakertown Area, major tributaries to the watershed include Haycock Creek, Kimples Creek, Dry Branch Creek, Hickon Creek, Licking Run, Morgan Creek, Tohickon Creek, and Bog Run. The Bog Run Secondary Watershed is located in portions of East Rockhill and Richland townships and generally corresponds to the environmentally sensitive area known as the Quakertown (Great) Swamp.

In its entirety, the Perkiomen Watershed contains roughly 362 square miles, is located in Bucks, Lehigh, and Montgomery counties, and eventually drains into the Schuylkill River. Within the Quakertown Area, the Perkiomen Watershed contains two secondary watersheds—Unami and Macoby. The Macoby Watershed is located in the far-western portion of Milford Township. The Unami Watershed encompasses most of Milford, Trumbauersville, and small portions of Quakertown and Richland (and West Rockhill Township).



*Unami Creek in Milford Park*

Small areas in the northern portions of Haycock and Richland townships, totaling slightly less than half of a square mile, are located within the Delaware River (North)

Watershed. In its entirety, the Delaware River (North) Watershed drains approximately 75 square miles and includes numerous subwatersheds that drain directly or eventually to the Delaware River. The major tributary to the watershed in this portion of the Quakertown Area is Cooks Creek, which has been recognized by the Pennsylvania Fish and Boat Commission as the only exceptional value stream in Bucks County.

The Pennsylvania Department of Environmental Protection (DEP) established five stream-quality designations. In order of increasing water quality standards the stream quality classifications include: Warm Water Fishes (WWF), Cold Water Fishes (CWF), Trout Stocked Fishes (TSF), High Quality-Cold Water Fishes (HQ-CWF), and Exceptional Value (EV). Listed on the next page are tributaries within the Quakertown Area that have received quality designations from DEP.

Streams that receive exceptional value designation have the highest protection level; the water quality of such streams shall not be lowered. The designation of high quality provides a measure of protection against uses and activities that would degrade the water quality of the stream. Any uses and activities that would degrade stream quality may be denied a permit.

Stream Name	WWF	CWF	TSF	HQ-CWF	EV
Beaver			X		
Bog			X		
Butter				X	
Cooks					X
Dry Branch			X		
Haycock			X		
Hazelbach				X	
Hickon			X		
Kimples			X		
Licking				X	
Licking Run			X		
Macoby			X		
Molasses				X	
Morgan			X		
Ridge Valley				X	
Schmoutz				X	
Tohickon			X		
Unami				X	

Source: Pennsylvania DEP

The surface waters and groundwater are interrelated components of the hydrologic system. These elements ultimately need to be related to land-use planning, water supply planning, sewage facilities planning, flood control, stormwater management, and erosion and sediment control. The following strategy offers a reasonable approach to protecting the area's streams and watersheds that municipalities may wish to consider as an enhancement to existing floodplain, watercourse, wetland, and lake/pond shoreline protection requirements:

**Riparian Buffer Zones** – Development and activities that remove vegetation from streambanks create a variety of negative consequences on watercourses. Without the vegetative buffer, runoff from adjacent lands enter the stream more quickly, exacerbating stream bank erosion, increasing floodwaters during significant flood events, and decreasing stream flows during the normal stream cycle. In addition, pesticides and herbicides used in lawn care and agricultural cultivation, as well as sediment from construction activities, are able to flow directly into the stream when it rains.

An effective way of reducing these impacts to streams is to establish riparian buffer zones. A riparian buffer zone is the normally vegetated or wooded area occurring along a streamside, which is protected by ordinance in 100 percent open space. To be effective, buffer zones should be at least 50 feet in width from either side of the stream (100 feet total). Such buffer zones also provide stormwater management benefits and help to protect water quality in streams.

Milford Township is currently the only municipality within the Quakertown Area to have incorporated riparian corridor protection standards in its zoning ordinance. To provide maximum protection to the area's streams and watersheds, all Quakertown Area municipalities should establish riparian corridor protection standards.

### ***Wetlands and Wetland Margins***

Wetlands are undrained, saturated soils that support wetland vegetation where the water table is at or near the surface or where shallow water covers the area due to permanent or seasonal inundation of surface or groundwater. Typically, wetlands occur as marshes, swamps, and bogs.

The protection of wetlands is important for several reasons. Wetlands play a key role in maintaining and improving water quality by filtering out chemical and organic wastes. Wetlands store water during storms and floods, thereby reducing hazards to life and property. Wetlands provide groundwater recharge. Finally, wetlands are important habitats for many threatened or endangered plants and animals.

Wetlands are shown in Figure 2. Wetland areas greater than 10 acres are dispersed throughout the Quakertown Area, though many are located near the area's streams. A particularly significant area of wetlands is the Quakertown Swamp, located primarily in the southern portion of the Quakertown region and extending into East Rockhill and West Rockhill townships.

According to the Heritage Conservancy, the 518-acre Quakertown Swamp is the largest freshwater inland wetland in southeastern Pennsylvania. It is a palustrine nonglacial bog that provides a critical wildlife habitat and is a natural plant community for numerous wetland species. Seasonally high water tables and large areas subject to occasional ponding or puddling identify this region as a remnant of the original great swamp.



*Quakertown Swamp*

Listed as an all-important wetland area by the U.S. Fish and Wildlife Service, the Quakertown Swamp is part of the Heritage Conservancy's *Lasting Landscapes* initiative that identifies and maps significant landscapes and develops protection strategies for implementation. Richland Township, which contains areas of this important resource, should continue to coordinate with the Heritage Conservancy to implement recommended protection measures.

In addition to local protection standards, wetlands are regulated by the U.S. Army Corps of Engineers and the Pennsylvania DEP by authority of the Federal Clean Water Act and various state laws. The Corps requires a permit to disturb wetlands greater than one acre. State and/or federal agencies that permit wetlands disturbance may require that the loss of wetlands be mitigated by the creation of wetland areas elsewhere. The Pennsylvania DEP also regulates wetlands under Chapter 105 Rules and Regulations administered by the Bureau of Dams and Waterways Management.

The Quakertown Area Zoning Ordinance, which four of the municipalities have adopted, has included wetland protection requirements since 1975. Since these local regulations, combined with state and federal laws, largely prohibit the direct destruction of wetlands, most threats to wetlands come from the secondary impacts of development. Grading and development near wetlands causes these resources to suffer the loss of hydrologic function and critical wildlife species. The destruction

of adjacent vegetation and the construction of impervious surfaces increase the amount of stormwater runoff and decrease the natural capacity of the wetland to handle water volumes, runoff speed, and pollutants.

Additionally, changing the topography of the site surrounding the wetland affects the direction of stormwater runoff and can lead to either increased or decreased amounts of water reaching the wetland. An increase in stormwater runoff may overburden the ability of the wetland to deal with floodwater and pollutants by continually inundating it. Conversely, reduced stormwater runoff may affect the hydrologic functions of a wetland and threaten its continued existence. Even if the topography of surrounding sites remains unaltered, a wetland may still have its hydrologic functions affected by the increased impervious surfaces and stormwater channeling.

In light of the comparatively flat topography and drainage characteristics in much of the Quakertown Area, it is important that wetland portions of the natural drainage system continue to be protected under municipal regulations. Ordinances should require delineation of existing wetland areas on development sites by a qualified professional. No encroachment, except for needed access roads, should be permitted in wetland areas. However, any encroachment will require approval of the Army Corps of Engineers.

In addition to protection of wetlands, a buffer area or margin area should also be protected, since the existence and quality of the wetland is directly related to conditions of wet soil areas around these features. The model zoning ordinance contains a wetlands margin requirement, in which 80 percent of the natural cover located a distance of 100 feet from wetlands or to the limit of hydric soils, whichever is the shorter distance, must be protected. Several Quakertown municipalities have adopted this standard, while two other area municipalities have adopted similar standards, only with varying distances from the wetland or hydric soil boundary. Richlandtown Borough requires the same protection ratio for a distance of 75 feet from the wetland or hydric soil boundary, and Milford Township requires the same protection ratio but for a distance of only 25 feet from the wetland or hydric soil boundary.

### ***Lakes, Ponds and Their Shore Areas***

Lakes, ponds, and their shore areas function in a similar manner to wetlands and wetland margin areas. Whether natural or man-made, lakes and ponds moderate stream flow during storms and flood events and play an important role in oxygen and nitrogen cycles. These water bodies provide habitat for aquatic life as well as water sources for wildlife. These landscape features are scenic and recreational amenities.

The Quakertown Area contains two large bodies of water, both of which are located either in or partially within Haycock Township. Lake Nockamixon, which is part of Lake Nockamixon State Park, is located partially within Haycock Township. Lake Towhee, which is within Lake Towhee Park (county park), is located in the west-central portion of Haycock Township. There are numerous small ponds scattered throughout the Quakertown Area.

Shore areas, measured from shorelines, serve as filters or buffers against potential surface and groundwater pollution that would degrade the water body. In addition to environmental

considerations, open space around water bodies has major aesthetic and recreational value. Lakes and ponds should not be altered or filled.

The model Quakertown Area Zoning Ordinance recommends that 80 percent of the vegetative cover of pond shore areas be maintained. Pond shore areas are measured 100 feet from the shoreline. In addition, not more than 10 percent of the shore area may contain impervious surfaces. Lake shore areas warrant a wider protection area. The model ordinance recommends that shore areas of these major bodies of water be protected for a distance of 300 feet from shorelines and 70 percent of these areas shall remain undisturbed. As in pond shore areas, not more than 10 percent of the lake shore area may contain impervious surfaces. These protection standards should be retained by the four municipalities that have previously adopted them, and the other municipalities that do not have these standards should consider incorporating them into their zoning ordinance.

## **Land Resources**

### ***Steep Slopes***

Topography can have a profound influence on development capacity, stormwater runoff, and site erodibility. Areas of steep slopes occur where the average slope exceeds 8 percent. These slopes are subject to higher rates of stormwater runoff and erosion and the spread of brush fires.

Slopes are calculated in gradients as a percentage indicating the height of the vertical rise relative to a constant horizontal distance. A 15 percent slope, for example, is equivalent to a rise of 15 feet over a distance of 100 feet. For purposes of this comprehensive plan and implementing ordinances, slopes are grouped into three categories: 8 to 15 percent, 15 to 25 percent, 25 percent or greater.

Development on these slopes accelerates erosion by removing or disturbing the established groundcover and topsoil. Removal of the vegetation destroys the groundcover that absorbs rainwater, anchors soil, and buffers or dissipates the impact of rainfall on topsoil. Erosion produces sediment that pollutes surface water. Over time, accumulated sediments narrow stream channels and fill in pond and lake bottoms. This process restricts the capacity of waterways to handle flood flows and increases the incidence and severity of flooding.

Nearly all of the steeply sloping areas in the Quakertown Area are located either along stream corridors or on or near Haycock Mountain. Steep slopes are shown in Figure 3.

The model Quakertown Area Zoning Ordinance includes the following regulations protecting steep slopes: 60 percent protection for slopes of 8 to 15 percent; 70 percent protection for slopes of 15 to 25 percent; and, 85 percent protection for slopes of 25 percent or steeper. Four of the Quakertown Area municipalities have adopted these standards.

The protection standards of the Quakertown Area model ordinance are appropriate as currently structured. Limiting construction, regrading and the amount of impervious surfaces allowed on steep slopes will greatly reduce the adverse environmental impacts of new development.



*Wooded area along Umbreit Road in Milford*

### **Woodlands**

Woodland resources serve multiple purposes. They moderate environmental conditions, support wildlife as habitat and provide recreational opportunities. They also have significant aesthetic value.

The environmental functions of woodlands are particularly important. Trees and shrubs anchor soil and reduce erosion and sedimentation in streams. The vegetative cover softens the impact of falling rainwater, enables groundwater recharge and reduces the volume and rate of runoff. Woodlands also play a role in filtering air pollutants and moderating microclimates. Additionally, woodlands provide visual and sound buffering.

Woodlands can benefit from proper timber management and can normally withstand impacts of limited development. When woodlands are located in environmentally sensitive areas, such as steep slopes of more than 15 percent grade, along tributaries and in floodplains, around wetlands and shore margins, even minor disturbances can lead to serious environmental disruptions. In the distant past, woodlands had been cleared to establish fields for farming. More recently, forests were cleared to make way for development.

Wooded areas are scattered throughout the Quakertown Area, with significant areas of contiguous woodlands located in much of Haycock Township, the southeast and northwest portions of Richland Township, and the southern portion of Milford Township. Woodlands remaining in the Quakertown Area are shown in Figure 4.

The remaining wooded areas of the Quakertown Area are integral elements of both rural and developing areas. Four of the Quakertown Area municipalities have adopted the recommended standard in the model ordinance, which requires an 80 percent protection standard for wooded areas on development sites. In addition to environmental, stormwater management and erosion control considerations, this policy is intended to preserve the sense of wooded areas as elements in the diverse landscape.

To prevent the cutting of trees to reduce the requirement to protect woodland resources in anticipation of a subdivision or land development, municipalities may want to consider requiring a signed and recorded agreement for proposed forestry activities which states that no cutting or clearing shall be considered to reduce the area of woodland for any subdivision or land development. Further, the cutting of trees that is initiated two years or less before the submission of plans for subdivision or land development should be presumed to be in anticipation of development. Woodland protection standards would then be applied to the property as it existed before the removal of trees or grading. Woodland removal beyond the limits set in the resource protection requirements of the municipal ordinances would require the replacement of trees based on the number and size of trees or woodland area removed.



Woodlands are most clearly threatened by their removal for site development. But other site preparation and construction practices can have significant impacts on woodlands. Although the required area to be protected may be shown on a development plan, damage to roots from machinery; grade changes affecting root stability, and aeration; soil compaction from temporary roads; and materials stockpiling can result in the loss of woodlands in a few short years. Tree protection requirements have been adopted by four of the Quakertown Area municipalities.

In addition to protection of existing woodlands, consideration should be given to landscaping for future generations and reforestation of environmentally sensitive areas. Municipalities may wish to enhance existing woodland protection requirements with the following:

**Tree Replacement** – Where tree retention is not feasible, reforestation or replanting may be the only alternative. Municipalities should consider adopting tree replacement requirements that specify a method for calculating the replacement of existing mature trees (i.e., caliper-inch replacement, or multiple trees for a single tree removed). The approach may also include requiring planting at an unforested off-site location and/or monetary contribution to a specified fund to promote reforestation. New plantings should comply with approved tree lists in each municipality.

**Mature Tree Protection** – The protection of significant individual trees can be addressed through municipal ordinances. Some communities have elected to preserve larger mature trees by prohibiting the removal of trees over a specified diameter. For example, various Bucks County municipalities’ zoning ordinances include provisions protecting mature trees outside of forested areas by specifying a maximum diameter at breast height (ranging from 6 to 36 inches), that may be removed only when certain conditions are satisfied.

**Recommended Standards**

For the resources described above, the following chart contains recommended protection standards for all land-use ordinances of the participating municipalities. These recommendations, which are in the model zoning ordinance, can be enhanced with the additional standards suggested above (i.e., riparian buffer zones, tree replacement, mature tree protection).

<b>Resource</b>	<b>Minimum Protection Standard</b>	<b>Maximum Intrusion Permitted</b>
Floodplains	100%	0%
Floodplain Soils	100%	0%
Watercourses	100%	0%
Wetlands	100%	0%
Lakes and Ponds	100%	0%
Wetland Margins	80%	20%
Lake Shore Areas	70%	30%
Pond Shore Areas	80%	20%
Steep Slopes		
8 to 15%	60%	40%
15 to 25%	70%	30%
25% +	85%	15%
Woodlands	80%	20%

## Other Natural Resource Determinants

### *Agricultural Soils (or Farmland)*

For many types of land uses, a wide range of soil conditions will have little effect on the type or cost of possible uses. Recreational activities can make use of many types of land. Residential development, although limited by several natural constraints, is adaptable to many locations.

Farm crop production, however, often varies directly with the type and quality of soil being farmed. Some land is virtually useless as cropland and some is highly productive. The open space value of farmland is important. People enjoy open areas and frequently have strong emotional associations with farmland as a part of the Quakertown Area's landscape. In addition, cropland has an environmental benefit by helping to maintain natural cycles through transpiration of water and gas exchanges associated with photosynthesis.

The Natural Resource Conservation Service (NRCS), formerly the U.S. Soil Conservation Service, provides a classification system for the identification of prime agricultural soils. Bucks County soils were recently recertified by the NRCS and include soil Classes 1 through 4. These soils have been determined to be potentially the most productive for a wide range of field crops, with the least risk of damage when properly managed.

Prime agricultural land is generally more productive than other land under the same management practices. The survey assesses farmland based upon soil quality, climate, and soil acidity. There are two major classifications as follows:

- *Prime Farmland*—Land best suited for producing food, feed, forage, and oilseed crops. The soil quality, growing season, and moisture supply present are able to sustain high yields for crops economically when managed with modern farming methods. There are limited types of soils that qualify as prime farmland, but they primarily consist of Class 1 and 2 soils.
- *Additional farmland of statewide importance*—Land that is of statewide importance for the production of food, feed, forage, and oilseed crops. The appropriate state agency is authorized to define and delineate this farmland. Typically, in the Commonwealth, land that consists of Class 2 and 3 soils that do not qualify as prime farmland is designated as additional farmland of statewide importance. In Bucks County, most of this land consists of Class 3 soils, but it also includes some Class 2 soils.

Although the amount of acreage devoted to agriculture has been declining, there are still several large areas of active farmland in the Quakertown Area. Significant areas of farmland in the region are located throughout Milford Township from Geryville to Spinnerstown to the Zionsville area, and within an area extending from Trumbauersville Borough along Morgan Creek south of Quakertown Borough up to the area around Richlandtown Borough and the eastern portions of Haycock Township. Prime agricultural soils are shown in Figure 5.

It is the intent of this plan to preserve farmland soils and to conserve agricultural activity in those areas that are actively farmed and contain concentrations of prime agricultural soils. Farmland must be conserved in blocks large enough to permit efficient farm operations and to allow adequate separation by distance or buffering from nonfarm activities.

Development in these areas should be limited to low-intensity land uses. Clustering of dwellings will help keep a portion of this land open. For the purposes of this plan, agricultural areas where conservation practices should be implemented are those that remain substantially undeveloped and are actively farmed.

Effective farmland preservation often requires a multifaceted approach utilizing various planning tools. The following strategies represent some of the most common approaches to farmland preservation:

**Agricultural Security Areas**—Municipal officials and farmers can work to maintain farming in the Quakertown Area through establishment of agricultural security areas under Act 43 of 1981. These areas must be 500 acres or larger in size; all parcels of land need not be contiguous. At least half of the soils must be Class 1 through 4 soils and farming must be a viable activity in the area. Participation is voluntary on the part of landowners.

Within security areas, the farmer is protected from imposition of local nuisance restrictions (noise, odor, etc.) on normal farming activities except where public health and safety is concerned. Land within these areas may qualify for the purchase of easements for farmland preservation under Act 149 of 1988. In addition, land may not be condemned for public use without review by the Agricultural Lands Condemnation Approval Board, which tries to find alternatives to the condemnation of good farmland.

**Bucks County Agricultural Land Preservation Program**—In 1989, the Bucks County Agricultural Land Preservation Program (BCALPP) was created to administer agricultural conservation easements to viable farms throughout the county. An agricultural conservation easement is a legally binding document filed with the deed of a property, restricting its use to agricultural and directly associated uses. Restrictions carry with the land and are binding upon current and future owners. However, a conservation easement allows a landowner to protect his/her farmland for agricultural uses while retaining private ownership of the farm.

The BCALPP compensates farmers for the difference between the fair market value (development value) and the agricultural value of their land. To be eligible for this program, the following criteria must be satisfied:

- Size restriction: 50 acres (minimum for individual parcel or group of contiguous parcels)
- Location: within agricultural security area
- Soil criteria: at least 50 percent Class 1-4 soils
- Harvest criteria: at least 50 percent harvested cropland/pastureland
- Plan approval: approved U.S.D.A. Soil Conservation Plan in effect.



*Agricultural Preservation Program sign in Milford*

Three farms in Milford Township, totaling 190 acres, have been preserved through the Bucks County Agricultural Land Preservation Program.

**Agricultural Preservation Zoning**—The protection of agricultural soils through agriculture preservation zoning requirements should also be considered as part of the Quakertown Area’s planning effort to preserve farmland and active farming. In general, communities creating zoning provisions for agricultural soil protection begin with an inventory of the locations and types of agricultural soils present in their communities. The municipality then identifies areas of large parcels dedicated to agricultural use as well as agricultural security areas. This background information gives the municipality an idea where farm preservation efforts should be focused and where protection provisions would be most appropriate.

Bucks County communities have chosen to protect farmland soils in two different ways. The first, employed by Bedminster Township, is to establish an agriculture preservation zoning district. The district permits farming and related farming uses by right, but places very specific standards on other permitted uses.

For example, Bedminster’s zoning ordinance requires that 60 percent of farmland soils be protected in a residential subdivision in the AP Agriculture Preservation District. The site is required to be 10 acres or more and lot sizes are a minimum of 32,000 square feet and a maximum of 2 acres. The ordinance provides additional standards to ensure the remaining farmland preservation tract remains suitable for farming operations.

The second method is to apply a resource protection standard for the NRCS soil types for specific uses such as cluster subdivisions and performance subdivisions. For example, the Newtown Area Joint Municipal Zoning Ordinance requires an 80 percent protection ratio for Class 1 Soils, in determining the number of acres required for resource protection for cluster and performance subdivisions. (This applies only within their CM Conservation Management District.)

Recent court decisions have upheld the regulatory purpose and intent of agricultural preservation zoning. Zoning for agriculture is specifically mentioned in two places in the MPC. Section 603(5) authorizes zoning provisions for “...the protection and promotion of natural resources and agricultural land and activities.” One of the purposes of zoning listed in Section 604(3) is the preservation of “...prime agriculture and farmland considering topography, soil type and classification, and present use.” Nevertheless, if a municipality chooses to consider an agriculture preservation zoning district, it is recommended the municipality carefully study the provisions and types of ordinance generally upheld by Pennsylvania courts and applicable case law.

## ***Geology***

The underlying geology of an area largely impacts future planning and land-use decisions based on existing water supply, topography, and soil characteristics. The Quakertown Area’s primary geological features are the Brunswick formation and diabase. These features can be characterized as follows:

**Brunswick Formation**—The Brunswick formation underlies all three Quakertown Area boroughs and the majority of both Milford and Richland townships. A sedimentary rock consisting mostly of red to reddish-brown shale, gray to greenish-gray mudstone, and

siltstone, Brunswick shale is nonporous rock moderately resistant to erosion and weathering. However, because it is highly fractured, the Brunswick formation is considered a reliable source of groundwater with well yields averaging 60 gallons per minute (gpm).\* The Brunswick formation underlies more than one-third of the land area of Bucks County and is used as a source of water for domestic and industrial land uses.

**Diabase**—Located in the southwestern, northcentral, and eastern portions of the region, this formation covers roughly a third of the Quakertown Area. A majority of Haycock is within the diabase area. Diabase consists of a dense, erosion-resistant crystalline, which is the primary rock type underlying many wooded ridges, steep slopes, and narrow stream valleys. Most diabase is too dense and the fractures and fissures too narrow to provide reliable well water on a large scale. Thus, diabase is considered a poor source of groundwater, which is only available within the weathered zone to 30 feet. The average well yield is 5 gpm.\* The shallow depth to bedrock also presents difficulties for excavation of on-site septic systems.

A more detailed discussion on the relationship between the existing geology and water supply is located in the Community Facilities and Services section of this document.

### *Significant Natural Areas*

Bucks County contains a diversity of unique natural features. These natural features harbor a wide range of flora and fauna, some of which are not found anywhere else in the Commonwealth.

In 1999, an inventory was performed to identify and rank the most significant natural areas remaining in the county, including the Quakertown Area. This survey, titled *Natural Areas Inventory of Bucks County, Pennsylvania* (1999), was conducted by the Morris Arboretum of the University of Pennsylvania (Ann F. Rhoads and Timothy A. Block) for the Bucks County Commissioners, and is intended to provide guidance for implementation of natural areas protection component of the Bucks County Open Space Program.

Based upon detailed aerial and field surveys, the analysis and evaluation resulted in four levels of importance, with Level 1 representing the most important features for preservation. In the entire county, there were 240 sites considered in the survey, with 118 included in the final list. Some sites are significant in size, while others are small tracts. In general, small isolated sites, which, for instance, may have contained remnant populations of rare species, were not included because they are not part of a sustainable natural community or system.

The Quakertown Area municipalities should ensure that priority sites are shown on future subdivision and land development plans (where applicable) to help protect and mitigate impacts on these important local resources. In addition, municipalities should consider these priority areas in their open space preservation efforts.

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\* As noted in the *Bucks County Water Supply Plan*, Bucks County Planning Commission, 1997.

The following were identified as priority sites in the Quakertown Area (for brief descriptions of the priority sites see Appendix E):

<b>Site Name</b>	<b>Priority</b>
Cooks Creek	1
Haycock Mountain (State Game Lands 157) & Nockamixon State Park	1
Quakertown Swamp	1
Tohickon Creek	1
Ridge Valley Creek	1
Cressman Hill & contiguous forested areas	2
Dimple (Kimbles) Creek – meadow at mouth	2
Dimple (Kimbles) Creek / Lake Towhee Park	2
Rock Hill	2
Top Rock Trail Road meadow	2
Hazelbach Creek	3
Morgan Run	3
Tohickon Creek – vicinity of West Thatcher Road	3
Unami Creek – vicinity of Allentown Road	3
Beaver Run Woods	4
Route 309 Woods	4

### **Pennsylvania Rivers Conservation Plans**

The four river conservation plans that pertain to the Quakertown Area are: the Schuylkill Watershed Conservation Plan, the Upper Tohickon Rivers Conservation Plan, the Lower Tohickon Rivers Conservation Plan, and the Cooks Creek Rivers Conservation Plan. Generally, the purpose of these plans is to provide a comprehensive intermunicipal approach to improving, conserving, and making better use of river resources and surrounding land. The plans provide general recommendations pertaining to watersheds and land conservation.

Administered by the Bureau of Recreation and Conservation of the Pennsylvania Department of Conservation and Natural Resources (DCNR), the Pennsylvania Rivers Conservation Program has been developed to conserve and enhance river resources through preparation and accomplishment of locally initiated plans. The program provides technical and financial assistance to municipalities and river support groups to carry out planning, implementation, acquisition, and development activities.

The Pennsylvania Rivers Conservation Registry promotes river conservation and recognizes rivers or river segments in communities that have completed river conservation plans. The registry also is an avenue to endorse local initiatives by binding them together in a statewide recognition program.

In order for a river to be placed on the registry it must have an approved plan and local municipal support. Registry status must be achieved to qualify for implementation, development or acquisition grants. With the adopted rivers conservation plans, municipalities within the Quakertown Area are eligible for DCNR funding under the Community Conservation partnership, Rivers Conservation Program, for certain acquisition and development projects on a 50-50 cost-sharing basis.

## **Low-Impact Development, an Overarching Principal**

The very nature of rural communities and the characteristics that make them desirable are forever lost if valued resources are destroyed during the development process. The conversion of prime agricultural soils, clear-cutting of wooded areas, filling of wetlands, and improper land uses in sensitive floodplain areas are some of the most negative impacts of development. The challenge for municipalities becomes how to plan and manage growth while preserving natural resources.

By limiting the amount of disturbance permitted on a site, much of the existing resources and natural drainage patterns can be retained. This maintains groundwater infiltration and natural runoff patterns, stabilizing both surface water and groundwater sources.

Low-impact development (LID) is an overarching approach to land development that uses various land planning and design practices and technologies to conserve and protect environmental resources. 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.

Often considered the first step in resource protection, this approach should be used to strengthen complementary ordinance regulations. An important aspect of this approach is to first evaluate a site with regard to its existing resources so that future development may be planned with primary consideration of the site's topography and physical constraints.

After working with The Natural Lands Trust as part of its Growing Greener initiative in the late 1990s, the QAPC incorporated regulations into the Quakertown Area Subdivision and Land Development Ordinance (prepared in 2003) that are designed to identify and consider the existing resources on a development site prior to official plan submissions. The model ordinance contains provisions that strongly recommend a pre-application meeting, an existing resources and site analysis plan, a site inspection, a pre-sketch plan conference, and sketch plan submission prior to any formal plan submission.

Milford Township, the first and only Quakertown Area municipality to adopt these standards, adopted a modified version in which the pre-application meeting, the existing resources and site analysis plan, the site inspection, and the pre-sketch conference are all required. Sketch plan submissions, while strongly recommended, are not required.

The existing resources and site analysis plan includes detailed information on the natural features and resources on a development site. This information provides the applicant and municipal officials with a sound understanding of the conditions on and around the site that provide the context for future development. The required site inspection by the planning commission further familiarizes local officials with the property's existing conditions and special features, and affords an opportunity to discuss site design concepts including the layout of open space and potential locations for proposed buildings and street alignments.

Milford Township has also adopted provisions in the model ordinance that outline a four-step design process for subdivisions and land developments with required open space and provisions requiring a preliminary resource impact and conservation plan. The four-step design process requires that the

layout of open space be considered at the forefront of the development process, and is discussed further in the Park, Recreation and Open Space Planning component of this document. The resource impact and conservation plan requires 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. The main premise of the resource impact and conservation plan is to ensure that site disturbance has been minimized to the greatest extent possible.

All Quakertown Area municipalities should consider following Milford Township's lead in amending their subdivision and land development ordinance to incorporate the above-stated plan procedures, as well as provisions requiring the four-step design process and the resource impact and conservation plan. In addition, consideration should be given to further requiring protection of resources on a lot-by-lot basis in the area of the site intended for development in addition to the overall site.

Preservation techniques can be applied not only in the designated conservation areas for the site but in areas of the site intended for development. This can be accomplished by requiring that a resource impact and conservation plan show how natural contours and vegetation will be respected in terms of the overall site and individual lots.

Additionally, area municipalities should consider incorporating provisions in their subdivision and land development ordinances related to low-impact grading techniques. Among the most harmful development practices is site grading. Grading is the process of clearing a site of vegetation and smoothing sloping areas to create an even topography. Mass grading is harmful because it destroys valuable species habitat and reduces water quality by introducing sediment into local streams and lakes. Grading will also destroy an area's rural nature; it effectively replaces native vegetation and topography with a flat expanse of lawn.

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

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

## **Recommendations**

- Continue the planning and zoning policies requiring preservation of environmental resources that include floodplains, floodplain soils, watercourses, wetlands, lakes and ponds, wetlands margins, lake and pond shore areas, steep slopes and woodlands. Municipalities that do not



have all of the recommended protection standards should consider adopting them into their zoning ordinances, if appropriate.

- Revise municipal ordinances to reference the new NRCS soil classification and to reflect its new soil classifications.
- Area municipalities that currently do not have riparian corridor protection standards should consider establishing and incorporating such standards (riparian buffer zones) into their zoning ordinances to protect the area's streams and watersheds. Milford is the only Quakertown Area municipality to have riparian corridor protection standards.
- Richland Township should continue to coordinate with the Heritage Conservancy to implement recommended protection measures for the Quakertown Swamp.
- Require delineation of wetland areas on development sites by a qualified professional.
- As part of forestry use regulations, consider amending the zoning ordinance to prohibit the cutting of trees to reduce the requirement to protect forest resources in anticipation of a subdivision or land development.
- Consider enhancing existing woodland protection requirements with tree replacement and/or mature tree protection regulations.
- Revise plan submission requirements in municipal subdivision and land development ordinances to require that subdivision and land development plans show priority sites designated in the *Natural Areas Inventory of Bucks County, Pennsylvania* (where applicable).
- As Milford Township has done, all other area municipalities should consider amending their subdivision and land development ordinances to incorporate provisions that strongly recommend a pre-application meeting, an existing resources and site analysis plan, a site inspection, a pre-sketch plan conference, and sketch plan submission prior to any formal plan submission, as well as requiring the four-step design process and a resource impact and conservation plan.
- Consider revising municipal subdivision and land development ordinances to require the use of low-impact grading techniques.



## Chapter 4

# Development Today and Projected Changes

### Regional Characteristics—The Demographics of the Quakertown Area

#### Population

One of the most important purposes of a comprehensive plan is to assess current conditions and potential trends in order to plan for possible growth and change. Basic demographic measures of population and housing conditions, both past and present, can provide some sense of the key characteristics of a community or region and an indication of where it is headed.

Population change over time is one such indicator. Table 1 shows population change in the Quakertown Area Planning Committee (QAPC) region during the 70 years from 1930 to 2000.

**Table 1. QAPC Region Population Change, 1930–2000**

Municipality	Year							
	1930	1940	1950	1960	1970	1980	1990	2000
Haycock	852	864	1,084	1,273	1,260	1,750	2,165	2,191
Milford	2,248	2,521	2,865	3,524	4,812	6,053	7,360	8,810
Quakertown	4,883	5,150	5,673	6,305	7,276	8,867	8,982	8,931
Richland	2,173	2,105	3,050	3,783	4,089	6,286	8,560	9,920
Richlandtown	642	628	762	741	856	1,180	1,195	1,283
Trumbauersville	692	746	838	785	831	781	894	1,059
<b>QAPC-Region</b>	<b>11,490</b>	<b>12,014</b>	<b>14,272</b>	<b>16,411</b>	<b>19,124</b>	<b>24,917</b>	<b>29,156</b>	<b>32,194</b>

Source: U.S. Census

The QAPC's member municipalities have all experienced population growth during the 20<sup>th</sup> century. Much of it has taken place since 1970, when the pace of growth began accelerating markedly. Growth has generally been greater in the townships of the Quakertown Area, which are geographically far larger and have more land available for development than do the region's smaller and more densely settled boroughs.

The six-municipality QAPC region gained 5,793 people from 1970 to 1980, its decade of greatest percentage growth to date, and added another 7,277 people from 1980 to 2000. The region's total population stood at 32,194 in 2000, having nearly tripled in the preceding 70 years, and doubled in the preceding 40.

The region, while still growing, appears to be gaining population at a more measured pace than previously. And the overall regional growth pattern encompasses some significant differences at the municipal level. Table 2 compares rates of population change by municipality and areawide between 1970 and 2000.

**Table 2. QAPC Municipal and Regional Population Change, 1970–2000**

	1970	1980	1990	2000
<b>Haycock</b>				
Population	1,260	1,750	2,165	2,191
Number change		490	415	26
Percent change		38.9%	23.7%	1.2%
<b>Milford</b>				
Population	4,812	6,053	7,360	8,810
Number change		1,241	1,307	1,450
Percent change		25.8%	21.6%	19.7%
<b>Quakertown</b>				
Population	7,276	8,867	8,982	8,931
Number change		1,591	115	-51
Percent change		21.9%	1.3%	-0.6%
<b>Richland</b>				
Population	4,089	6,286	8,560	9,920
Number change		2,197	2,274	1,360
Percent change		53.7%	36.2%	15.9%
<b>Richlandtown</b>				
Population	856	1,180	1,195	1,283
Number change		324	15	88
Percent change		37.9%	1.3%	7.4%
<b>Trumbauersville</b>				
Population	831	781	894	1,059
Number change		-50	113	165
Percent change		-6.0%	14.5%	18.5%
<b>QAPC-Region</b>				
Population	19,124	24,917	29,156	32,194
Number change		5,793	4,239	3,038
Percent change		30.3%	17.0%	10.4%

Source: U.S. Census

The region registered its greatest growth rate to date between 1970 and 1980, with a population gain of just over 30 percent. The rate slowed to 17 percent and then to 10.4 percent during the next two decades. But at the municipal level, growth has apparently stabilized in two of the Quakertown Area boroughs and its least populous township, while continuing in its two most populated townships and in its third borough, suggesting the need for planning policies favoring maintenance and revitalization in some communities and for growth management strategies in others.

In Quakertown Borough, a 1 percent population gain from 1980 to 1990 was followed by a 1 percent loss the next decade. That borough's population has held steady at under 9,000 since 1980.

Following a 38 percent population gain from 1970 to 1980, Richlandtown Borough grew by only 1 percent from 1980 to 1990, and by 7 percent the next decade. It has gained only 103 people since 1980, resulting in a total population of 1,283 in 2000.

Trumbauersville Borough, the least populous municipality in the Quakertown Area region, lost 6 percent of its population from 1970 to 1980. But that trend appears to have reversed, as the borough has gained 33 percent since 1980. Its population in 2000 was 1,059.

Haycock, the least populous township in the Quakertown region, showed substantial rates of population gain from 1970 to 1990, but only 1 percent growth the next decade. Nockamixon State Park, state gamelands, preserved open space, and other parklands account for more than 5,000 acres forming nearly one-third of the township’s land area, a factor which greatly limits growth in this rural community of approximately 2,200.

Meanwhile, Richland Township, the fastest-growing municipality in the Quakertown region, eclipsed Quakertown as the area’s most populous one by 2000. Richland has grown by 142 percent since 1970, and had a population of 9,920 in 2000.

Milford, the second fastest-growing township, has been growing at a relatively even pace of between 20 percent and 26 percent since 1980. Its population of 8,810 in 2000 was nearly equal to that of Quakertown.

Changes in regional population can also be compared with trends in adjacent municipalities as well as with trends in the county, the state, and the Philadelphia metropolitan area. (The metro area, as defined by the Delaware Valley Regional Planning Commission, encompasses Bucks, Chester, Delaware, Montgomery and Philadelphia counties in Pennsylvania; and Burlington, Camden, Gloucester and Mercer counties in New Jersey.) Table 3 compares population trends at regional, state, and local levels.

**Table 3. Population Trends in QAPC Environs, 1990–2000**

<b>Place</b>	<b>Population 1990</b>	<b>Population 2000</b>	<b>Number Change</b>	<b>Percent Change</b>
<b>Bucks County</b>				
Springfield Township	5,177	4,963	-214	-4.1%
Nockamixon Township	3,329	3,517	188	5.6%
Bedminster Township	4,602	4,804	202	4.4%
East Rockhill Township	3,753	5,199	1,446	38.5%
West Rockhill Township	4,518	4,233	-285	-6.3%
<b>Montgomery County</b>				
Marlborough Township	3,116	3,104	-12	-0.4%
Upper Hanover Township	4,604	4,885	281	6.1%
<b>Lehigh County</b>				
Lower Milford Township	3,269	3,617	348	10.6%
<b>Bucks County</b>	541,224	597,635	56,411	10.4%
<b>Lehigh County</b>	291,129	312,090	20,961	7.2%
<b>Montgomery County</b>	678,111	750,097	71,986	10.6%
<b>DVRPC Nine-County Region</b>	5,182,705	5,386,867	204,162	3.9%
<b>Pennsylvania</b>	11,881,643	12,281,054	399,411	3.4%
<b>QAPC-Region</b>	29,156	32,194	3,038	10.4%

Sources: U.S. Census, DVRPC website

The rate of growth in the Quakertown Area during the past 10 years has essentially matched those of Bucks County and neighboring Montgomery County, to the east, and has surpassed that of neighboring Lehigh County, to the north. At 10.4 percent, the region's pace of growth was more than triple the statewide rate of 3.4 percent, and more than double the Philadelphia metro area rate of 3.9 percent.

In the community survey taken to gather public input as part of this comprehensive plan, more than 90 percent of those responding rated growth management as either very important or important to future planning in the region. Yet about two-thirds of respondents said growth management efforts so far had been only poor to fair. (The compiled survey results are in Appendix A.)

Population growth in surrounding municipalities has been largely consistent with municipal growth rates in the Quakertown region, so that spillover impacts of rapid growth outside the immediate area are minimal. Most of the adjacent municipalities in upper Bucks and Montgomery County registered gains of 10 percent or less from 1990 to 2000, with the exception of fast-growing East Rockhill Township, which grew by a little more than 38 percent. Nevertheless, the Quakertown region and its environs did not see the degree of rapid growth that took place in much of central Bucks during the same period, where population gains commonly ranged upward of 40 percent.

### *Age*

The median age of Quakertown Area residents has been rising, as is true for Bucks County and for the state as well. Pennsylvania ranks third among all states for its share of citizens 65 and older, largely due to slow immigration and heavy out-migration, along with the sheer size of the graying baby boom generation. At the same time, the area's population has become relatively younger than that of Bucks County, suggesting the need to balance services and facilities for elders and for younger singles and families.

Median age figures for the QAPC municipalities and Bucks County are in Table 4.

**Table 4. Median Age in QAPC Municipalities and Bucks County, 1990–2000**

<b>Place</b>	<b>Median age in years</b>	
	<b>1990</b>	<b>2000</b>
Haycock	35.6	40.0
Milford	35.5	37.6
Quakertown	33.8	36.2
Richland	33.3	36.8
Richlandtown	31.4	35.4
Trumbauersville	32.0	36.6
<b>Bucks County</b>	<b>33.7</b>	<b>37.7</b>

*Source: U.S. Census*

The median age in all of the Quakertown Area communities rose somewhat between 1990 and 2000, as did the countywide median. But the region's population has begun to skew younger than the county's. In 1990, three of the six QAPC municipalities had a median age above the countywide median of 33.7 years, while in 2000, only one municipality, Haycock Township, had a median age above the county's 37.7 years.

Possible reasons why the region is drawing or retaining a greater share of younger families may include quality of life factors, normal population turnover, the job market, or the nature or moderate price of the housing stock. In the community survey, respondents identified quality of life, nearness to friends and family, and reasonable housing costs as their top three reasons for settling in the municipality in which they live.

For a closer look at age trends, the area’s population can be sorted into age groupings, or cohorts. The share of each age cohort by municipality and for the entire region is in Table 5.

**Table 5. Change in QAPC Region Age Distribution, 1990–2000**

Age Group	1990							2000						
	Haycock	Milford	Quakertown	Richland	Richlandtown	Trumbauersville	Percent QAPC-Region	Haycock	Milford	Quakertown	Richland	Richlandtown	Trumbauersville	Percent QAPC-Region
under 5	142	510	731	690	106	55		133	560	591	738	90	70	6.8%
5 to 9	152	545	645	686	123	88	9.8%	128	643	620	740	110	68	7.9%
10 to 14	150	551	513	515	86	90	10.1%	154	708	682	696	85	84	8.7%
15 to 19	148	537	504	408	58	67	7.5%	134	590	601	628	86	86	6.7%
20 to 24	148	400	650	518	52	46	5.1%	103	347	487	436	57	41	3.1%
25 to 34	317	1,067	1,658	1,766	248	152	17.0%	254	1,126	1,278	1,366	202	149	10.7%
35 to 44	433	1,382	1,208	1,223	155	174	19.5%	395	1,642	1,599	1,895	216	194	19.9%
45 to 54	278	877	725	784	81	81	9.1%	424	1,408	1,071	1,266	138	160	18.4%
55 to 59	85	353	323	410	31	27	3.0%	140	480	359	442	39	43	5.4%
60 to 64	104	320	346	426	26	31	3.5%	107	309	278	347	35	43	3.4%
65 to 74	114	482	837	720	78	55	6.2%	134	537	544	718	66	76	5.4%
75 to 84	85	240	613	363	82	25	2.8%	67	341	567	501	84	38	2.7%
85 and up	9	96	229	51	69	3	0.3%	18	119	254	147	75	7	0.8%
<b>Total</b>	<b>2,165</b>	<b>7,360</b>	<b>8,982</b>	<b>8,560</b>	<b>1,195</b>	<b>894</b>	<b>93.8%</b>	<b>2,191</b>	<b>8,810</b>	<b>8,931</b>	<b>9,920</b>	<b>1,283</b>	<b>1,059</b>	<b>100.0%</b>

Source: U.S. Census

In 2000, the region’s share of population age 19 and under totaled 23.4 percent, and the 65-and-older population totaled slightly less than 9 percent. The most significant changes in population age between 1990 and 2000 entailed a decrease in the percentage of residents aged 25 to 34 (from 17 percent to 10.7 percent) and an increase in the percentage of residents aged 45 to 54 (from 9.1 percent to 18.4 percent).

One likely reason for this trend is the aging of the large baby boom generation. It also raises the possibility that fewer younger people are moving into the area, or that residents under the age of 25 in 1990 did not stay to replenish the next-older age group.

Throughout the Philadelphia metro area, the retention of recent college graduates and other younger residents has been a concern in recent years, although there are signs the city is drawing more young people. Planning for the QAPC region should take into account an anticipated spike in the elderly population within the next decade and a likely increased demand for specialized housing, transportation, health care and other goods and services.

The numerical dominance of the baby boomer spans all Quakertown Area municipalities, but there are some notable population variations at the municipal level. In Milford, bucking the overall trend, the size of the 25- to 34-year-old age group increased, which would be expected to affect schools, recreation programs, and demand for child care and family-oriented housing, among other things. Quakertown, Richland, and Richlandtown have the largest share of residents in the 65-and-older group, which suggests greater need for seniors' services and facilities in or near those communities.

### ***Households and Families***

While population is one measure of absolute change, a look at residents living together as a household or family in an individual dwelling unit further illustrates the type of growth or other change that is taking place in the region, and the nature of the local population. Household size has continued to decline nationally and regionally, reflecting factors that include: later family formation, declining birth rates, rising divorce rates, increased longevity, and more young and old people living alone.

A household consists of one or more people occupying a single dwelling unit. The occupants may be related, or not. Average household sizes for Quakertown Area municipalities and for Bucks County are in Table 6.

**Table 6. Household Size in QAPC Municipalities and Bucks County, 1990–2000**

<b>Place</b>	<b>Average household size</b>	
	<b>1990</b>	<b>2000</b>
Haycock	2.89	2.71
Milford	2.98	2.80
Quakertown	2.48	2.52
Richland	2.65	2.62
Richlandtown	2.91	2.70
Trumbauersville	3.17	2.82
<b>Bucks County</b>	2.80	2.69

*Source: U.S. Census*

Household size trends support the observation drawn from the median age data: that the area is experiencing population turnover and is drawing a robust share of younger families. Although the average household size dropped between 1990 and 2000 for five of the six Quakertown Area municipalities, four of them exceeded the Bucks County average household size of 2.69 persons in 2000.

While Quakertown continued to have the smallest household size in the region, it alone among the area's municipalities reported an increase in household size during the decade. Trumbauersville continued to have the largest average family size, at 2.82 persons, followed by Milford at 2.8.

A family household consists of two or more people living together who are related by blood, marriage, or adoption. Nonfamily households include persons living alone and households with two or more persons who are not related. Data on households and families in the Quakertown region are in Table 7.



**Table 7. Households and Families, QAPC Region and Bucks County, 1990–2000**

Place	Number of households (HH)		Change, 1990 - 2000		Number of families		Families as percent of HH	
	1990	2000	Number	Percent	1990	2000	1990	2000
Haycock	748	805	57	7.6%	606	618	81.0%	76.8%
Milford	2,425	3,073	648	26.7%	2,078	2,448	85.7%	79.7%
Quakertown	3,485	3,421	-64	-1.8%	2,399	2,252	68.8%	65.8%
Richland	3,219	3,763	544	16.9%	2,418	2,667	75.1%	70.9%
Richlandtown	368	430	62	16.8%	263	319	71.5%	74.2%
Trumbauersville	282	374	92	32.6%	230	305	81.6%	81.6%
<b>QAPC-Region</b>	10,527	11,866	1,339	12.7%	7,994	8,609	75.9%	72.6%
<b>Bucks County</b>	190,503	218,725	28,222	14.8%	145,924	160,946	76.6%	73.6%

Source: U.S. Census

In the Quakertown region, as in Bucks County, the vast majority of residents live in family situations, although the share of families has been decreasing slightly. Most family households consist of married couples, but couples with children under age 18 account for a minority of the region's households.

Household type has implications for the housing stock, for community services, and for demand for consumer goods and services. Nonfamily households may be more likely to choose smaller or rental housing units, for example, and less likely to generate public school students.

The share of family households in the region, at 72.6 percent in 2000, was just 1 percent below the countywide figure. That figure fell by more than 3 percent from 1990 to 2000, mirroring a similar change at the county level. The region gained 1,339 families and households and 615 families from 1990 to 2000. That growth in households was about 2 percent less than the countywide gain.

Milford added the greatest number of households, 648, followed by Richland's 544, although Trumbauersville's addition of 92 new households represented the greatest percentage gain at the municipal level. Quakertown was the only Quakertown Area municipality to lose families and households during the decade, registering a minimal loss of less than 2 percent of its households.

The share of family households in 2000 ranged from a high of nearly 82 percent in Trumbauersville to a low of nearly 66 percent in Quakertown. The share of nonfamily households rose in all Quakertown Area municipalities except the region's two smallest boroughs. In Richlandtown, the share of family households rose by about 3 percent, and in Trumbauersville, it stayed the same.

Most of the region's family households consist of married couples, with or without children under the age of 18. The share of married-couple families ranged from about 40 percent to 75 percent of all households in the six municipalities. The share of married-couple families with children under age 18 ranged from about 25 percent to 40 percent, by municipality.

### ***Diversity***

Other characteristics pertinent to understanding the nature of a community involve its racial and ethnic composition. Historically largely rural, the Quakertown region has long been homogeneous

and is today a predominantly white, native-born, and English-speaking population. Statistics on race and Hispanic origins for the region and the county are in Table 8. Statistics on ethnicity and languages spoken at home are in Table 9.

**Table 8. Race and Hispanic Origins in QAPC Region and Bucks County, 2000\***

Place	Non-white	Percent of total	Hispanic	Percent of total
Haycock	44	2.0%	6	0.3%
Milford	198	2.3%	90	1.0%
Quakertown	495	5.5%	257	2.9%
Richland	362	3.7%	131	1.3%
Richlandtown	22	1.7%	16	1.3%
Trumbauersville	22	2.1%	9	0.9%
<b>QAPC-Region</b>	<b>1,143</b>	<b>3.6%</b>	<b>509</b>	<b>1.6%</b>
<b>Bucks County</b>	<b>45,004</b>	<b>7.5%</b>	<b>14,005</b>	<b>2.3%</b>

Source: U.S. Census

\*The 2000 census featured a change that allowed individuals to select more than one race and also separated racial identification from Hispanic or Latino classification. The total in the table includes those who only selected one race and categorized themselves as “white.” It does not include those who selected more than one race of which “white” was one of the categories selected.

**Table 9. Ethnic and Linguistic Characteristics in QAPC Region and Bucks County, 2000**

Place	Born in the USA	Percent of total	English only*	Percent of total
Haycock	2,095	96.2%	1,926	94.2%
Milford	8,597	97.6%	8,012	97.0%
Quakertown	8,344	93.4%	7,715	92.2%
Richland	9,549	96.3%	8,673	94.8%
Richlandtown	1,257	98.0%	1,151	96.3%
Trumbauersville	1,038	98.0%	949	96.1%
<b>QAPC-Region</b>	<b>30,880</b>	<b>95.9%</b>	<b>28,426</b>	<b>94.8%</b>
<b>Bucks County</b>	<b>556,920</b>	<b>93.2%</b>	<b>510,814</b>	<b>91.3%</b>

Source: U.S. Census

Although the number of residents who consider themselves nonwhite has increased in the last decade or so, the region’s population is predominantly white. The region’s percentage of nonwhite residents in 2000, at 3.6 percent, was less than half of the county average of 7.5 percent. The share of residents who described themselves as Hispanic or Latino in the 2000 Census, at 1.6 percent, was also smaller than the countywide figure of 2.3 percent.

In the municipalities within the region, only in Quakertown did the nonwhite population exceed 5 percent. The share of Hispanics by municipality ranged from a low of less than 1 percent in Haycock and Trumbauersville to a high of 2.9 percent in Quakertown.

Data regarding the place of birth of residents and the languages used at home underline the homogeneity of the region’s residents. Nearly 96 percent of the area’s population was born in the United States and nearly 95 percent of those age 5 and older spoke only English at home. Most residents—at least 80 percent in each QAPC municipality—are also natives of Pennsylvania.

***Education, Income, Employment***

The share of high school graduates exceeds 80 percent in nearly all of the Quakertown Area municipalities, ranging upward from a low of just under 79 percent in Richlandtown to a high of nearly 89 percent in Haycock. The share of population with a bachelor’s degree ranged from a low of 14.2 percent in Richlandtown to a high of 29.2 percent in Haycock.

While overall educational attainment in the region has risen in the past decade, it still generally lags slightly behind the countywide level. In 2000, 88.6 percent of Bucks County residents age 25 or older had graduated from high school, and 31.2 percent held bachelor’s degrees or better. Statistics comparing educational attainment in the Quakertown Area municipalities and the county are in Table 10.

**Table 10. Educational Attainment in QAPC Municipalities and Bucks County, 2000\***

<b>Place</b>	<b>Percent high school graduate or higher</b>	<b>Percent bachelor's degree or higher</b>
Haycock	88.8%	29.2%
Milford	85.8%	22.0%
Quakertown	83.6%	17.0%
Richland	81.2%	15.0%
Richlandtown	78.8%	14.2%
Trumbauersville	84.3%	19.2%
<b>Bucks County</b>	<b>88.6%</b>	<b>31.2%</b>

Source: U.S. Census

\*Age 25 and older

The reasons for the differences in level of schooling may have to do with the age of residents in certain communities, the nature of the local job market, or other factors. In the survey taken for the comprehensive plan, residents rated the quality of public schools as very important to the future of the region and its quality of life.

Educational attainment is one factor that influences income. Other factors include the nature of the job market and the local cost of housing and other living expenses.

Median household income in the Quakertown region, with the exception of Haycock, fell short of the countywide figure of \$59,727. (The median marks the point at which half of all households have more income and half have less.) Income figures are in Table 11.

**Table 11. Median Household Income in QAPC Municipalities and Bucks County, 1999**

<b>Place</b>	<b>Median household income</b>
Haycock	\$61,061
Milford	\$59,683
Quakertown	\$41,942
Richland	\$47,057
Richlandtown	\$45,652
Trumbauersville	\$52,250
<b>Bucks County</b>	<b>\$59,727</b>

Source: U.S. Census

The median income for Quakertown-region households ranged from a high of \$61,061 in Haycock to a low of \$41,942 in Quakertown. Quakertown, as the region’s historic and relatively urban hub, remains a point of entry for new residents migrating into the area and has a higher proportion of young adults, who have not entered their peak earning years.

Employment and commuter patterns affect aspects of community life that include the tax base, real estate markets, traffic flow, school enrollments, volunteerism, and many more. More than half of the region’s residents work within Bucks County, but the region’s employment profile is somewhat less diversified than that of the county as a whole, and tilts more toward blue-collar occupations and industries.

The unemployment rate in nearly all area municipalities in 2000 was lower than the Bucks County rate of 3.5 percent. Unemployment in QAPC municipalities ranged from a low of 1.7 percent in Haycock to a high of 3.9 percent in Quakertown.

Occupation is the kind of work someone does to earn a living. Industry is the type of activity at the workplace, the sector of the economy to which a specific occupation belongs. Statistics on residents’ occupations are in Table 12 and statistics on the industries that employ residents are in Table 13.

**Table 12. Employment Profile in QAPC Municipalities and Bucks County, 2000**

<b>Occupation</b>	<b>Place</b>						
	<b>Haycock</b>	<b>Milford</b>	<b>Quakertown</b>	<b>Richland</b>	<b>Richlandtown</b>	<b>Trumbauersville</b>	<b>Bucks County</b>
Management, professional	34.2%	30.8%	23.1%	24.6%	19.3%	30.4%	38.4%
Service	12.2%	12.1%	13.4%	12.6%	17.6%	13.1%	10.7%
Sales, office	25.5%	26.3%	31.2%	28.6%	28.1%	24.2%	29.7%
Farming, fishing, forestry	0.3%	0.6%	0.2%	0.4%	0.3%	0.3%	0.2%
Construction, extraction, maintenance	15.8%	10.8%	10.8%	11.2%	12.4%	10.4%	9.0%
Production, transportation, material moving	12.0%	19.4%	21.4%	22.7%	21.9%	21.5%	12.0%

Source: U.S. Census

Bucks County residents most often hold management and professional jobs. That is true for some Quakertown Area municipalities, but in several, sales and office occupations are more prevalent. Residents in the Quakertown region are also more likely than other county residents to work in construction, production, or similar types of occupations.

**Table 13. Industrial Profile in QAPC Municipalities and Bucks County, 2000**

Industry	Place						
	Haycock	Milford	Quakertown	Richland	Richlandtown	Trumbauersville	Bucks County
Agriculture, forestry, fishing, hunting & mining	1.4%	0.6%	0.1%	1.3%	0.6%	0.2%	0.5%
Construction	13.0%	10.1%	9.7%	9.5%	10.6%	8.8%	7.2%
Manufacturing	16.4%	26.3%	22.5%	23.6%	18.4%	25.3%	15.5%
Wholesale trade	4.7%	4.1%	4.7%	5.0%	6.8%	3.8%	4.6%
Retail trade	9.6%	10.2%	15.1%	15.1%	14.3%	13.5%	13.3%
Transportation, warehousing utilities	3.6%	4.4%	2.8%	3.1%	2.3%	2.2%	3.9%
Information	2.5%	2.3%	1.2%	1.3%	2.5%	2.2%	3.1%
Finance, insurance, real estate, rental/leasing	3.1%	5.3%	6.5%	7.4%	4.8%	4.7%	8.4%
Professional, scientific, management, administrative	9.4%	6.4%	7.2%	5.8%	6.5%	7.3%	10.7%
Education, health, social services	20.6%	19.8%	17.5%	14.7%	19.1%	18.3%	19.6%
Arts, entertainment, recreation, food svcs.	6.6%	5.0%	5.6%	5.7%	6.8%	4.3%	5.4%
Other services	8.1%	4.2%	5.4%	4.1%	5.8%	5.9%	4.5%
Public administration	0.9%	1.3%	1.9%	3.2%	1.4%	3.5%	3.3%

Source: U.S. Census

While residents of Bucks County as a whole most frequently hold jobs within the education, health, and social service sector, manufacturing is more often the top-ranking employment sector for residents of the Quakertown region, followed by education, health, and social services. Retail trade ranks third both countywide and within the region. (Manufacturing ranks second countywide.) But residents of Quakertown Area municipalities are somewhat underrepresented, compared to other county residents, in professional, finance, public administration or other types of white-collar sectors and are more likely to work for manufacturing or construction enterprises.

In the community survey, a total of about 72 percent of respondents rated employment opportunities as a very important or important planning issue for the region's future. A large share of residents also rated job opportunities and economic development as fair or poor in both their home municipality and in the Quakertown region.

The data on occupations and industrial sectors describe what kind of work is done by residents of the region, but not where they work. Table 14 shows where residents work by state, county and municipality.

**Table 14. Place of Work in QAPC Municipalities and Bucks County, 2000**

Place of work	Haycock		Milford		Quakertown		Richland	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
TOTAL workers*	1,228		4,862	100.0%	4,497	100.0%	4,906	100.0%
Worked in . . .								
municipality of residence	98	8.0%	475	9.8%	1,022	22.7%	631	12.9%
county of residence	690	56.2%	2,580	53.1%	2,685	59.7%	2,866	58.4%
state of residence	1,146	93.3%	4,761	97.9%	4,401	97.9%	4,812	98.1%

Place of work	Richlandtown		Trumbauersville		Bucks County	
	Number	Percent	Number	Percent	Number	Percent
TOTAL workers*	639	100.0%	568	100.0%	303,586	100.0%
Worked in . . .						
municipality of residence	30	4.7%	58	10.2%	51,337	16.9%
county of residence	415	64.9%	395	69.5%	168,090	55.4%
state of residence	624	97.7%	549	96.7%	260,009	85.6%

Source: U.S. Census

The vast majority of employed Quakertown Area residents—more than 90 percent in each municipality—work in the state of Pennsylvania. The regional share of in-state workers exceeds the corresponding countywide figure of 85.6 percent.

The share of regional residents who work within Bucks County more nearly approximates the countywide figure of 55.4 percent. The proportion of regional residents who work within Bucks ranges from a low of 53.1 percent in Milford to a high of 64.9 percent in Richlandtown. These numbers suggest strong linkages between the employment and economic base of the Quakertown region and those of neighboring Pennsylvania counties, particularly Lehigh and Montgomery.

The share of the region’s residents who work in their home municipality is generally much smaller than the countywide share of nearly 17 percent. The exception is Quakertown, where nearly 23 percent of municipal residents also work in their home borough. While Richland and Milford have the greatest number of workers, they have far smaller shares of municipal residents who are employed within their own township.

The Delaware Valley Regional Planning Commission (DVRPC) report on employment centers in the Delaware Valley in 2000 lists Quakertown as the only major employment center within the Quakertown Area municipalities. Quakertown hosted more than 4,000 jobs each in services and retail, and nearly 2,500 manufacturing jobs. The two other employment centers closest to the region are in the Sellersville–Perkasie–Hilltown area in Bucks County and the Pennsburg–Red Hill–East Greenville area in Montgomery County, according to the report.

Job growth within the Quakertown Area is projected to outstrip the countywide rate of growth during the next 20 years. Job growth promotes population growth and housing starts, as people often like to live in proximity to their work, when it is practicable, affordable, and offers a desirable quality of life. As noted previously, job growth in nearby employment centers in Montgomery and Lehigh counties, and elsewhere in Bucks County, may also feed population growth in the Quakertown Area.

The region could gain 3,594 jobs between 2000 and 2020, an increase of nearly 24 percent that would bring the total number of jobs to 18,687, according to figures generated by the DVRPC. That compares to job growth of slightly less than 20 percent in Bucks County for the same period.

The three least populous QAPC member municipalities – Haycock, Richlandtown, and Trumbauersville – would each gain less than 50 jobs, although the percentage of growth in Haycock would be quite high. Quakertown, with stable cumulative job growth in the range of 3 percent and more than 8,000 jobs in 2020, would remain a primary employment center in the area. But employment in Richland would grow to rival that in Quakertown, as the township is projected to gain 2,059 jobs, a growth rate of nearly 40 percent during the 20-year period. Milford is projected to have the area’s highest rate of job growth, 68.2 percent, from 2000 to 2020, for a gain of 1,242 jobs.

### ***Population Projections***

Previous sets of projections have shown reasonable accuracy over time. Projections of the QAPC regional population in 2000 were done for the 1978 *Quakertown Area Comprehensive Plan* according to the cohort survival method, which simulates population change by applying birth, death and migration rates to a base population, which is segmented by age groups and by gender.

Those calculations yielded three projections based on variable assumptions about migration, birth and death rates: a low-end figure of 31,046, a moderate, “best guess” figure of 32,650, and a high-end figure of 38,028. In fact, the moderate projection of 32,650 was close to the 2000 census count of 32,194 persons in the six-municipality region.

The 1992 comprehensive plan added projections done by the Bucks County Planning Commission in 1989. Those projections, also incorporating the cohort survival method, are in Table 15. They featured low- and high-growth scenarios for each municipality.

**Table 15. Year 2000 QAPC Projections**

<b>Place</b>	<b>Low</b>	<b>High</b>
Haycock	2,100	2,700
Milford	7,100	9,150
Quakertown	8,800	11,250
Richland	8,350	10,750
Richlandtown	1,150	1,500
Trumbauersville	1,150	1,500
<b>QAPC-Region</b>	<b>28,650</b>	<b>36,850</b>

*Sources: Bucks County Planning Commission  
QAPC Comprehensive Plan, 1992*

The regional census count for 2000 fell in the middle of the low-end and high-end projections. But by municipality, the year 2000 populations in the two townships with the most room for growth, Milford and Richland, came close to the high-end projections, while the figures for the three boroughs and Haycock Township clustered near the low-end projections. This supports the case for planning techniques to promote measured growth in communities that have land capacity for continued growth.

The DVRPC provides population projections by municipality for the nine-county region it serves. Projections to 2020 for the DVRPC region, its component municipalities, and Bucks County are in Table 16.

These projections foresee composite population growth of nearly 37 percent in the six QAPC municipalities from 2000 to 2020. The projected growth rate from 2000 to 2010 is 16.6 percent.

**Table 16. QAPC Population Projections, 2005–2020**

Place	Year					Change, 2000–2020	
	2000	2005	2010	2015	2020	Number	Percent
Haycock	2,191	2,380	2,570	2,770	3,210	1,019	46.5%
Milford	8,810	9,700	10,650	11,630	12,750	3,940	44.7%
Quakertown	8,931	9,020	9,090	9,110	9,170	239	2.7%
Richland	9,920	11,280	12,790	14,420	16,330	6,410	64.6%
Richlandtown	1,283	1,310	1,340	1,350	1,380	97	7.6%
Trumbauersville	1,059	1,090	1,110	1,130	1,160	101	9.5%
<b>QAPC-Region</b>	<b>33,135</b>	<b>35,695</b>	<b>38,450</b>	<b>41,295</b>	<b>44,860</b>	<b>11,725</b>	<b>35.4%</b>
<b>Bucks County</b>	<b>597,635</b>	<b>634,250</b>	<b>662,400</b>	<b>688,660</b>	<b>719,610</b>	<b>121,975</b>	<b>20.4%</b>

Source: DVRPC

The projections suggest the continuation of current trends. Numerical growth would continue to be concentrated in the region’s two most populous townships, Milford, and especially, Richland, while the three boroughs would continue to see low to modest growth levels. Haycock, while its projected growth rate is high, would add far less population than the two other townships in absolute numbers, because of its low baseline population.

Population growth in the Quakertown Area’s three townships is projected to far exceed the countywide rate of growth. In two of the townships, Haycock and Milford, growth could be at least double the countywide rate, while the third, Richland, is projected to gain population at a rate more than triple that of Bucks County.

## Housing

Housing is the dominant use of land in most communities. The type of housing, its location, whether it is owned or rented, and its physical condition have consequences for the nature, population, economic health, geography, and demographics of a community.

In many areas, growth in housing for many years has outpaced the rate of population increase, fueled not only by new construction but also by declining household size and the market for vacation homes. In the Quakertown region, the rate of housing construction from 1980 to 2000 virtually mirrored the pace of population growth, except in the three



Residential street in Trumbauersville



smallest municipalities: Trumbauersville, Richland, and Haycock. This suggests that population growth and residential development are generally proceeding in sync within the region.

The region had 12,343 housing units in 2000. The housing stock increased by 31.6 percent between 1980 and 2000, while the population increased by 29.2 percent. The corresponding figures for Bucks County are a gain of 36.7 percent in housing paired with a gain of 24.7 percent in population. Figures on housing and population change are in Table 17.



*Residence in the village of Applebachsville*

**Table 17. Housing and Population Change in QAPC Region and Bucks County, 1980–2000**

	Housing				Population		
	1980*	1990	2000		1980	1990	2000
<b>Haycock</b>							
Housing units	585	791	841	Population	1,750	2,165	2,191
Number change		206	50	Number change		415	26
Percent change		35.2%	6.3%	Percent change		23.7%	1.2%
<b>Milford</b>							
Housing units	2,035	2,525	3,161	Population	6,053	7,360	8,810
Number change		490	636	Number change		1,307	1,450
Percent change		24.1%	25.2%	Percent change		21.6%	19.7%
<b>Quakertown</b>							
Housing units	3,596	3,625	3,631	Population	8,867	8,982	8,931
Number change		29	6	Number change		115	-51
Percent change		0.8%	0.2%	Percent change		1.3%	-0.6%
<b>Richland</b>							
Housing units	2,511	3,344	3,877	Population	6,286	8,560	9,920
Number change		833	533	Number change		2,274	1,360
Percent change		33.2%	15.9%	Percent change		36.2%	15.9%
<b>Richlandtown</b>							
Housing units	381	379	451	Population	1,180	1,195	1,283
Number change		-2	72	Number change		15	88
Percent change		-0.5%	19.0%	Percent change		1.3%	7.4%
<b>Trumbauersville</b>							
Housing units	273	292	382	Population	781	894	1059
Number change		19	90	Number change		113	165
Percent change		7.0%	30.8%	Percent change		14.5%	18.5%
<b>QAPC-Region</b>							
Housing units	9,381	10,956	12,343	Population	24,917	29,156	32,194
Number change		1,575	1,387	Number change		4,239	3,038
Percent change		16.8%	12.7%	Percent change		17.0%	10.4%
<b>Bucks County</b>							
Housing units	164,914	199,599	225,498	Population	479,180	541,224	597,635
Number change		34,685	25,899	Number change		62,044	56,411
Percent change		21.0%	13.0%	Percent change		12.9%	10.4%

Source: U.S. Census

More than 86 percent of the region’s housing is located in three municipalities: Milford, Quakertown, and Richland. Richland in 2000 had 3,877 dwelling units, the most of any single Quakertown Area municipality. Since Quakertown is nearly fully developed, most future residential growth in the region will take place in Richland and Milford, the two municipalities with the greatest carrying capacity of developable land.



*Spinnerstown Crossing housing development in Milford*

The region has a mix of older and newer housing. More than half of all housing in the region has been built since 1970, much of it concentrated in the townships. Figures on housing age are in Table 18.

**Table 18. Housing Unit Age in QAPC Region and Bucks County, 2000**

Place	Date unit built					
	1939 or earlier		1940 – 1969		1970 – 2000	
	Number	Percent	Number	Percent	Number	Percent
Haycock	218	25.9%	176	21.0%	447	53.0%
Milford	497	15.7%	640	20.2%	2,024	64.0%
Quakertown	1,379	38.0%	1,098	30.0%	1,154	32.0%
Richland	524	13.5%	772	19.9%	2,581	66.6%
Richlandtown	195	43.2%	76	16.9%	180	39.9%
Trumbauersville	171	44.8%	102	26.7%	109	28.5%
<b>QAPC-Region</b>	<b>2,984</b>	<b>24.2%</b>	<b>2,864</b>	<b>23.2%</b>	<b>6,495</b>	<b>52.6%</b>
<b>Bucks County</b>	<b>26,051</b>	<b>11.6%</b>	<b>86,483</b>	<b>38.3%</b>	<b>112,964</b>	<b>50.1%</b>

Source: U.S. Census

The share of the region’s housing built since 1969, at 52.6 percent, is slightly greater than the corresponding countywide share of just over 50 percent. In Richland and Milford, the two largest townships, nearly two-thirds of all housing has been built since 1969.

The region added a far smaller share of its housing from 1940 to 1969 than did Bucks County in its entirety. But the regional share of housing built before 1940, at 24.2 percent, is more than twice the countywide share, and it is largely concentrated in the three boroughs. Housing in the boroughs, then, may require a greater degree of concentrated rehabilitation and maintenance than other area housing in the future.

Both rental and owner-occupied housing in the Quakertown region are less costly than in the county as a whole. Data on housing by tenure type—rental or owner-occupied—are in Table 19.

**Table 19. Rental and Owner-occupied Housing in QAPC Municipalities and Bucks County, 2000**

Place	Rental housing units			Owner-occupied housing units		
	Number	Percent	Median rent	Number	Percent	Median value
Haycock	104	12.9%	\$629	701	87.1%	\$174,300
Milford	341	11.1%	\$670	2,732	88.9%	\$160,200
Quakertown	1,265	37.0%	\$629	2,156	63.0%	\$113,700
Richland	652	17.3%	\$606	3,111	82.7%	\$135,200
Richlandtown	135	31.4%	\$609	295	68.6%	\$109,400
Trumbauersville	82	21.9%	\$646	292	78.1%	\$147,100
<b>QAPC-Region</b>	2,579	21.7%	n/a	9,287	78.3%	n/a
<b>Bucks County</b>	49,520	22.6%	\$736	169,205	77.4%	\$163,200

Source: U.S. Census

Quakertown Area residents responding to the comprehensive plan survey identified reasonable housing prices as the third most frequently cited reason for settling in the municipality in which they live. Upward of 60 percent of survey respondents rated housing variety and affordability as good-to-fair in the region and in their home municipalities.

Overall, the 21.7 percent of rental housing and 78.3 percent of owner-occupied housing in the region nearly match the corresponding rates for Bucks County of 22.6 percent and 77.4 percent. The rates of owner occupancy in the region range from a low of 63 percent in Quakertown to a high of nearly 89 percent in Milford.

Median values of owner-occupied housing in the region were generally well below the county figure of \$163,200, except in Haycock and Milford. The figures ranged from a low of \$109,400 in Richlandtown to a high of \$174,300 in Haycock.

The region's rental housing is heavily concentrated in Quakertown, which numbers 37 percent of its housing stock in rentals. Richland also has a sizable number of rental units, but they make up a smaller percentage of the total housing stock. There is also a relatively high percentage of rental housing in Richlandtown, although the absolute number of units is small.

Rental housing in Quakertown in 2000 had a vacancy rate of 7.3 percent—the sole instance of a vacancy rate in excess of the 5 percent generally considered desirable to allow for normal market activity. Median monthly rental costs in the region were well below the countywide figure of \$736, ranging from a low of \$606 in Richland to a high of \$670 in Milford.

Affordability of both rental and market housing on a regional basis is good, based on 2000 census data, although housing costs have risen steadily since then. Using Quakertown, the region's municipality with the lowest median household income (\$41,942), as a benchmark, a household making the median income can afford the median rent of \$639 or buy the median-valued \$113,700 home, while paying no more than 30 percent of income. Payment of no more than 30 percent of income for housing is considered a standard measure of affordability.

The distribution of housing by type of structure illustrates the varied residential mix that exists in the Quakertown region. Table 20 presents data on housing type. In Pennsylvania, municipalities are required to zone for a fair share of all kinds of housing, or risk a court challenge to their zoning.

**Table 20. Housing Units\* by Type in QAPC Municipalities and Bucks County, 2000**

Housing Type	Municipalities				Bucks County			
	Haycock	Milford	Quakertown	Richland	Richlandtown	Trumbauersville	QAPC	Bucks County
Single-family Detached	762 90.6%	2,473 78.2%	1,191 32.8%	1,779 45.9%	187 41.5%	279 73.0%	6,671 54.0%	144,555 64.1%
Single-family Attached (townhouse, condo)	10 1.2%	317 10.0%	1,315 36.2%	849 21.9%	165 36.6%	45 11.8%	2,701 21.9%	31,382 13.9%
2 or more units (multi-family, apts.)	42 5.0%	240 7.6%	1,121 30.9%	462 11.9%	99 22.0%	58 15.2%	2,022 16.4%	43,767 19.4%
Mobilehomes	27 3.2%	131 4.1%	4 0.1%	787 20.3%	0 0.0%	0 0.0%	949 7.7%	5,723 2.5%
<b>TOTAL</b>	<b>841</b>	<b>3,161</b>	<b>3,631</b>	<b>3,877</b>	<b>451</b>	<b>382</b>	<b>12,343</b>	<b>225,427</b>

\*Bucks County total excludes 71 boats, RVs, vans

Source: U.S. Census

The region’s residential stock is more diverse than housing countywide, providing a greater share of types other than conventional single-family detached housing. This diversity may help to explain the affordability cited in the comprehensive plan survey.

The housing mix reflects consumer preferences, income, and the demographic makeup of municipalities in the region. Zoning ordinances in the Quakertown Area municipalities have yielded a housing mix that encompasses “all basic forms of housing,” as required by Section 604(4) of the Pennsylvania Municipalities Planning Code (MPC).

The ratio of detached single-family housing in Bucks County is 64.1 percent, compared to a regional figure of 54 percent. The only other case in which the regional share of a certain housing type is less than the countywide share is multifamily housing of 2 or more units. The regional figure is 16.4 percent, compared to a countywide figure of 19.4 percent.

Also, multifamily housing in the region is more likely to be found in smaller buildings of 2 to 4 units, rather than larger apartment buildings of 5 units or more. This likely reflects the small scale of the region’s boroughs, where much of the



Attached residential units in Trumbauersville



Renaissance age-restricted housing in Richland (under construction)

multifamily stock is located, and the relatively recent vintage of construction of much of the attached or multifamily housing in the region.

Zoning ordinances in Richland and Quakertown make provisions for age-restricted housing. Several hundred units of this type of housing are under construction or in the planning stage, most of it in Richland. Municipal zoning ordinances in the Quakertown Area also generally provide for institutional-type land uses that include living quarters for the elderly in nursing homes, life care, and assisted living facilities.

## Existing Land Use

The pattern of existing land uses is a product, in part, of design through the ongoing planning program and implementing zoning ordinances. The land use pattern is also a result of the response to economic, social and legal circumstances.

During preparation of this comprehensive plan update, an inventory of existing land uses was undertaken. Aerial photographs, taken in early-2000, and Bucks County Board of Assessment (BOA) information served as primary sources for the inventory.

Based on land use information verified by each municipality, the acreages and percentages of various land use categories were obtained using computer calculations generated through the county's geographic information system (GIS). Land use information has been provided on a municipal and regional basis.

Figures 6 and 7 identify existing land use (year 2005) in the townships and boroughs, respectively. Table 21 provides a land use classification summary for all six Quakertown Area municipalities.

**Table 21. 2005 Quakertown Area Municipal Land Use Classification\***

Land Use	Haycock Township		Milford Township		Quakertown Borough		Richland Township		Richlandtown Borough		Trumbauersville Borough	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Single-family residential	991	8%	2,684	15%	471	36%	2,000	15%	81	49%	127	45%
Multifamily residential	5	0.04%	17	0.1%	72	6%	54	0.4%	23	14%	6	2%
Rural residential	4,069	32%	5,139	29%	0	0%	3,082	23%	0	0%	28	10%
Agricultural	920	7%	4,524	25%	0	0%	3,315	25%	0	0%	0	0%
Commercial	15	0.1%	298	2%	179	14%	817	6%	7	4%	19	7%
Government & institution	222	2%	410	2%	150	12%	210	2%	17	10%	26	9%
Mining and manufacturing	1	0.01%	336	2%	53	4%	222	2%	0	0%	6	2%
Parks, rec, open space	4,824	38%	976	5%	98	8%	1,158	9%	3	2%	12	4%
Transportation & utilities	231	2%	944	5%	206	16%	697	5%	20	12%	20	7%
Vacant	1,430	11%	2,690	15%	67	5%	1,591	12%	14	8%	36	13%
<b>Total</b>	<b>12,708</b>		<b>18,018</b>		<b>1,296</b>		<b>13,146</b>		<b>165</b>		<b>280</b>	

Source: Bucks County Planning Commission

\*Percentages may not add up to 100 percent due to rounding.

## ***Municipal Perspective***

### **Haycock Township**

Haycock Township can be characterized as open and very rural. A unique feature of the township is the prevalence of public lands.

Haycock Mountain State Game Lands (2,046 acres), Bucks County Lake Towhee Park (consisting of 501 acres) and approximately 2,091 acres of Nockamixon State Park are all located within Haycock's municipal boundary. These lands account for a vast majority of the township's 4,824 acres classified as parks, recreation and open space which comprises more than a third of the township's land area (38 percent). Approximately 11 percent (1,430 acres) of the township is classified as vacant, much of which is wooded area.

Residential uses comprise slightly over 40 percent of the township, approximately 32 percent of which are classified as rural residential—lots with a residential use on 5 acres or more. Single-family residential use accounts for 8 percent of land, with multifamily residential comprising only 5 acres (0.04 percent) of the township.

Commercial and industrial uses are few and dispersed, with only 0.1 percent (16 acres) of the township's land use in these categories. Major shopping takes place outside of the township. Agricultural land, consisting of 7 percent of the township's land area, is generally located in the western part of the township near the Richland Township border.

### **Milford Township**

With a combined acreage of 7,840 acres, residential land uses represent slightly more than 43 percent of Milford Township's land area. The majority of this land is in the three residential classifications: rural residential (5,139 acres or 29 percent), single-family residential (2,684 acres or 15 percent), and multifamily residential (17 acres or 0.1 percent). Much of this development has occurred east of the turnpike, south of Route 663, and in the Spinnerstown area in the northwestern portion of the township.

Agriculture remains a major land use in the township, representing a quarter of the total land area with over 4,500 acres actively farmed. Primary areas of agricultural use in the township are west of the turnpike and north of Route 663.

Three working farms in the north-central portion of the township, totaling 190 acres, have been preserved through the Bucks County Agricultural Land Preservation Program. Although areas around Trumbauersville Borough contain active farms, these areas have been experiencing residential development that will place additional pressure on farms to convert to non-farm uses. With 2,690 acres, vacant land represents approximately 15 percent of the township.

Within the last decade, Milford Township has experienced a significant amount of nonresidential development along the Route 663 corridor, primarily between the turnpike and Quakertown Borough. Much of this development has occurred along Route 663, near Portzer Road, Commerce Boulevard and the airport, and also near the turnpike interchange in the vicinity of AM Drive, where

a new slip-ramp to the turnpike has been constructed. Mining and manufacturing account for roughly 2 percent of the township's land cover, with 336 acres designated in that category.

Lands classified as parks, recreation and protected open space account for approximately 5 percent of the township. Such lands include municipal parks, dedicated open space, and golf courses.

### **Richland Township**

Residential uses account for a significant portion of Richland Township's land use at roughly 39 percent (5,136 acres). Of that number, 23 percent (3,082 acres) is classified as rural residential, 15 percent (2,000 acres) as single-family residential, and 0.4 percent (54 acres) as multifamily residential. Much of the township's recent residential development has occurred in the southern portion of the township and around the borough of Quakertown.

With approximately 3,315 acres, agricultural land accounts for approximately 25 percent of the township's area. While some agricultural land remains in the southern portion of the township along the Morgan Creek, much of the township's farmland is located around Richlandtown Borough in the northeastern portion of the township.

The northern part of the township is characterized by steep slopes and wooded areas, with significant wetland areas in the southern portion of the township, especially in the area known as the Great Swamp. Vacant land accounts for approximately 12 percent of the township's land area (1,591 acres).

Land classified as parks, recreation and protected open space accounts for roughly 1,158 acres, or 9 percent of the township's land area. Fifty acres of Quakertown Borough's Memorial Park are located in the township.

Approximately 6 percent of the township consists of commercial uses (817 acres). The vast majority of the township's commercial land is located along or near the Route 309 corridor. Mining and manufacturing uses account for roughly 2 percent (222 acres) of the township, with the major industrial area located along the railroad north of Quakertown Borough and west across California Road.

### **Quakertown Borough**

Quakertown Borough is the historic hub of the area. The intensity and types of land uses make the borough a center for many activities. Only 5 percent of the borough is classified as vacant.

As with all of the other Quakertown Area municipalities, residential uses are the predominant land use in the borough. Of the 42 percent (543 acres) of land area classified as residential use, single-family residential accounts for 36 percent (471 acres), while multifamily residential covers 6 percent (72 acres).

Commercial uses, which account for 14 percent (179 acres) of the borough's land area, are located within the borough's center and along the Route 309 corridor that crosses the borough. Industrial uses, categorized as mining and manufacturing, cover 53 acres, or 4 percent of borough land. Much

of the industrial land is located along the rail line that runs from north to south in the eastern portion of the borough.

At approximately 150 acres, government and institutional uses represent 12 percent of the borough's land area. Included in this category are the Quakertown Community School District administrative offices, several schools, nursing homes and personal care facilities, and the Quakertown Community Hospital. Land classified as transportation and utilities accounts for 16 percent of the borough. Roads and rail lines and property fall within this category.

Parks, recreation, and protected open space comprise 98 acres, or 8 percent of the borough. The 58-acre portion of the Quakertown Memorial Park located in the borough contains a variety of active and passive recreation facilities. The senior citizen center is located in the borough.

### **Richlandtown Borough**

Residential uses account for 63 percent (104 acres) of Richlandtown Borough's land area. Of this figure, 49 percent is classified as single-family and 14 percent as multifamily. Government and institutional uses, which consist of a large cemetery, nursing home, borough hall, and several churches, represent 10 percent (17 acres) of the borough.

Transportation and utilities, which includes road areas, comprises 12 percent (20 acres) of the borough, while 4 percent (7 acres) consists of commercial land located in several areas along Main Street and Union Road. According to county land-use information, there is no industrial land in the borough.

Land classified as parks, recreation, and preserved open space account for 2 percent (3 acres) of the borough. Vacant land accounts for 8 percent (14 acres) of the borough land area.

### **Trumbauersville Borough**

Residential uses comprise 57 percent (161 acres) of Trumbauersville Borough. Of that land, 45 percent (127 acres) is classified as single-family residential, 10 percent (28 acres) as rural residential, and 2 percent (6 acres) as multifamily residential. Land classified as rural residential consists primarily of three separate land areas in the borough, all with access along Main Street. Vacant land represents 13 percent (36 acres) of the borough.

Government and institutional uses, which include a school, a cemetery, several churches, the municipal building and fire company property, account for 9 percent (26 acres) of the borough's land area. Commercial and industrial uses combined occupy approximately 25 acres or 9 percent of the borough's land area, and are located in various areas throughout the borough. Land classified as parks, recreational, and preserved open space account for 4 percent (12 acres) of the borough's land area.

### ***Regional Perspective***

Table 22 on the following page illustrates the regional summary by land use category for 2005. Not quite half (41.4%) of the Quakertown Area's overall land use is devoted to residential uses (single-family, multifamily, and rural residential).



Of that figure, a majority of the residential land use—roughly 27 percent, falls within the rural residential land use category. The rural residential land-use category includes parcels with a single-family detached dwelling and a size of five acres or greater (a detailed description of land use classification definitions can be found in Appendix D). This category is used to identify large residential lots that may have potential for future subdivision and land development.

The agricultural land use category is limited to parcels that are 20 acres or larger. Parcels of less than 20 acres are classified as either vacant or rural residential land uses.

With approximately 8,759 acres, equating to 19 percent of total land area, agricultural land represents almost a fifth of the land use in the entire Quakertown region. The total area of agricultural land in the Quakertown Area (8,759 acres) is divided among the three townships. Slightly more than half of the region's agricultural land lies within Milford Township (4,524 acres), followed by Richland Township with 3,315 acres (almost 38 percent), and Haycock Township with 920 acres (10.5 percent). Approximately 13 percent (5,828 acres) of land in the Quakertown Area is classified as vacant.

Multifamily residential land use comprises slightly less than half a percent (0.4 percent) of the land area in the Quakertown Area at 177 acres. Much of this land use is concentrated in and around the boroughs.

Parks, recreation, and protected open space land use covers 7,071 acres in the region, accounting for 16 percent of the total land area. Slightly over 66 percent or one-third, of land in this category lies within Haycock Township (4,824 acres), with 16 percent (1,158 acres) in Richland Township, 14 percent (976 acres) in Milford Township, and 1.4 percent (98 acres) in Quakertown Borough.

Transportation and utility uses take up 5 percent (2,118 acres) of the land area in the region. It should be noted that this includes road rights-of-way where dedicated to a governmental agency.

Commercial uses represent 3 percent (1,335 acres) of the area's land use with Richland Township having the highest percent of land in this category at 61 percent (817 acres), followed by Milford Township at 22 percent (298 acres) and Quakertown Borough at 13 percent (179 acres). Governmental and institutional uses occupy 1,035 acres (2 percent) of the Quakertown Area, with Milford Township leading in this category with 410 acres (40 percent), followed by Haycock and Richland townships, respectively. Mining and manufacturing takes up 1 percent (618 acres) of the total, with the most acreage devoted to this use found in Milford Township (336 acres), followed by Richland Township and Quakertown Borough, respectively.

### **Regional Land Use Trends**

There have been notable shifts in the land use characteristics of the Quakertown Area, as measured against comparable statistics from 1990. While absolute precision in identifying and determining exact changes is not possible, due to differences in the mapping techniques and technology between 1990 and 2005 and potential errors in mapping, the information in the following table provides enough accuracy to identify important trends and changes.

**Table 22. 1990 to 2005 Quakertown Planning Area Land Use Summary**

Land Use	1990		2005		1990 to 2005	
	Acres	Percent	Acres	Percent	Acreage change	Percent change
Single-family residential	4,995	11%	6,354	14%	1,359	27%
Multifamily residential	153	0.3%	177	0.4%	24	16%
Rural residential	11,398	25%	12,318	27%	920	8%
Agricultural	11,629	25%	8,759	19%	-2,870	-25%
Commercial	1,171	3%	1,335	3%	164	14%
Government & institutional	888	2%	1,035	2%	147	16%
Mining and manufacturing	461	1%	618	1%	157	34%
Parks, recreation, open space	4,808	11%	7,071	16%	2,263	47%
Transportation & utility	1,961	4%	2,118	5%	157	8%
Vacant	8,174	18%	5,828	13%	-2,346	-29%
<b>TOTAL</b>	<b>45,638*</b>		<b>45,613*</b>			

Source: Bucks County Planning Commission

\* Discrepancy between totals is due to differences in mapping techniques and technology between 1990 and 2005.

The Quakertown Area continued to lose agricultural land in the period 1990 to 2005, and losses in this category constituted the greatest change in the number of acres lost at 2,870 (a decrease of 25 percent). Within this time period, Richland Township experienced the greatest decline of agricultural acreage, losing 1,271 acres. The other two townships in the region also experienced reductions in agricultural land within this time frame: Haycock Township lost 907 acres, and Milford Township lost 620 acres.

Another land use category that saw significant losses is land classified as vacant. From 1990 to 2005, vacant land in the region declined by 2,346 acres (29 percent decrease). Milford Township had the largest loss in acreage of vacant land at 1,190 acres. Richland Township experienced a decline of 629 acres of its vacant land, and Haycock Township lost approximately 505 acres of vacant land.

The percentage of land in rural residential use saw a modest increase in the Quakertown Area, from 25 to 27 percent of the total land area of the community. Rural residential areas in both Haycock and Milford townships actually increased by 801 acres and 186 acres, respectively, with a small drop in both Richland Township and Richlandtown Borough (62 acres and 6 acres, respectively).

The steadiness of this percentage may not be a result of stagnating growth, but instead may indicate the breakup of agricultural lots (moving such land into the rural residential category) that equals the flow of rural residential areas into other land-use categories. In particular, this may be the case in Haycock Township, which saw large declines in agricultural land and increases in rural residential land.

In terms of acreage gained between the years of 1990 to 2005, two land-use categories saw the greatest increase within the region, each with well over 1,000 acres gained. Parks, recreation, and preserved open space increased the most in acreage with 2,263 additional acres dedicated to that use (47 percent increase). While all municipalities within the Quakertown Area experienced an increase in park, recreation, and preserved land, Richland Township saw the greatest increase in acreage

gained with 864 acres, followed by Milford Township—775 additional acres, Haycock Township—563 additional acres, Quakertown Borough—52 additional acres, Trumbauersville Borough—6 additional acres, and Richlandtown Borough—3 acres.

The other land use that experienced a significant increase is single-family residential, which increased by 1,359 acres (27 percent increase) in the region between 1990 and 2005. Milford Township experienced the greatest acreage increase in this category with an additional 573 acres. Richland and Haycock townships also saw increases in single-family residential uses, with increases of 545 and 229 acres, respectively. Trumbauersville Borough was the exception with this trend, as the borough saw a decrease by 4 acres devoted to single-family residential.

Other land-use categories saw varying increases during this time period. Multifamily residential land in the region increased by 24 acres (16 percent increase) of the region's total in this category, with Richland Township experiencing the greatest increase in acreage gained (10 acres). Land devoted to transportation and utility uses increased by 157 acres (8 percent increase), with the largest increases occurring in Milford and Richland townships. Much of this can be contributed to the construction of additional roads associated with new development. Land devoted to commercial uses within the Quakertown Area rose by 164 acres (14 percent increase), with the largest increase in Richland Township (247 additional acres), followed by Quakertown Borough (23 additional acres).

Two land uses, mining and manufacturing and government and institutional uses, experienced no change in percentage of regional area between 1990 and 2005. While both categories did register slight increases in acreage, the percentages of those land uses respectively comprised 1 and 2 percent of the total Quakertown Area, at the beginning and end of this decade.

From 1990 to 2005, the Quakertown Area continued to see losses in the amount of land devoted to agricultural production and in vacant land, coupled with an increase in the amount of territory devoted to open space, recreation, and preserved open space, and to single-family residential development. The amount of rural residential land in the region increased, which was the result of the loss of agricultural land and vacant areas to large residential lots (where the potential for further development is still present).

Efforts to preserve more areas for recreational use and open space appear to have increased the amount of land dedicated to that purpose. Land uses that may be associated with increased development (transportation facilities, utilities, and commercial activities) showed an increase in the amount of land devoted to them. While parts of the Quakertown Area were not directly touched by growth, land-use changes indicate that development continued to be intense, primarily in Richland and Milford townships.

## Residential Development Areas Analysis

Section 301 of the MPC lists the following as one required element of a comprehensive plan:

(2.1) A plan to meet the housing needs of the present residents and of those individuals and families anticipated to reside in the municipality, which may include conservation of presently sound housing, rehabilitation of housing in declining neighborhoods, and the accommodation of expected new housing in different dwelling types and at appropriate densities for households of all income levels.

This section of the comprehensive plan evaluates development potential in light of the projected dwelling units between 2000 and 2017 and identifies existing zoning districts intended for higher-density residential development. These higher-density zoning districts, called Residential Development Areas,<sup>1</sup> are intended to provide the opportunity for the construction of housing and are appropriate locations for a full range of services and complementary land uses that would support housing in such areas. Residential Development Areas are intended to provide sufficient areas for a full range of housing options in the most appropriate locations to establish healthy, attractive, convenient, safe, and well-serviced living environments, without causing environmental problems elsewhere in the region.

As part of this comprehensive plan update, the Quakertown Area needs to determine if it is providing a Residential Development Area sufficient to accommodate projected population and housing growth over the next 10 years. The 1992 Update to the *Quakertown Area Comprehensive Plan* analyzed the zoning and land-use patterns found in the Quakertown Area and determined that the land included in residential development areas (zoning districts in which attached dwellings and mobile home parks are permitted at densities of 2.75 dwelling units per acre or higher) would be sufficient to accommodate projected housing growth, including the need for low- and moderate-income housing, through the year 2000.

This section of the comprehensive plan analyzes whether the amount of land in the Residential Development Areas, including zoning districts permitting all forms of housing, is sufficient to accommodate housing growth that should be accommodated by the Quakertown Area in the timeframe of this planning document. A separate analysis is provided to determine whether the Quakertown Area is providing sufficient areas to accommodate multifamily housing growth over the next 10 years.

Since the Quakertown Area has not adopted a joint zoning ordinance, there is concern that each municipality must separately satisfy its fair share needs to accommodate projected population and housing growth over the next 10 years. Therefore, the following section provides both regional-level and municipal-level fair share housing and multifamily analyses, and highlights the process of determining reasonable housing projections. The projections focus on the 2000 to 2017 time period.

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<sup>1</sup> For a listing of zoning districts included in the Residential Development Area, see page 67.

## **A. Regional-Level Fair Share Analysis**

### **Housing Demand within the Quakertown Area**

#### ***Step 1. Projected Residential Growth from 2000 to 2017***

The following formula estimates the increase in residential units from 2000 to 2017 using the estimated change in population for the same period. The projected population totals for Quakertown Area municipalities for 2015 and 2020, as supplied by the DVRPC, were used to calculate the 2017 projections.

Since DVRPC's projections are calculated in five-year increments, the 2017 projections are based upon an extrapolation of the five-year projections between 2015 and 2020. The difference between the 2015 and 2020 projection figures is divided by 5 and then multiplied by 2, to reach the 2017 population figure.

This figure was divided by the corresponding persons per dwelling unit obtained by dividing the 2000 U.S. Census population by the Census 2000 total dwelling units for each municipality, resulting in the number of projected housing units for 2017. The average number of persons per dwelling unit for the three townships was developed through an adjustment, as discussed below.

The final calculation provided a projected number of new units for the period 2000 to 2017 for each municipality. That figure, added to the Census 2000 housing unit total, provided a projected total of housing units to 2017.

The following assumptions were used to develop this projection:

1. The 2000 U.S. Census amounts for population and housing units are approximately correct and take into account all units constructed up until the end of 1999.
2. The population projections of the DVRPC to 2015 and 2020 are reasonable.
3. The use of the average number of persons per dwelling unit in order to calculate the projected number of new units in each borough in the Quakertown Area provides an accurate measure of the amount of housing that will be needed for the projected population and accurately accounts for the effect of vacancies on these projections. The average number of persons per dwelling unit in each borough will remain constant and equal the average number calculated for 2000 throughout the entire period.
4. The use of the average number of persons per dwelling unit, adjusted downward (a more conservative figure that is intended to account for demographic patterns generally evident in townships), in order to calculate the projected number of new housing units in each township in the Quakertown Area provides an accurate measure of the amount of housing that will be needed for the projected population and accurately accounts for the effect of vacancies on these projections. The adjusted average number of persons per dwelling unit in each township will remain constant and equal the average number calculated for 2000 throughout the entire period.

The average number of persons per dwelling unit in each of the townships of the Quakertown Area was adjusted because past data from developing communities such as townships suggests that the average number of persons per dwelling unit tends to decline as housing stock is added to the community. Boroughs, as communities that are generally close to build-out and exhibit a more stable quantity of housing stock, do not exhibit this attribute. For this reason, the projected average number of persons per dwelling unit in Haycock, Milford and Richland Townships was decreased by one-half of the percentage reduction in the average number of persons per household seen in these municipalities between 1990 and 2000.

This adjustment produced a smaller average number of persons per dwelling unit, a more conservative figure that increased the projected number of dwelling units between 2000 and 2017 in these communities. In Haycock, persons per dwelling unit were adjusted from 2.61 to 2.53, in Milford from 2.79 to 2.71, and in Richland from 2.56 to 2.55.

<b>Municipality</b>	<b>Total municipal acreage</b>	<b>Municipal acreage (Excluding agricultural land area)</b>	<b>Land zoned for multifamily use</b>	<b>Percentage of land area zoned multifamily</b>
Haycock	12,708	11,820	40	0.3
Milford	18,018	13,495	1,115	8.2
Quakertown	1,296	1,296	435	33.5
Richland	13,146	9,830	2,703	27.4
Richlandtown	165	165	161	97.5
Trumbauersville	280	280	261	93.2

*Sources: U.S. Census; DVRPC, Population and Employment Forecasts, 2000–2030, Revised Regional Data Bulletin No. 73 (March 2005).*

**From 2000 to 2017, the projected number of new housing units in the Quakertown Area is 3,355, resulting in a total of 15,698 units in the Quakertown Area by 2017.**

### ***Step 2. Residential Units Constructed between 2000 and 2005***

As stated in the section above, the projection of the amount of residential growth involves use of the most recent U.S. Census data available, from Census 2000. Since 2000, the construction of residential units has continued in the Quakertown Area, and any analysis involving the period 2000 to 2017 should take into account the amount of housing that has been built since that census.

A list of residential developments proposed between 1998 and 2005 was generated to determine what had been constructed from 2000 to 2005.<sup>2</sup> Developments from 1998 and 1999 were included, based on the assumption that an approximately two-year time span between the filing and construction of a proposal might result in proposals from 1998 and 1999 not being constructed before 2000 (and therefore not being counted in Census 2000), but being built afterwards.

<sup>2</sup> The source for this data was the review files of the Bucks County Planning Commission.

The townships and boroughs then reviewed the list and confirmed what was built from 2000 to 2005. Only units that were actually built were counted (not units that were approved or proposed), which results in a more conservative estimate, since a lower number of structures in 2000-2005 increases the number of future units that must be accommodated in the period 2005-2017.

According to information supplied by the boroughs and townships, the following numbers of dwelling units were built between 2000 and 2005:

<b>Municipality</b>	<b>Number of units built</b>
Haycock Township	60
Milford Township	159
Quakertown Borough	30
Richland Township	903
Richlandtown Borough	2
Trumbauersville Borough	<u>15</u>
<b>Total units built in the Quakertown Area</b>	<b>1,169</b>

The number of residential units that have not yet been constructed and must be accommodated is the difference between the 2000-2017 projection and the number of units built in the time frame 2000-2005

Projected number of units, 2000-2017	3,355
Actual units built, 2000-2005	<u>- 1,169</u>
Projected units to be built 2005-2017	2,186

**The projected number of residential units that will be built in the Quakertown Area from 2005 to 2017 is 2,186 units.**

***Step 3. Projected Units Constructed Outside of the Residential Development Area***

Not all of the residential development that occurs in a community takes place in the Residential Development Area a municipality has designated to accommodate future growth. New units are constructed in zoning districts not part of this area.

The municipalities in the Quakertown Area are no exception to this phenomenon, as demonstrated by information supplied by townships and boroughs regarding location of new residential units constructed in the last five years. There is no reason to expect that this trend will not continue and that some percentage of new units will be constructed outside the Residential Development Area during 2005 and 2017. The projected amount of demand for space in the Residential Development Area can be reduced based on a projected amount of residential development that will occur in zoning districts not included in that area.

The following assumptions were used to develop this portion of the projection:

1. The zoning districts listed below will be considered part of the Residential Development Area in this update and any residential units constructed in the last five years in these zoning

districts will be counted as having been constructed within the Residential Development Area when calculating the percentage of units built outside that area.

The zoning districts are:

***Haycock Township, Milford Township, Richland Township, Trumbauersville Borough***

SRC Suburban Residential Conservation District

SRL Suburban residential Low District

SRM Suburban Residential Medium District

SRH Suburban Residential High District

VC-2 Village Center District

URL Urban Residential Low District

AQ Age Qualified Overlay District

***Quakertown Borough***

LR Low Density Residential

MR Medium Density Residential

HR High Density Residential

TC Town Center

NC Neighborhood Commercial

***Richlandtown Borough***

RS Residential Subdivision

VC Village Center

2. The remaining zoning districts will be considered to be outside of the Residential Development Area in this update, and any residential units constructed in the last five years in these zoning districts will be counted as having been constructed outside the Residential Development Area when calculating the percentage of units built outside that area.
  
3. The percentage of dwelling units built outside of the Residential Development Area (as defined by this plan) in the last five years will provide an approximation of the percentage of dwelling units that will be constructed outside the Residential Development Area in the entire Quakertown Area for the period 2005–2017.

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**Number of units built outside Residential Development Area, 2000-2005**

Haycock Township	
Number of units built outside the Residential Development Area	60
Milford Township	
Number of units built outside the Residential Development Area	100
Richland Township	
Number of units built outside the Residential Development Area	<u>176</u>
Total number of units built outside the Residential Development Area	336

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### **Percentage of units built outside of Residential Development Area, 2000-2005**

Total number of units built in the Quakertown Area	1,169
Total number of units built outside the Residential Development Area	336
Percentage of units built outside the Residential Development Area	29%

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### **Projected Number of units to be built outside of Residential Development Area, 2005-2017**

Projected total number of units to be built in the Quakertown Area	2,186
Projected percentage of units to be built outside of the Residential Development Area	29%
Projected total units to be built outside of the Residential Development Area	633

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The number of residential units that must be accommodated in the Residential Development Area is the difference between the projected total units to be built in the Quakertown Area, 2005–2017, and the projected number of units to be built outside of the Residential Development Area, 2005–2017.

Projected number of new units in the Quakertown Area	2,186
Projected number of new units outside Residential Development Area	<u>- 633</u>
Projected units to be accommodated in the Residential Development Area	1,553

As a result of these calculations, the assumed number of new units that will need to be accommodated within the Residential Development Area of the Quakertown Area between 2005 and 2017 will be 1,553 units.

### **Supply of Available Land within the Quakertown Area**

To determine the capacity of the Residential Development Area, the potentially developable land remaining in the zoning districts that compose this area was analyzed. Potentially developable lands consist of vacant, agricultural, or rural residential properties.<sup>3</sup>

### **Methodology Used to Determine Developable Land and Potential Units**

1. A list of residential developments proposed between 1998 and 2005 was generated to determine what new development may have been approved from 2000 to 2005.<sup>4</sup> The townships and boroughs then reviewed the list and confirmed what was approved for construction, but not yet constructed, as of 2005 in the Residential Development Area. A total of 592 approved, but not constructed, dwelling units were identified in the Residential Development Area. Parcels on which approved proposals were located were removed from consideration to avoid being double-counted as developable area.

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<sup>3</sup> A rural residential property contains a dwelling unit and is five acres or larger, which may result in future subdivision.

<sup>4</sup> The source of this data was the review files of the Bucks County Planning Commission.

2. From the existing land-use maps that had been reviewed by township officials, parcels listed as vacant, rural residential, or agricultural in certain zoning districts were identified as developable parcels.
3. Potential natural resource constraints on the remaining developable parcels were analyzed by mapping floodplains and wetlands located on those parcels. The area of those resources that were found on each parcel was removed from the total area of each parcel so that the portion of a parcel that could not be developed (due to natural resource constraints) would not be included in calculations regarding the development potential of that parcel.
4. Potential units that could be built on each parcel were calculated using the highest permitted density in the zoning district in which the parcel was located. No development (i.e., a potential dwelling unit) was projected on lots that did not meet either the minimum lot size or maximum density requirement for the district in which they were located, a conservative approach given that some of those lots may be legally entitled to be developed with a single unit. Properties with the potential for conversion or redevelopment were not considered due to their highly variable potential for future use.
5. The total number of potential units that could be built in the developable area, combined with the number of approved units (See Item 1, above), was compared to the projected demand within the Residential Development Area to determine whether the developable land within the Residential Development Area is sufficient to accommodate the projected growth.

***Step 1. Approved Units to be Constructed in the Residential Development Area, 2005–2017***

The number of units that have received approval for construction in the Residential Development Area and can be expected to be built between 2005 and 2017 is provided below. This number either represents what actually will be built or a reasonable projection of what can be built on those parcels, since they are drawn from actual plans. Those parcels were removed from consideration in Step 2, below, to avoid being counted twice.

Approved units in the Quakertown Area

Approved units in Haycock	0
Approved units in Milford	129
Approved units in Quakertown	1
Approved units in Richland	546
Approved units in Richlandtown	0
<u>Approved units in Trumbauersville</u>	<u>+ 10</u>
Projected new units accommodated	686

The number of units that have received approval for construction in the Residential Development Area and can be expected to be supplied between 2005 and 2017 is 686 units.

***Step 2. Development Potential within the Residential Development Area***

The Residential Development Area (which includes the zoning districts identified in Part A of this section) was analyzed to determine the total number of units that could be constructed on the parcels identified as developable and available for residential development.

Potential units in the Residential Development Area

**Haycock Township**

Suburban Residential High District 112

**Milford Township**

Suburban Residential Low District 372

Suburban Residential Medium District 118

Village Center District + 4

Total potential units 494

**Quakertown Borough**

High Density Residential District 27

Low Density Residential District 61

Medium Density Residential District 38

Neighborhood Commercial District 3

Town Center District + 28

Total potential units 157

**Richland Township**

Suburban Residential Conservation District 48

Suburban Residential High District 33

Suburban Residential Low District 327

Suburban Residential Medium District 256

Age Qualified Overlay District + 127

Total potential units 791

**Richlandtown Borough**

Residential Subdivision District 55

**Trumbauersville Borough**

Suburban Residential Low District 67

Suburban Residential Medium District + 38

Total potential units 105

The number of units that can be accommodated in the zoning districts that are a part of the Residential Development Area of the Quakertown Area is 1,714 units.

***Step 3. Determine Adequacy of Residential Development Area to Accommodate Projected Development, 2005-2017***

The adequacy of the Residential Development Area is determined by comparing the projected number of new units between 2005 and 2017 to the number of approved units and the number of units that can be accommodated in the Residential Development Area.

Approved units in the Residential Development Area  
that will be constructed, 2005-2017 686

Additional units that can be accommodated <u>in the Residential Development Area</u>	<u>+ 1,714</u>
Total of approved units and units that can be accommodated	2,400
Projected units to be accommodated <u>in the Residential Development Area, 2005-2017</u>	<u>- 1,553</u>
Surplus potential units in the Residential Development Area	847

### **Summary**

Currently, the Quakertown Area’s municipalities provide approximately 847 units more than the number of units projected to be accommodated in the Residential Development Area between 2005 and 2017. Based upon planning conventions, a minimum safety factor or surplus capacity of 25 percent (or 125 percent of the projected number of housing unit) is generally acceptable. This figure is intended to account for the uncertainties and changes in market conditions, the use of properties for nonresidential use (e.g., churches, schools, parks and playgrounds, etc.), unbuildable areas (e.g., floodplains, steep slopes, etc.) within the growth areas, and the inherent inefficiencies of development layout and design.<sup>5</sup>

This safety factor is in addition to the conservative methodology described above that eliminated many parcels originally considered for inclusion within the totals of developable land in the Quakertown Area because of their size or natural resource limitations. Consequently, the Quakertown Area’s provision of 847 units more than the Year 2017 projected unit total provides a safety factor of 54 percent, well above the minimum 25 percent considered acceptable by planning conventions.

### **B. Municipal-Level Fair Share Analysis**

The same fair share analysis that was conducted above for the region as a whole was conducted for each of the six municipalities and is summarized in the Table 23 on the next page.

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<sup>5</sup> Source: *Planning Beyond Boundaries, Multi-Municipal Planning and Implementation Manual for Pennsylvania Municipalities*, 10,000 Friends of Pennsylvania (2002).

**Table 23. Municipal-Level Fair Share Analysis (2000–2017)**

	Milford	Richland	Haycock	Quakertown	Trumbauersville	Richlandtown
<b>A. Housing demand</b>						
Projected new units	1,101	1,882	243	76	27	25
Minus units constructed (2000–2005)	159	903	60	30	15	2
<b>Projected units to be built</b>	<b>942</b>	<b>979</b>	<b>183</b>	<b>46</b>	<b>12</b>	<b>23</b>
Historic percentage of units constructed multiply by outside development area (D.A.)*	x 0.29	x 0.29	x 0.29	x 0.29	x 0.29	x 0.29
<b>Projected units to be built outside D.A.</b>	<b>273</b>	<b>284</b>	<b>53</b>	<b>13</b>	<b>3</b>	<b>7</b>
Projected units to be built	942	979	183	46	12	23
Minus projected units to be built outside D.A.	273	284	53	13	3	7
<b>Projected units accommodated inside D.A.</b>	<b>669</b>	<b>695</b>	<b>130</b>	<b>33</b>	<b>9</b>	<b>16</b>
<b>B. Supply of available land</b>						
Approved units in D.A.	129	546	0	1	10	0
Plus potential units in D.A.	494	791	112	157	105	55
<b>Total of approved/potential units</b>	<b>623</b>	<b>1,337</b>	<b>112</b>	<b>158</b>	<b>115</b>	<b>55</b>
Minus projected units accommodated inside D.A.	669	695	130	33	9	16
<b>Current unit surplus or deficit in D.A.</b>	<b>-46</b>	<b>642</b>	<b>-18</b>	<b>125</b>	<b>106</b>	<b>39</b>
<b>Current surplus or deficit percentage</b>	<b>-7%</b>	<b>92%</b>	<b>-14%</b>	<b>379%</b>	<b>1178%</b>	<b>244%</b>
<b>Unit surplus or deficit in D.A. w/zoning amendment**</b>	<b>-3</b>	<b>642</b>	<b>75</b>	<b>125</b>	<b>106</b>	<b>39</b>
<b>Surplus or deficit percentage w/zoning amendment**</b>	<b>-4%</b>	<b>92%</b>	<b>57%</b>	<b>379%</b>	<b>1178%</b>	<b>244%</b>

\* Based upon the average percentage of units built outside the Development Area throughout the Quakertown Area.

\*\* See the following summary for details on the zoning ordinance amendment.

### Summary

Under the current zoning, the analysis above indicates that all of the Quakertown Area municipalities, with the exception of Haycock and Milford townships, satisfy their individual fair share of housing units including a safety factor of at least 25 percent. As discussed in the Future Land Use and Growth Management Plan section, this comprehensive plan recommends revising land use policy to change the category of the VC-1 district from Reserve Area to Development Area.

Consequently, if the two municipalities amend their zoning ordinances to reflect this policy in the Statements of Purposes and Intent for the Districts section, Haycock’s current 18-unit deficit would result in a 75-unit surplus or a surplus capacity (safety factor) of 57 percent. This is the result of an additional 93 units of potentially developable lands within Applebachsville and Strawntown.

If Milford follows suit with such a zoning amendment, it would yield an additional 43 units as the result of potentially developable lands associated with Brick Tavern, Finland, and Geryville. Subsequently, Milford can reduce its dwelling unit deficit to 3 units, or 4 percent. Even with the zoning amendment, Milford needs an additional 126 units within the Development Area to satisfy the 25 percent safety factor. In Richland, the housing unit yield would increase if municipal officials decide to incorporate the villages of Shelly and California as VC-1 districts (as described in the

Village Planning and Preservation section), and the VC-1 district’s purpose is amended accordingly in the zoning ordinance.

### C. Regional Multifamily Accommodation

The purpose of this section is to determine if there is adequate land zoned for multifamily housing in the Quakertown Area. Two methods have been employed to analyze whether the Quakertown Area has sufficient land in the zoning districts that permit multifamily housing to accommodate such housing for the period 2005 to 2017.

#### *Method 1. Multifamily Housing Unit Need based on County Average*

This analysis involves a comparison of the actual and potential amount of such housing found in the Quakertown Area, compared to the percentage of multifamily housing found throughout Bucks County. The overall percentage of multifamily units<sup>6</sup> for Bucks County is 30.7 percent, based upon the 2000 U.S. Census. Using the projection found in Part A, above, as the potential number of housing units that would be constructed by 2017, the following calculation provides the potential number of multifamily units that should be provided in 2017.

Projected 2017 housing units in the Quakertown Area	15,698
Multiply by the county average of multifamily units (30.7%)	<u>x 0.307</u>
Number of multifamily units needed for the Quakertown Area	4,819

The U.S. Census provides data on the number of multifamily units that were found in the Quakertown Area in 2000. This number is subtracted from the units needed by 2017 to provide the amount of units that must be provided between 2000 and 2017.

Number of multifamily units needed for the Quakertown Area	4,819
<u>Multifamily units in Quakertown Area in 2000</u>	<u>- 4,175</u>
Additional units needed between 2000 and 2017 to meet county percentage	644

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Information supplied by the municipalities in the Quakertown Area indicates that additional multifamily housing was constructed between 2000 and 2005 and was approved for construction (which, it is assumed, will take place between 2005 and 2017).

Multifamily units already constructed (2000-2005)	280
<u>Multifamily units approved for construction</u>	<u>+ 442</u>
Additional multifamily units constructed, 2000-2005, or approved for construction, 2005-2017	722
Additional units needed between 2000 and 2017 to meet county percentage	<u>- 644</u>

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<sup>6</sup> Multifamily units for the purpose of this analysis include attached unit structures (e.g., townhouses) of 3 or more unit structures (e.g., apartment buildings), but excludes 2-unit structures (e.g., twins).

**Number of existing or approved multifamily units  
above number required to meet county average**

78

In addition, developable land that could be developed for multifamily use exists in the zoning districts that permit multifamily housing.

Potential multifamily units that can be accommodated in the Quakertown Area:

Potential units in Haycock	67
Potential units in Milford	339
Potential units in Quakertown	49
Potential units in Richland	529
Potential units in Richlandtown	51
<u>Potential units in Trumbauersville</u>	<u>+ 72</u>
Total potential units	1,107

**Summary**

Based upon this analysis, the number of existing and approved multifamily units in the Quakertown Area in 2005 was already sufficient to result in a percentage of multifamily units in the Quakertown Area in 2017 that meets or exceeds Bucks County’s average number of multifamily units. If that land were developed in its entirety for multifamily use at the highest permissible density, an additional 1,107 multifamily units could be constructed. This would result in an amount of multifamily housing that would exceed the amount needed to equal the county percentage by 1,245 units.

**Method 2. Land Area Percentage**

A second test for determining if a municipality is providing its fair share of multifamily housing units is based upon percentage of land area zoned for multifamily use. Courts have not established an actual threshold, but have upheld specific percentages of land area based on various factors such as whether or not a municipality is a logical area for growth and growth pressure. (See E. Conclusions at the end of chapter for a listing of applicable court cases).

Additionally, the Court of Common Pleas has specifically held that land used for farming is to be considered developed when conducting an analysis related to the case of *Surrick v. Zoning Hearing Board of the Township of Upper Providence* and other cases that supplement the *Surrick* case.<sup>7</sup> Therefore, the agricultural land area (8,759 acres) is subtracted from the total land area of the Quakertown Area (45,648 acres), resulting in 36,889 acres of land that would be used in determining the percentage of land zoned for multifamily use.

Currently, the following zoning districts permit multifamily housing (e.g., single-family attached units - townhouses, multifamily - apartments).

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<sup>7</sup> *Heritage Building Group, Inc. v. Plumstead Township Board of Supervisors*. Commonwealth Court of Pennsylvania. No. 3020 C.D. October 17, 2003.

<b>Zoning</b>	<b>Acres</b>
<b>Haycock Township</b>	
SRH Suburban Residential High	39.52
<b>Milford Township</b>	
SRL Suburban Residential Low	761.96
SRM Suburban Residential Medium	<u>352.56</u>
Total	1,114.52
<b>Quakertown Borough</b>	
HR High Density Residential	345.51
NC Neighborhood Commercial	26.82
TC Town Center	<u>62.23</u>
Total	434.56
<b>Richland Township</b>	
SRC Suburban Residential Cons.	596.86
SRH Suburban Residential High	208.60
SRL Suburban Residential Low	917.72
SRM Suburban Residential Medium	528.33
URL Urban Residential Low	16.21
AQ Age Qualified Overlay	<u>435.27</u>
Total	2,702.99
<b>Richlandtown Borough</b>	
RS Residential Subdivision	145.50
VC Village Center	<u>15.76</u>
Total	161.26
<b>Trumbauersville Borough</b>	
SRL Suburban Residential, Low	179.37
SRM Suburban Residential, Medium	<u>81.20</u>
Total	260.57
Grand Total	<b>4,713.42</b>

**Summary**

Based upon an analysis of tax map parcel data, the total land area in these districts zoned for multifamily use is approximately 4,713 acres, or more than 12 percent of the total land area of the QAPC (excluding agricultural land areas).

**D. Municipal-Level Multifamily Accommodation**

The purpose of this section is to determine if there is adequate land zoned for multifamily housing in the Quakertown Area at the municipal level. This fair share analysis is conducted under the assumption that the region is in the path of development. An important note is that some communities within the region may be subject to growth pressures, while others are not. Because of their rural characteristics, abundance of significant natural resources, distance from growth centers,



and lack of infrastructure and services, certain municipalities are not individually in the path of development.

***Method 1. Multifamily Housing Unit Need based on County Average***

This analysis involves a comparison of the actual and potential amount of multifamily housing found in the Quakertown Area’s municipalities, compared to the percentage of multifamily housing found throughout the county. The overall percentage of multifamily units for Bucks County is 30.7 percent, based upon the 2000 U.S. Census. Using the projection found in Part A, above, as the potential number of housing units that would be constructed by 2017, the following calculation provides the number of multifamily units that should be provided for each municipality in 2017 to meet the county average.

<b>Municipality</b>	<b>Projected 2017 housing units</b>	<b>Multiply by County average of multifamily units</b>	<b>Number of multifamily units needed</b>
Haycock	1,084	0.307	332
Milford	4,262	0.307	1,308
Quakertown	3,707	0.307	1,138
Richland	5,759	0.307	1,768
Richlandtown	476	0.307	146
Trumbauersville	409	0.307	125

The following summarizes the potential number of multifamily units that can be accommodated based upon developable land within zoning districts that permit multifamily housing, the number of constructed multifamily units based upon the 2000 U.S. Census, and multifamily units that were constructed between 2000 and 2005.

<b>Municipality</b>	<b>Potential number of multifamily units</b>	<b>Number of multifamily units (2000 Census)</b>	<b>Multifamily units constructed (2000-2005)</b>	<b>Total units</b>
Haycock	67	36	0	103
Milford	339	513	43	895
Quakertown	49	2,165	*	2,214
Richland	529	1,164	218	1,911
Richlandtown	51	223	*	274
Trumbauersville	72	74	*	146

\* The number of multifamily units constructed (2000-2005) was not calculated for the three boroughs since boroughs inherently contain more than adequate number of multifamily units just from the potential and existing units alone.

The following compares the total number of multifamily units (potential, existing, and constructed) from the total above, to the number of multifamily residential units necessary for each municipality (based upon the county average of 30.7 percent), resulting in a surplus or deficit of multifamily units as shown.

<b>Municipality</b>	<b>Number of potential, existing, and constructed, multifamily units (2005)</b>	<b>Minus projected number of multifamily units needed (2017)</b>	<b>Surplus or deficit of multifamily units to meet county average</b>
Haycock	103	332	(229)
Milford	895	1,308	(413)
Quakertown	2,214*	1,138	1,076
Richland	1,911	1,768	143
Richlandtown	274*	146	128
Trumbauersville	146*	125	21

\* This figure represents only the potential number of multifamily units (based upon zoning districts that permit multifamily housing) and the existing number of multifamily units from the 2000 U.S. Census.

**Summary**

Based upon this analysis, Haycock and Milford townships have a deficit of multifamily units that is below the county average. Haycock, unlike Richland and Milford townships, is not likely to be considered in the path of development due to existing conditions and context.

**Method 2. Land Area Percentage**

The following examines the actual and potential amount of multifamily housing units in each municipality compared to that percentage for the Bucks County as a whole. Currently, the following zoning districts permit multifamily housing (e.g., single-family attached units, such as townhouses, or multifamily housing, such as apartments).

<b><u>Zoning</u></b>	<b><u>Acres</u></b>
<b>Haycock Township</b>	
SRH Suburban Residential High	39.52 or <b>40</b>
<b>Milford Township</b>	
SRL Suburban Residential Low	761.96
SRM Suburban Residential Medium	<u>352.56</u>
<b>Total</b>	<b>1,114.52 or 1,115</b>

**Quakertown Borough**

HR High Density Residential	345.51
NC Neighborhood Commercial	26.82
TC Town Center	<u>62.23</u>
Total	434.56 or <b>435</b>

**Richland Township**

SRC Suburban Residential Cons.	596.86
SRH Suburban Residential High	208.60
SRL Suburban Residential Low	917.72
SRM Suburban Residential Medium	528.33
URL Urban Residential Low	16.21
AQ Age Qualified Overlay	<u>435.27</u>
Total	2,702.99 or <b>2,703</b>

**Richlandtown Borough**

RS Residential Subdivision	145.50
VC Village Center	<u>15.76</u>
Total	161.26 or <b>161</b>

**Trumbauersville Borough**

SRL Suburban Residential, Low	179.37
SRM Suburban Residential, Medium	<u>81.20</u>
Total	260.57 or <b>261</b>

**Summary**

Based upon the analysis above, all municipalities in the Quakertown Area, with the exception of Haycock Township, contain at least 8 percent of their land area zoned for multifamily use, excluding agricultural areas. Haycock is not likely to be considered in the path of development due to existing conditions and context.

**E. Conclusions**

**Regional-Level Analysis**

This fair share analysis indicates that the assumed number of new units that will need to be accommodated within the Residential Development Area of the Quakertown Area between 2005 and 2017 will be 1,553 units. It also indicates that the amount of land available in the Residential Development Area, as defined by this update, is sufficient both to provide for projected growth in the Quakertown Area and to provide a surplus percentage or safety factor of about 54 percent or a total margin of approximately 847 units.

The multifamily fair share analysis indicates that the region satisfies the fair share needs on a municipal-level based upon the *Surrick* case, which includes a provision that there should be an examination of the present level of development. In the context of Bucks County, the number of existing and approved multifamily units in the Quakertown Area exceeds the county's average of 30.7 percent by a margin of 78 units. If all vacant or potentially developable land zoned for multifamily use were developed for this purpose, an additional 1,107 multifamily units could be constructed. This would result in a number of multifamily units that would exceed the county percentage by 1,245 units.

Another method used to determine multifamily fair share is the percentage of land area zoned for multifamily use within a municipality. Courts have not established an actual threshold, but have upheld specific percentages of land area based various factors such as whether or not a municipality is a logical area for growth and growth pressure.<sup>8</sup>

Additionally, the Court of Common Pleas has specifically held that land used for farming is to be considered developed when conducting an analysis related to the *Surrick* case and other cases that supplement the *Surrick* case.<sup>9</sup> Consequently, agricultural land area was subtracted from the total municipal land area to determine the area zoned for multifamily residential use. The analysis above identifies that approximately 4,713 acres or more than 12 percent of the total land area of the QAPC (excluding agricultural land areas) is zoned for multifamily use.

### **Municipal-Level Analysis**

Under the current zoning, this fair share analysis indicates that all Quakertown Area municipalities, with the exception of Haycock and Milford townships, more than adequately satisfy their individual fair share of housing units by a safety factor exceeding 25 percent. However, Haycock can satisfy its fair share provision by amending the VC-1 District's Statement of Purpose and Intent for Districts section of its zoning ordinance to be consistent with the recommendation of this comprehensive plan to revise the land use policy of the VC-1 district from a Reserve Area to Development Area (as discussed in the Future Land Use and Growth Management Plan section). Haycock's current 18-unit deficit would result in a surplus of 75 units, or 57 percent.

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<sup>8</sup> *Cambridge Land Company v. Marshall Township*, 560 A.2d 253 (Pa. Commonwealth. 1989). The township provided apartment use on 2.75 percent of its total land area and 1 percent of the land set aside for this use was undeveloped. Based on additional factors, such as low growth pressure, the court upheld the ordinance.

*Appeal of M.A. Kravitz Co. Inc.*, 460 A.2d 1075 (Pa. 1983). Wrightstown Township provided for multifamily use on 0.6 percent of its total land area. Based upon additional factors, including that the community was not a logical area for growth, the court upheld the township's ordinance.

*Hostetter v. Londonderry Township*, 437 A.2d 806 (Pa. Commonwealth. 1981). The township zoned 2.6 percent of its total land area for multifamily use. Based upon potential units under permitted densities and the context of minimal development pressure, the court sustained the ordinance.

*Willistown Township v. Chesterdale Farms, Inc.* 341 A.2d 466 (1975). The township provided for apartment development on 0.7 percent of its total land area. The court ruled that this was a token amount and was therefore exclusionary.

<sup>9</sup> *Heritage Building Group, Inc. v. Plumstead Township Board of Supervisors*. Commonwealth Court of Pennsylvania. No. 3020 C.D. October 17, 2003.

Milford's current deficit of 46 units, or 7 percent, could be reduced to a deficit of three units, or 4 percent, if municipal officials follow suit with the aforementioned zoning amendment. Even with this zoning amendment, Milford would still need an additional 126 units within the Development Area to satisfy the 25 percent safety factor. Milford township officials should consider analyzing which areas may be suitable for the expansion of the township's Development District to meet the housing projections for 2017.

All municipalities, with the exception of Haycock and Milford townships, satisfy the multifamily housing unit need based on County's average of 30.7 percent. Those municipal solicitors should review applicable case law to determine if rezoning of additional lands for multifamily use is warranted. If rezoning is deemed necessary, municipal officials should consider rezoning appropriate areas of the township accordingly.

With the exception of Haycock Township, all municipalities in the Quakertown Area contain at least 8 percent of their land area zoned for multifamily use (excluding agricultural land areas.) Haycock Township's percentage of land zoned for multifamily use is 0.3 percent of the total land area. However, it is important to recognize that the township is a rural community, is not likely to be considered in the path of development due to its rural characteristics (e.g., abundance of significant natural resources, lack of significant transportation network, distance from growth center, lack of infrastructure and services, and its residential/nonresidential composition).

Approximately 4,824 acres or 38 percent of the land area of the township consist of parks, recreation, or protected open space lands (e.g., Nockamixon State Park, State Game Lands No. 157, and Lake Towhee County Park). As noted shown in Footnote 8, courts have upheld multifamily housing percentages significantly less than 4 percent for rural communities of this nature. Based upon these facts, Haycock's municipal solicitor should review applicable case law to determine if the township has to meet a multifamily fair share, or if rezoning of additional lands for multifamily use is warranted. If rezoning is deemed necessary, municipal officials should consider rezoning appropriate area(s) of the township, accordingly.

### **Nonresidential Development Areas Analysis**

Since the last comprehensive plan update in 1992, there has been substantial development in the nonresidential zoning districts in the Quakertown Area, in addition to the development that has occurred in the residential districts. Several of the parcels identified in 1992 as undeveloped are no longer vacant and data developed by the Bucks County Planning Commission indicates that more than 100 commercial, industrial, or institutional development proposals have been filed within the Quakertown Area since 1992. One purpose of this element of the plan is to identify developable parcels within the commercial, office, and industrial districts.

This section does not include the same type of calculations of anticipated growth for comparison with the capacity of the nonresidential development areas as was found in the residential development areas analysis. Such a comparison is not relevant for several reasons. From a legal standpoint, the courts have not developed a regional fair share concept for nonresidential uses. From

a practical standpoint, shopping, employment and service needs are not directly associated with a locality. People travel in and out of the Quakertown Area for these purposes.

Instead, this section provides an analysis regarding the ability of the developable land in the nonresidential zoning districts described below to accommodate projected growth in the number of jobs that will be located in the Quakertown Area from 2007 to 2017. To determine the capacity of the nonresidential development areas, the potentially developable land remaining in the zoning districts that compose these areas was analyzed. Potentially developable lands consist of vacant, agricultural, or rural residential properties.<sup>10</sup>

## **Inventory of Developable Land in Nonresidential Areas**

For a complete understanding of the nonresidential development potential in the region, the following narrative briefly describes the purposes and ordinance requirements for each nonresidential zoning district located in the Quakertown Area. Haycock, Milford, Richland and Trumbauersville have each adopted the model Quakertown Area Zoning Ordinance as a base, and as a result, utilize the same zoning designations.<sup>11</sup> Quakertown and Richlandtown each have a different zoning ordinance with zoning designations specific to those boroughs. The district descriptions are followed by a brief discussion on district locations in each municipality and the potentially developable lands within those districts.

### **Haycock, Milford, Richland, and Trumbauersville**

*CC – Central Commercial District.* The purpose of the CC District is to provide for the continuation of the commercial core areas which have traditionally served as the business centers of the Quakertown Area. This district permits primarily commercial and office uses on a minimum lot area of 2,500 square feet with a maximum floor area ratio of 300 percent.

Found only in Trumbauersville Borough, the CC District is centrally located in the southern portion of the borough. Situated mainly around the intersection of Broad and Main streets, the district extends south to the Milford Township border, and includes all parcels between South Main and West Broad streets. One vacant parcel containing approximately 0.28 acre (12,196 square feet) is located in this district.

*EXT – Extraction District.* The EXT District is intended to provide for the continuation of existing extractive operations and other uses which would otherwise interfere with the development and operation of other land uses. The required minimum lot area is 2 acres, with a maximum floor area ratio of 10 percent.

This district is only found in Richland Township. It is located along East Pumping Station Road in the north-central region of the township. An agricultural parcel containing approximately 126 acres is located in this district.

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<sup>10</sup> A rural residential property contains a dwelling unit and is 5 acres or larger, which may result in future subdivision.

<sup>11</sup> Not all zoning districts are located in each municipality.

*PC – Planned Commercial District.* The PC District is intended to provide for the creation and continuation of commercial development in appropriate areas. Under the standards of the model zoning ordinance, the minimum lot area is 1 acre and the maximum floor area ratio is 40 percent.

This district is located in the southeastern portion of Haycock Township, around the intersection of Old Bethlehem Road, adjacent to Nockamixon State Park. A rural residential parcel with an area of approximately 12 acres is located in this district.

In Milford Township, the PC District is located east of the Pennsylvania Turnpike, along Route 663 around the intersection of Route 663 and Weiss Road/Quaker Pointe Drive, and along the southern side of Route 663 between Route 663 and Milford Square Pike. This district includes some vacant parcels and one rural residential parcel totaling approximately 24.6 acres.

With the exception of an area zoned PC along Station Road, bordered by a rail line, the PC district is located primarily along the Route 309 corridor which crosses the western half of Richland Township in a north-south direction. A combination of mostly vacant parcels, three rural residential parcels, and three agricultural parcels make up approximately 160 acres in this district.

*PI – Planned Industrial District.* The purpose of this district is to allow planned industrial, heavy commercial, office, or laboratory uses with design standards that avoid impacts on neighboring residential properties. The zoning ordinance requires a minimum lot area of one acre and permits a maximum floor area ratio of 40 percent.

This district is located in the western portion of Haycock Township, along the northern side of Thatcher Road, adjacent to the municipal border with Richland Township. Two adjoining agricultural parcels that total approximately 63 acres are located in this district.

In Milford, this district is located primarily in two areas: in the eastern portion of the township south of Route 663 and along both sides of Milford Square Pike, and in the central portion of the township on both sides of Route 663 just east of the Pennsylvania Turnpike. Also, several parcels with existing industrial uses near the borough of Trumbauersville are zoned PI. Available land in this district consists of several rural residential and vacant properties, in addition to part of an agricultural parcel, all of which total approximately 175 acres.

This district is located in the vicinity of East Pumping Station, California, and Heller roads in the north-central portion of Richland Township, to the north of Quakertown Borough. A rail line that crosses through the township bisects this zoning district. Approximately 200 acres of developable land consisting of vacant, rural residential and agricultural parcels are located in this district.

*SC – Select Commercial District.* The purpose of this district is to provide for the creation and continuation of low-intensity commercial and office development in appropriate areas where its effect on adjacent residential land uses is minimized. The zoning ordinance requires a minimum lot area of one acre and permits a maximum floor area ratio of 25 percent for development in this district.

This district is only found in Haycock and is located along the western side of Old Bethlehem Road in two separate areas of the township; the smaller SC district contains several parcels and straddles Thatcher Road, while the larger SC district contains approximately seven parcels and is located south of Dogwood Lane to just below the Cobbler Road intersection with Old Bethlehem Road. In the Thatcher Road area, one parcel totaling about 4.5 acres is vacant. No developable parcels are currently located in the SC district near Dogwood Lane and Cobbler Road.

*VC-2 – Village Center District.* This district is intended to protect the character of villages in Development Areas by permitting a variety of residential and small-scale commercial uses that continue the existing land-use pattern. The intensities are intended to allow infill development compatible with existing conditions in the villages. Under the standards of the zoning ordinance, the minimum lot area is 30,000 square feet and the maximum impervious surface ratio is 30 percent for nonresidential uses.

The VC-2 District is only found in two areas in Milford. They are the village of Spinnerstown, around the intersection of Spinnerstown, Sleepy Hollow, and Steinsburg roads, located in the northwestern half of the township; and the village of Milford Square, around the intersection of Allentown Road and Milford Square Pike, located in the eastern half of the township, just south of Route 663.

## **Quakertown Borough**

*H – Hospital District.* The intent of this district is to provide for hospital and health care uses that are compatible with the existing medical facility and nearby residential areas. For permitted uses other than hospital, the minimum lot area is 9,500 square feet and the maximum impervious cover is 65 percent.

This district is located in the center of the borough in the area of South 10<sup>th</sup> and South 11<sup>th</sup> streets and Park Avenue, and includes the hospital and associated medical facilities. There are no developable parcels in this district.

*HC – Highway Commercial District.* This district is intended to provide for commercial and business uses that require location along well-traveled highways. The minimum lot area is 12,000 square feet and the maximum impervious cover permitted is 90 percent.

This district is located in Quakertown Borough along Route 309, from its northern border with Richland Township to around S. 11<sup>th</sup> Street, and from Katharyn Street south to the borough's



southern boundary with Richland Township. There are some vacant parcels scattered throughout the district, totaling about 2.3 acres.

*LI – Light Industrial District.* The purpose of this district is to provide suitable areas in the borough for light industrial, heavy commercial, and office uses. For most uses permitted in this district, the minimum lot area is 6,000 square feet and the maximum impervious cover permitted is 90 percent. There are two areas of LI zoning in Quakertown, both located in the eastern half of the borough, around rail tracks. One area is along both sides of Mill Street, roughly bordered by North Hellertown Avenue, Erie Avenue, 4<sup>th</sup> Street and the borough boundary with Richland Township. The other LI area is in the vicinity of New Street, 2nd Street, and Fairview Avenue, and also borders Richland Township. Both areas of LI zoning contain vacant parcels, which combined total 14.4 acres.

*OB – Office/Business District.* The purpose of this district is to provide areas for office and business uses that are compatible with the qualities of the borough environment. The required minimum lot area is 15,000 square feet and the maximum impervious cover permitted is 40 percent. There are two areas of OB zoning in the borough: one area is along the southern side of Route 663, west of Hickory Drive, and the other is along both sides of Route 309 from the area near South 11<sup>th</sup> Street to Katharyn Street. Two vacant OB-zoned parcels totaling approximately 3.9 acres are located along Route 663, and some vacant OB parcels totaling slightly less than an acre exist in the area along Route 309.

### **Richlandtown Borough**

*HC – Highway Commercial District.* This district is intended to accommodate retail and business activities that serve a regional market and are not normally part of a shopping center development and those activities that require merchandising oriented to the highway user. The minimum lot size is 20,000 square feet and maximum permitted building coverage is 25 percent. The district is located on both sides of East Union Street in the southeastern portion of the borough, bordering Richland Township. No developable parcels are located in this district.

*VC – Village Center District.* This district is intended to accommodate higher-density residential uses and those retail sales and services that are considered to be essential to the functions of residential neighborhoods. The district is located in the southern portion of the borough in the area typically considered the borough center. Located along North Main Street and South Main Street, this district extends along portions of East Union and West Union streets, and Church Street. No developable parcels are located in this district.

### **Future Employment Creation Potential of Developable Areas**

The Delaware Valley Regional Planning Commission (DVRPC) has developed projections regarding the number of jobs that will be located in each municipality in the Philadelphia metropolitan area to the year 2030. These projections, provided in five-year increments, forecast increases or decreases in employment in each community. An interpolation of the projections are considered below for the

purposes of determining whether the amount of developable land in nonresidential areas is adequate to meet the projected employment growth in the area.

For ease in establishing a baseline, 2005 was used as a starting point instead of 2007. Employment projections were interpolated to 2017 to include the 10-year time frame for this comprehensive plan update. The 2017 projections are based upon an extrapolation of the five-year projections between 2015 and 2020. The difference between the 2015 and 2020 projection figures are divided by 5 and then multiplied by 2 (to reach the 2017 employment forecast).

<b>Municipal employment forecast</b>	<b>2005</b>	<b>2017</b>	<b>Absolute change, 2005-2017</b>
Haycock	88	120	32
Milford	2,007	2,846	839
Quakertown	7,945	8,056	111
Richland	5,707	8,780	3,073
Richlandtown	193	200	7
Trumbauersville	495	537	42
<b>QAPC-Region</b>	<b>16,435</b>	<b>20,539</b>	<b>4,104</b>

*Source: DVRPC, Draft Year 2030 Municipal Employment Forecasts (February 24, 2005)*

#### **A. Employment Growth within the Quakertown Area (Demand)**

As indicated above, the projections of the DVRPC estimate that Haycock, Richlandtown, and Trumbauersville will see slight increases in employment growth, with projected changes of 32, 7, and 42 new jobs, respectively. Quakertown is expected to experience an increase of 111 new jobs, Milford will see an increase of 839 jobs, and Richland is expected to gain the most with 3,073 additional jobs forecasted by year 2017. These totals will result in an increase of 4,104 jobs throughout the Quakertown Area with a total employment figure of slightly over 20,500 jobs by that time.

#### **B. Employment Potential of Developable Areas (Supply)**

The employment capacity of the developable nonresidential areas of the Quakertown Area was estimated by determining how many jobs could be created in those developable areas if nonresidential uses permitted in the zoning districts where those areas are located were constructed.

#### **Methodology Used to Determine the Employment Potential of Approved Developments and Developable Areas**

##### 1. Approved developments

- a. A list of nonresidential developments (excluding institutional uses) proposed between 1998 and 2005 was initially generated to determine what new development may have been approved from 2000 to 2005.<sup>12</sup> The townships and boroughs then reviewed the

<sup>12</sup> The source of this data was the review files of the Bucks County Planning Commission.

list and confirmed what was approved for construction, but not yet constructed, as of 2005 in the Nonresidential Development Area.

- b. The total number of square feet from these approved developments was divided by the estimated number of employees per square foot for the proposed use (commercial, industrial, office or warehousing).<sup>13</sup>
- c. The totals of the number of potential employees from the approved developments were added together to determine the number of potential jobs that could be created in each municipality.

The results of this analysis to determine the employment potential of approved developments that are not yet constructed are presented below for the applicable municipalities.

<b>Municipality</b>	<b>Floor Area Square Feet</b>	<b>Square Feet by employee</b>	<b>Potential Number of employees</b>
Milford Township			
Commercial	112,008	400	280
Industrial	935,540	750	1,247
Office	--	--	--
		<b>Total</b>	<b>1,527</b>
Richland Township			
Commercial	58,313	400	146
Industrial	--	--	--
Office	7,450	250	30
		<b>Total</b>	<b>176</b>

## 2. Developable areas

- a. For Haycock, Milford, Richland, and Trumbauersville, the total acreage identified as developable in each zoning district was analyzed to determine the possible percentage of floor area that reasonably could be constructed on that acreage. In Quakertown Borough, developable area was determined after the permitted maximum impervious surface ratio and the amount of area required for roadways, parking lots, and other facilities that generate impervious surface was calculated. Developable acreage was further calculated by factoring out land requiring 100-percent protection based on the presence of floodplain and wetlands. The totals do not include parcels that fall below the minimum lot size for the district in which they are located, even if they could be developed as nonconforming lots.

<sup>13</sup> The number of square feet required for each employee in each of the general categories of uses (commercial, office, industrial and warehousing) was calculated based on a survey of several recent land use studies conducted in a variety of areas in the United States.

- b. The total acreage was multiplied by the maximum floor area ratio for properties in Haycock, Milford, Richland, and Trumbauersville, and by the building coverage percentage for properties in Quakertown. This calculation provides the total acreage that could be used for the construction of commercial, industrial, office, and warehousing structures (floor area acreage and building coverage acreage).
- c. The floor area and building coverage acreages were converted into the total number of square feet of structures that could be built on that acreage.
- d. The total number of square feet in each zoning district was divided by the estimated number of employees per square foot for the permitted use (commercial, industrial, office or warehousing) that would generate the largest potential number of employees.<sup>14</sup>
- e. The totals of the number of potential employees in each zoning district were added together to determine the number of potential jobs that could be created in the developable nonresidential areas of each municipality.

Below are the results of the developable area analysis for each municipality.

	Zoning District	Acreage	Maximum Floor Area Ratio	Floor Area Acreage	Floor Area Square Feet	Square Feet by Employee	Potential Number of Employees
HAYCOCK TOWNSHIP	PC	12.1	40%	4.84	210,830	400	527
	PI	63.17	40%	25.27	1,100,674	500	2,201
	SC	4.26	25%	1.07	46,391	400	116
	<b>Total</b>						<b>2,844</b>
MILFORD TOWNSHIP	PC	24.65	40%	9.86	429,502	400	1,074
	PI	148.89	40%	59.56	2,594,434	500	5,189
	<b>Total</b>						<b>6,263</b>
RICHLAND TOWNSHIP	EXT	65.5	10%	6.55	285,318	500	571
	PC	151.45	40%	60.58	2,638,865	400	6,597
	PI	145.46	40%	58.18	2,534,321	500	5,069
	<b>Total</b>						<b>12,237</b>
TRUMBAUERSVILLE BOROUGH	CC	0.28	300%	0.84	36,590	400	91
	<b>Total</b>						<b>91</b>

<sup>14</sup> The number of square feet required for each employee in each of the general categories of uses (commercial, office, industrial and warehousing) was calculated based on a survey of several recent land use studies conducted in a variety of areas in the United States.

	Zoning District	Impervious Surface			Building Coverage	Building Coverage	Building Coverage	Square Feet by Employee	Potential Number of Employees
		Acreage	Ratio	Parking, Etc. Percentage	Percentage	Acreage	Square Feet		
QUAKERTOWN BOROUGH	HC	2.27	90%	50%	40%	0.91	39,640	400	99
	LI	14.42	90%	30%	60%	8.65	376,794	500	754
	OB	4.79	40%	20%	20%	0.96	41,818	250	167
	<b>Total</b>								<b>1,020</b>

The analyses above indicate that potential jobs from the approved developments (176) and potential jobs from development areas, if fully developed (12,237), could produce 12,413 new jobs in Richland Township. This is well over the projected increase of 3,073 additional jobs in the township by 2017, and demonstrates that Richland has adequate areas zoned for nonresidential uses to accommodate future employment growth. In fact, the areas currently zoned for nonresidential uses along with currently approved developments could accommodate more jobs than the DVRPC has projected for the township through 2030 (5,248 additional jobs from 2005 to 2030). The vast majority of Richland Township’s potential number of employees would be located in commercial areas along Route 309 and in the industrial area to the north of Quakertown.

The calculations for Milford indicate the potential for 7,790 additional jobs (1,527 from approved developments and 6,263 from development areas). As is the case in Richland, the potential number of new jobs far exceeds DVRPC’s projection of 839 new jobs by 2017, and surpasses the DVRPC projection for 2030 (2,057 additional jobs from 2005 to 2030).

While much of the employment potential is located in the commercial areas, the majority is located in the township’s industrial areas, primarily in the area near the turnpike interchange. Although nonresidential uses are permitted in Milford’s VC-2 District, this district was not included because it was identified as an area available for residential development in the Residential Development Areas Analysis earlier in this section.

Haycock Township has the potential to accommodate 2,844 additional jobs. This amount is almost 90 times the projected number of 32 additional jobs by 2017, and is significantly more than the total additional jobs projected by 2030 (39 additional jobs from 2005 to 2030). By a wide margin, the majority of Haycock’s potential jobs would be located in the industrial district in the western portion of the township.

In Quakertown, the available land in the HC, LI and OB districts, along with currently proposed developments, could potentially yield 1,020 jobs if fully developed. This not only meets the projected increase of 111 jobs by year 2017, but surpasses the projected total to the year 2030 (151 additional jobs from 2005 to 2030). The H District was not included in the calculations because no available land was identified in this district. Although nonresidential uses are permitted there, the NC and TC districts were not included because they were identified as areas available for residential development in the Residential Development Areas analysis.

In Trumbauersville, the additional employment potential amounts to 91 jobs. This number exceeds the projected employment figure of 42 additional jobs by year 2017 and comes close to accommodating what is projected for 2030 (108 additional jobs from 2005 to 2017).

Although Richlandtown Borough has two nonresidential districts that were considered in this analysis, no developable parcels or proposed developments were identified for either district which could be used to determine potential number of future employees. The DVRPC estimates that 7 new jobs will be located in Richlandtown Borough by 2017. While our calculations do not show this projection being met, it should be noted that the projected increase is negligible and can certainly be accommodated in surrounding Quakertown Area municipalities or by home occupations.

Since almost all of the municipalities have more than adequate developable nonresidential areas for the projected growth in employment, it follows that the same is true for the entire Quakertown Area. The DVRPC projects 4,104 new jobs in the Quakertown Area by 2017. This analysis indicates that 24,158 jobs can currently be accommodated by developable land in the nonresidential areas of the community and currently approved developments.

**Quakertown Area Total Potential Employment**

	<b>Commercial</b>	<b>Office</b>	<b>Industrial</b>	<b>Total</b>
Haycock Township	643	0	2,201	2,844
Milford Township	1,354	0	6,436	7,790
Quakertown Borough	99	167	754	1,020
Richland Township	6,743	30	5,640	12,413
Richlandtown Borough	0	0	0	0
Trumbauersville Borough	91	0	0	91
<b>Total</b>	<b>8,930</b>	<b>197</b>	<b>15,031</b>	<b>24,158</b>

While there appears to be much less nonresidential developable land available now than existed when the 1992 update was completed, the remaining areas could support a significant amount of employment. As the previous analysis indicates, the areas zoned nonresidential could provide employment opportunities that exceed the municipal employment forecasts prepared by the DVRPC.

## Chapter 5

# Transportation

The function of transportation is to provide for the movement of people, objects and/or information between places. In recent years, rapid population growth and the strong economy have challenged the ability of the transportation system to balance those goals. Funding levels for roads, the backbone of the transportation system, have not kept pace with the proliferation of motor vehicles, housing, and businesses, which increase the demand for road miles. The backlog of needed road maintenance and construction projects has grown larger.

Traffic congestion on area roadways directly affects the lives of all who live in a region. When asked to rate a list of various characteristics in the Quakertown Area, nearly 85 percent of those responding to this question in the resident survey rated traffic and road conditions as fair to poor. On another survey question, nearly 95 percent of respondents indicated that the issue of traffic and road conditions is important or very important to future planning for the region.

The transportation network connects people and places to one another. In general terms, the purpose of the transportation network is to move goods and people from one place to another.

The well-being of this system is directly influenced by the type and size of the growth which occurs along the network. Proper land use planning is critical to prevent adverse effects to the transportation network due to improper development.

Conversely, when transportation improvements are designed, it is important to address the needs of the general public, individual property owners, and neighborhoods. Most transportation improvements should be designed as multiple-use facilities that provide for pedestrians, bicycles, public transit, and automobile use.

The road network is the most significant component in the Quakertown Area's transportation system. It is the primary method residents and businesses utilize to get from place to place. The Quakertown Area's location along the Route 309, 313/663, 563 and Northeast Extension of the Pennsylvania Turnpike (Interstate 476) corridors positions this area in a strategic location and under considerable traffic demands from areas beyond the boundaries of the planning area.

The "health" of the highway network is critical to the Quakertown Area. It also represents a major investment of public funds. However, as in other areas of southeast Pennsylvania, the Pennsylvania Department of Transportation and municipalities of the Quakertown Area have not been able to fund all improvements needed to accommodate the increased traffic.

### **Establishing the Transportation/Land Use Connection**

The fundamental interdependence between land use and transportation cannot be overstated. Land use patterns and intensity influence the roadway network. Likewise, the roadway network can influence the land uses in a particular area.

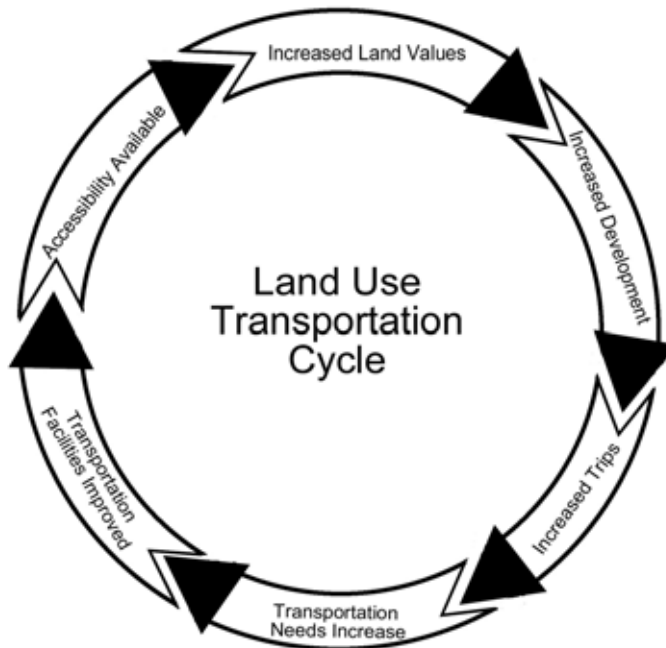
Just as new or expanded transportation systems create new access opportunities that attract new development, new development patterns create a need for additional transportation facilities. In fact, land use patterns and transportation patterns are linked in a continuing cycle, whereby transportation opportunities create an atmosphere for development that, in turn, generates additional transportation needs, and so on.

As an example, a two-lane highway eventually becomes congested as strip development occurs on both sides and individual driveways provide access to each business. Traffic accessing the numerous businesses by turning on and off the road impedes the flow of through-traffic.

Consequently, as a result of the congested conditions, the public demands a solution and additional lanes are built to relieve the congested conditions. The newly-constructed additional lanes increase the capacity of the roadway which in turn, provides congestion relief.

Now that the road is four lanes and congestion has been relieved, the accessibility of the area is enhanced, thereby raising land values. The increased accessibility attracts new development.

As new development causes increased traffic, congestion begins to exceed previous levels and the public demands yet more relief. Now, instead of a congested two-lane road, four lanes are congested. This land use-transportation cycle is shown in the figure below.



This scenario continues to repeat itself over time. In the final analysis, nothing has really been accomplished except roads have become wider, which in turn, divides our neighborhoods, impedes pedestrian accessibility, dehumanizes the scale of our streetscapes, and removes street trees. Obviously, providing more and more travel lanes over time does not solve the problems associated with increased development pressures.



The continued construction of additional travel lanes has other ramifications, as well. Businesses or residences constructed prior to the increased demand on the roadway system may have had a sufficient setback from the roadway when it was a two-lane facility. However, these same properties may stand in the way of expanding the road and will be required for right-of-way acquisition for the additional lanes.

These “takings” may increase the cost of the new facility beyond feasibility. Additionally, the taking of these homes and businesses by eminent domain may spark public opposition to the project.

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

Establishing the link between land use and transportation can provide numerous benefits for the community. Some of these benefits include:

- Incorporating land use considerations into transportation planning can influence future development patterns and ensure that transportation facilities have adequate capacity to meet demand;
- Matching Land use patterns to the transportation system can help relieve congestion and traffic on existing roads. Land use patterns which require buildings to be located closer to the roadway and/or are interconnected via shared parking areas can reduce the need to construct new transportation facilities;
- Improving site design and incorporating public transportation services can attract tenants and/or buyers;
- Incorporating transportation improvements and/or public transportation will ease employee commuting, which will decrease employee lateness and increase productivity; and
- Providing the link between land use and transportation will reduce congestion, improve mobility, improve air quality, and preserve additional open space, all of which help to create a more attractive and livable community.

Improving the linkage between land use and transportation planning is essential for the future of the Quakertown Area. Inappropriate land uses coupled with inadequate transportation services create congestion and traffic impacts on both highways and local roads. They also cause worsening air quality conditions, decreased highway safety, and reduced community access.

Furthermore, inefficient transportation access and unplanned land use patterns are also a significant hindrance to economic growth and productivity. It is recommended that municipalities continue requiring a traffic impact analysis of the roadway system for major development proposals, conditional use application, special exception requests, and all zoning change requests.

The Quakertown Area municipalities have the ability to influence the future by taking a proactive stance towards integrating planning for land use and transportation facilities. The promotion of compact, mixed-use development may be one way municipal officials can encourage less automobile-intensive uses. Municipal officials must carefully consider the transportation

implications of their decisions and coordinate these decisions with county, state, and regional governments.

## Travel to Work

An important aspect to consider when analyzing transportation needs in the region is commuting patterns. The vast majority of Quakertown Area residents—on the order of 85 percent—drive to work. Of these, less than 10 percent in each municipality take part in carpools. Public transportation in the area is scarce, and more residents walk to work than use public transportation.

The mean (average) travel time in most of the Quakertown Area municipalities, except for the rural community of Haycock, is less than a half-hour. Average commuting times by municipality are in Table 24, along with the corresponding countywide and national figures.

**Table 24. Mean Travel Time to Work, 2000**

<b>Place</b>	<b>Travel time (in minutes)</b>	<b>Percent working at home</b>
Haycock	36.4	4.8%
Milford	27.8	2.7%
Quakertown	24.8	4.4%
Richland	28.9	2.5%
Richlandtown	24.8	1.7%
Trumbauersville	24.1	4.6%
<b>Bucks County</b>	28.6	3.6%
<b>United States</b>	25.5	3.3%

*Source: U.S. Census*

Within the Quakertown Area, average daily commuting times ranged from a low of 24.1 minutes in Trumbauersville to a high of 36.4 minutes in Haycock. These times were broadly similar to the Bucks County average of 28.6 minutes and the national average of 25.5 minutes.

As outlined in the section on demographics, upward of half of employed residents of each Quakertown Area municipality work within Bucks County, while many others work in nearby communities in Montgomery or Lehigh counties, which serves to moderate commuting times. Working at home is a growing trend that minimizes commuting, and the share of people who do so approaches 5 percent in three of the six Quakertown Area municipalities.

## Public Transportation

Although public transportation in the Quakertown Area is extremely limited, steps are being taken to expand the availability of bus, and possibly, passenger rail service. In the resident survey taken for this comprehensive plan, slightly more than 41 percent of respondents rated public transportation service in the area as poor, yet about 60 percent of respondents nevertheless rated public transportation as important or very important to the region's future.

Residents surveyed said they would use public transportation if it were available. Sixty percent indicated they would use rail service, and nearly 38 percent indicated they would use bus service.

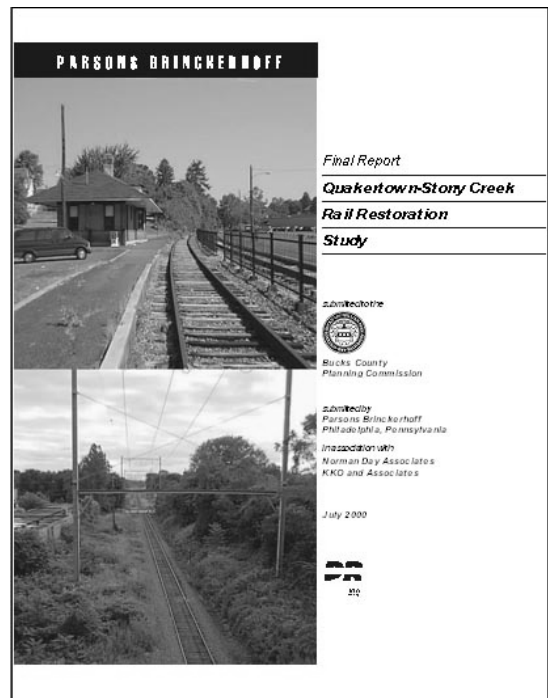
The bus services currently available to the Quakertown Area are the Carl R. Bieber Bus Tourways, Trans-Bridge Bus Lines, and Greyhound Lines. Bieber Bus Tourways operates five times a day from Philadelphia to Reading with stops in the Quakertown Area. Trans Bridge Bus Lines provides service from Quakertown to New York City with a stop in the Lehigh Valley. Greyhound provides intercity service.

However, the Bucks County Transportation Management Association (BCTMA) has been working with the Federal Transit Administration in an attempt to fund a circulator bus service for the Quakertown Area. The provision of a circulator bus service to the Quakertown Area would improve the mobility of the area's residents, especially those typically unable to drive, such as elderly, disabled, and lower income individuals.

The area municipalities should monitor and provide comment to the BCTMA with regard to the bus service routes and schedule. Furthermore, Quakertown Area municipalities should actively promote and market any future bus route as a feasible alternative to automobile use since the availability of public transportation is a benefit to all residents in the area.

The Quakertown Area was previously served by the Bethlehem Rail Line which provided passenger rail service from the Lehigh Valley to the City of Philadelphia. The Bethlehem branch of the SEPTA Regional Rail service was discontinued in the early 1980s due to a variety of factors. The use of outdated rolling stock, poor rail bed conditions, and diesel locomotion that would be unable to use the center city tunnel in Philadelphia led to a steady decline in ridership.

In 2000, the Bucks County Planning Commission completed the *Quakertown-Stony Creek Rail Restoration Study*, which analyzed the potential reactivation of this rail line. The study concluded that reactivation of passenger service was feasible from both a cost and ridership perspective.



Based upon these results, the BCTMA began taking the steps necessary for reactivation. Its first step was to draft a business plan, which was completed in early 2006.

Since then, money has been authorized for this project in the latest federal transportation bill, known as the *Safe, Accountable, Flexible Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU). This authorization will most likely be used to fund preliminary engineering costs for the reactivation of service.

The Quakertown-Stony Creek Business Plan proposes to reactivate passenger service in three phases. The first phase would involve initiating train service between the village of Shelly in

Richland Township and Lansdale Borough in Montgomery County as a shuttle linking the communities along the line and connecting with SEPTA Regional Rail Line R5 trains in Lansdale. The second phase involves activating service along the Stony Creek branch in Montgomery County to provide access to Norristown. Lastly, the third phase would extend service from Norristown to Philadelphia via the R6 rail line.

The shuttle service proposed in Phase 1 would be built and operated by a nonprofit corporation under the direction of the BCTMA. Reactivating passenger service in phases would reduce the expense and complexity of the initial service start-up. Phasing the project would defer some of the expenses associated with infrastructure, signal systems and rolling stock that are only needed to operate direct service to Philadelphia as proposed in Phase 3.

The Quakertown Area municipalities should monitor the results of this study for possible inclusion into its transportation planning programs. If further study proves reactivation of passenger rail service is viable, the Quakertown Area Planning Committee (QAPC) should ensure that proper land use planning is performed to allow for the necessary infrastructure (e.g., park-and-ride lot in Shelly) associated with construction of the facility.

## **Context-Sensitive Solutions**

In the not-so-recent past, transportation engineers and designers ignored the questions and concerns of the community while designing new transportation systems. The only goal these professionals focused upon was providing for the most efficient flow of traffic through an area. This way of thinking has led to the disappearance of unique areas around the country.

Realizing the mistakes of the past has led these professionals and PennDOT to develop a better way – *Context-Sensitive Solutions*. Context-sensitive solutions look beyond the pavement to the function streets and highways perform in enhancing communities and natural environments. The concept was developed to help transportation professionals build safe and efficient roads with the participation of residents and local officials who ultimately will be affected by the new infrastructure.

Context-sensitive solutions are a proactive approach to transportation planning, design, and implementation that looks at the extensive role streets and roads play in enhancing communities and natural environments, be they urban, suburban, rural, scenic, or historic. The concept involves asking questions first about the need and purpose of the transportation project, and then equally addresses safety, mobility, and the preservation of scenic, aesthetic, historic, environmental, and other community values.

Context-sensitive solutions consist of a collaborative, interdisciplinary approach in which citizens are part of the design team. Support from stakeholders is received at the beginning of a project, rather than negotiating support as the project nears completion. Context sensitivity emphasizes the broad nature of solutions to transportation needs by focusing on enhancing the quality of life for transportation users, communities and the surrounding environment.

Transportation planners must realize that every highway design project is unique. The setting and character of the area, the values of the community, the needs of the highway users, and the

challenges and opportunities are unique factors that designers must consider with each highway project.

Whether the design to be developed is for a fairly small safety improvement or five miles of new highway, there are no boilerplate solutions. For each potential project, designers are faced with the task of balancing the need for the highway improvement with the need to safely integrate the design into the surrounding natural and human environments. As transportation improvements are being planned, municipal officials and the QAPC should identify important areas that warrant protection.

## **Functional Classification**

The region's road system should be viewed as an integrated network of roadways with types of roads serving different functions and having different design criteria. Higher-order roads serve to move traffic through the community and lower-order streets provide access to abutting properties. Other, intermediate-order, roads provide links between the higher-order roads while providing some access to properties.

Under an established functional classification, new roads will be built to standards which their function requires. Whenever possible, existing roads should be improved so that they can function as intended. But it is unlikely that some roads will ever be redesigned to carry traffic uninterrupted by curb cuts.

The developed portions of Route 309 are an example of why the intended function of the road should be kept in mind when land uses are proposed. Route 309 has congestion problems because it is being asked to perform multiple functions.

It provides access to a multitude of businesses in the area, while at the same time being the major north/south through-route for vehicles that do not have an origin or a destination within the Quakertown Area. Providing for a functional classification of the road system seeks to minimize these conflicting uses.

Road classifications for the Quakertown Area, as shown in Figure 8, are described below:

1. Thoroughfares
  - a. Expressway—designed for large volumes of high-speed traffic with access limited to grade-separated intersections. The Northeast Extension of the Pennsylvania Turnpike is the only designated expressway in this area.
  - b. Arterial highways—designed for large volumes of high-speed traffic with access to abutting properties restricted. Routes 309, 313/663, and 563 are all classified as arterial highways in the Quakertown Area.
  - c. Collector highways—designed to carry a moderate volume of fast-moving traffic from primary and secondary streets to arterial highways, with access to abutting properties restricted.

## 2. Local Streets

- a. Primary streets—designed to carry a moderate volume of traffic, to intercept rural roads and secondary streets, to provide routes to collector highways, and to provide access to abutting properties.
- b. Rural roads and secondary streets—designed to provide access to abutting properties and to primary streets.

While all of the Quakertown Area municipalities generally utilize the same road classification categories, the Street Classification Map for Quakertown Borough further classifies collector roadways into either major collectors or minor collectors. The borough's minor collectors would meet the criteria established by the QAPC for primary streets.

For ease of illustration, minor collectors have not been identified on the map (Figure 8). Minor collectors in Quakertown include Hickory Drive, 14th Street, 11th Street, Franklin Street, Fairview Avenue, and portions of 9th Street (Park Avenue to Cemetery Road), 5th Street (West Broad Street to Park Avenue), 4th Street (West Broad Street to Mill Street), Ambler Street (East Broad Street to Tohickon Avenue), and Mill Road (Park Avenue to West End Boulevard).

Quakertown officials should consider amending borough ordinances to achieve consistency between narrative and the Street Classification Map, as well as consistency with the classifications established for the region. This same recommendation is made to Richlandtown Borough officials, since there is currently a discrepancy between roadways described in the ordinance (collector highways, primary streets) and those identified in the highway classification (collector, rural, and secondary).

As situations change, the functions or purposes of various roads should be revised as necessary to serve different purposes. Classification of roads so that the intended purposes are achieved is a project that involves more on-site evaluation and discussion among municipal officials than is intended in this comprehensive planning process.

Roadway classification has implications related to highway safety, efficiency of travel, community character, and environmental impact. In most comprehensive plans, a highway classification is structured to establish a grid or system of streets that will facilitate efficient movement.

It is recommended that the highway classification of the Quakertown Area roadways be reviewed to determine what changes may be needed to roadway classifications based on current needs. Improvement standards should be developed that will address aesthetic and environmental qualities in addition to highway engineering matters. During the subdivision or land development process, needed rights-of-way should be dedicated to ensure that sufficient land is provided for necessary improvements so that the highway system will be able to function as intended.

## Traffic Patterns

### Recommended Improvement Projects

Completed in May 2000, the *Quakertown Area Transportation Improvement Project* was a detailed analysis of the region's major highways<sup>15</sup>. The study was initiated to determine the most appropriate means to accommodate the demands placed upon the area's roadways given the intense development pressure experienced in the region since the 1980s. It was charged with the following tasks:

1. Examine existing land use patterns and determine future trends;
2. Identify major transportation networks and trends;
3. Identify current needs and forecast demand for the years 2005 and 2015;
4. Identify physical constraints and capacity problems;
5. Identify when forecast traffic volumes will result in unacceptable levels of service;
6. Examine transportation systems management improvements and congestion management system improvements;
7. Identify a menu of recommended physical improvements to the road network to meet present and future traffic demands;
8. Provide an analysis of environmental impacts for each improvement area to determine the feasibility of improving the existing roads and intersections;
9. Examine alternatives and develop a working plan for implementation of the improvements.

Traffic counts were collected in 1993, 1994, and 1995 and provided the basis for a depiction of traffic patterns. The average daily volumes indicated that Route 309 carried as many as 30,000 vehicles per day. Routes 313 and 663 each carried approximately 16,000 vehicles per day, although the Hickory Drive intersection on Route 663 operated with as many as 18,000 vehicles per day. California Road handled as many as 9,000 vehicles per day, Station Road had about 6,250 vehicles per day, and Tollgate Road had 5,000 vehicles per day.

Morning peak hour traffic at the Routes 309/313/663 intersection registered the greatest volume--3,527 vehicles. By comparison, the intersection of Route 663 and Old Bethlehem Pike carried 1,447 vehicles in the morning peak. The intersection of Route 313 and Main Street carried 1,324 vehicles. Tollgate Road and Route 309 handled 3,181 vehicles during the morning peak.

In the evening peak hour, the 309/313/663 intersection carried 4,081 vehicles. This was a 15 percent increase over the morning peak and can be attributed to the retail and commercial activity that occurs only in the evening peak hour. The intersection of Route 663 and Old Bethlehem Pike handled 2,269 vehicles, or 57 percent more traffic than during the morning peak. The Route 309 and Tollgate Road intersection evening traffic, at 3,667 vehicles, was 15 percent greater than the morning peak.

The evening peak hour consistently generated higher traffic volumes on the major routes through the Quakertown Area. The Route 309 traffic exhibited a heavy directional flow. The principal flow was southbound in the morning and northbound in the afternoon. This influence was as much as 67 percent of the traffic in the prevailing direction.

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<sup>15</sup> It should be noted that even though the study was completed in May, 2000, most of the baseline traffic data was collected during 1993, 1994, and 1995.

Based upon recommendations in the project, some of the suggested improvements have been implemented, mainly through municipal action. However, many of the suggested improvements have not been implemented and may be still applicable for implementation. Specifically, the following projects were recommended to be implemented in the plan, but have not been completed to date:

**East Rockhill Township**

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Route 313/Mountain View Road (Route 563) Signalization\*\*\*

**Milford Township**

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Route 663/Allentown Road ..... Add turning lanes  
 Route 663/Mill Hill Road.....Operational improvements  
 Route 663 – Weiss Rd to Route 309..... Add additional through lanes  
 Portzer Road connector ..... Realign roadway, improve corridor\*\*

**Richland Township**

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Route 663/Old Bethlehem Road .....Signalization  
 Route 663 – Weiss Road to Route 309..... Add additional through lanes  
 Old Bethlehem Road/Tollgate Road.....Add turning lanes, signalization  
 California Road/Cherry Road..... Operational improvements  
 Route 309/Tollgate Road..... Optimize signal\*  
 Route 309/Tollgate Road..... Add turning lanes  
 Route 309/Pumping Station Road .....Optimize signal, add turning lanes\*  
 Pumping Station Road/California Road .....Intersection realignment\*\*  
 Portzer Road connector ..... Realign roadway, improve corridor\*\*

*\*Improvements to be completed as part of an approved development plan.*

*\*\*Currently on DVRPC TIP.*

*\*\*\*Even though this improvement is not located within the Quakertown Area municipalities, it would have a direct impact on traffic flow within the study area.*

In addition to the recommended improvements from the *Quakertown Area Transportation Improvement Project*, Milford Township has identified specific projects along the Route 663 corridor that would improve traffic flow. These projects are listed in the following table.

**Milford Township**

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Route 663/Commerce Drive.....Signalization  
 Route 663/Portzer Road .....Signalization  
 Progress Drive/Weiss Road..... Construct roundabout  
 Progress Drive ..... Extend road through Weiss Road to Route 663  
 Milford Square Pike ..... Relocate intersection to Quaker Pointe Drive  
 New Road.....Construct parallel road from  
 Turnpike ramp to Weiss Road  
 Cornerhouse Road Construction.....Construct parallel road from  
 Commerce Drive to Route 663  
 Mill Hill Road Relocation ..... Relocate intersection to Commerce Drive

Milford Township is anticipating that several of these improvements will be put in place by developers as land developments are constructed. The township will seek funding from the region for those projects not constructed by developers.

This type of preplanning for transportation improvements is critical to implementation as privately-funded projects tend to get constructed in a more timely fashion. Since planning was performed prior



to the development plans being submitted, developers are aware of the improvements they will be required to perform as part of their land development plans.

Quakertown Borough is also interested in pursuing several improvement projects: the Front Street/Broad Street Improvement Project, and improvements to the Front Street/Park Avenue intersection. These intersections would benefit from redesign since both are awkward in their alignment and therefore pose a danger to safe vehicular operation. Any improvements to these intersections should also provide improved pedestrian facilities.

### **Alternative Routes**

The Quakertown Area TIP recommended the development of four “alternative routes” designed to relieve congestion from the Route 309/663/313 intersection. The concept behind these routes was to utilize existing roadways with some additional alternative alignments. These routes would be upgraded and improved to encourage motorists to use these routes rather than staying on Route 309, Route 663 or Route 313.

While these facilities would act as mini-bypasses, they would not be limited access facilities. Rather, the access along these roadways would be controlled through access management techniques that are detailed later in this text.

The first alternative route is known as the Portzer Road Connector. This route would begin at the Route 309/Pumping Station Road intersection. Pumping Station Road would be realigned and upgraded along its length up to the point where it meets Portzer Road. Portzer Road would also be upgraded and improved along its entire length to its intersection with Route 663. This intersection would be improved as well and would most likely warrant signalization at this point.

The biggest advantage to this project is that it would provide access to the Pennsylvania Turnpike for travelers on Route 309 South coming from the Lehigh Valley area, letting them bypass the Route 309/663/313 intersection. PennDOT is currently designing this project, and it is the only one of the four alternative routes that has secured funding through the DVRPC TIP.

The second alternative route is known as the Paletown Road Extension. Paletown Road would be extended to Route 309 from its current terminus at Old Bethlehem Pike. It is likely that a new signal would be necessary at Route 309 and possibly Old Bethlehem Pike. This project would benefit travelers heading north on Route 309 who wish to travel to destinations east of Quakertown.

The third alternative route, called the Southwest Quadrant, would provide relief to motorists interested in gaining access to northbound Route 309. Several roads which include East Pumping Station, Union, and West Thatcher roads, would be upgraded and improved. In addition, portions of this route involve constructing roadway on a new alignment.

The last alternative route would provide relief for those travelers along Route 663 eastbound who would like to access southbound Route 309. The exact route of this connector has not been finalized and may be the most difficult of all the alternative routes, given the development that has occurred in area southwest of the Route 309/663/313 intersection.

## **Park-and-Ride Facilities**

Park-and-ride lots are community facilities that allow commuters to leave their vehicles in a parking lot and carpool for the remaining portion of their trip. The vehicle is stored in the lot during the day and retrieved when the commuter returns. Park-and-rides are generally located on the outer edges of large population bases to reduce traffic demand on the road network. Park-and-ride lots provide a safe, convenient place to park your car so you can transfer to a prior-arranged carpool or vanpool.

The Quakertown Area Transportation Improvement Project (TIP) recommended four potential park-and-ride locations. These locations include the Quakertown Turnpike Interchange (which has been constructed), Route 309 and future Paletown Road extension, Route 309 and Pumping Station Road, and Route 313 and West Thatcher Road. The existing park-and-ride lot is very well used and has been an important topic of discussion, as the area around the turnpike interchange faces continued development pressure.

Park-and-ride lots can help make carpooling a viable alternative to the single-occupancy vehicle. Their benefits include lower vehicle emissions, reduced travel costs for individuals, and less congestion on roadways. Therefore, the aforementioned locations should be further evaluated and lots constructed if the locations are found to be suitable.

## **Transportation Improvement Program**

The Bucks County Transportation Improvement Program (BCTIP) is an inventory of transportation-related improvements requested by municipalities, concerned citizens, transportation studies and other sources. In order to develop the BCTIP, an appeal is made to all of the municipalities to put forward projects for the program update.

Once this list is completed, it is approved by the Bucks County Planning Commission (BCPC) board members. Once the BCPC Board approves the BCTIP, it is submitted to the Delaware Valley Regional Planning Commission (DVRPC) to be included as candidate projects for the regional TIP.

The regional TIP is updated every two years, in coordination with PennDOT's Twelve-Year Plan (TYP). The regional TIP lists all projects that intend to use federal and/or state funds for their engineering, right of way costs and/or construction costs.

The TIP update includes re-evaluating existing project schedules and costs. Once the schedules and costs have been updated for each existing project, some new projects (candidate projects) may be added to the TIP.

Since this list must be financially constrained per the requirements of the *Safe, Accountable, Flexible Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU), the addition of candidate projects is dependent upon federal allocations of transportation funding. DVRPC, in conjunction with the member governments of the region, then rank and select these potential projects from candidate projects lists (i.e., county TIPs) submitted by the member governments.

The TIP is then submitted to the DVRPC board for its approval. Once approved, the TIP is then submitted to PennDOT to be included in the state TIP. As of the 2007–2010 DVRPC TIP, the projects programmed for funding in the Quakertown Area include the following:

<b>MPMS#</b>	<b>Location</b>	<b>Description</b>	<b>Construction Year</b>
<u>Haycock Township</u>			
13240	Old Bethlehem Road	Bridge replacement	2008
13723	Saw Mill Road	Bridge replacement	2008
<u>Milford Township</u>			
13440	Allentown Road/Rte 663	Bridge replacement	After 2010
13607	Upper Ridge Road	Bridge replacement	After 2010
69826	Steinsburg Road	Culvert replacement	After 2010
<u>Milford Township/Richland Township</u>			
49315	Portzer Road	Connector roadway	After 2010
<u>Quakertown Borough</u>			
72908	Broad Street	Streetscape improvements	Unknown
<u>Richland Township</u>			
57627	Pumping Station Road	Realignment	After 2010
<u>Richland Township/Quakertown Borough</u>			
57635	Route 309	Signal interconnection	After 2010

The QAPC, along with the member municipalities, should work with the BCPC to develop a list of transportation improvements needed within the Quakertown Area. This list should be prioritized and submitted to the county for consideration for the regional TIP.

## **Transportation Impact Fees**

Transportation impact fees are charges imposed on new development to help pay for off-site impacts and costs of development. In principle, impact fees should be based on projections of municipal costs that are reasonably related to the impacts of a particular development.

A 1990 amendment to the Pennsylvania Municipalities Planning Code, Act 209, added Article V-A, which allows a municipality to impose transportation impact fees for certain limited off-site, transportation-related improvements. The amendment authorizes the imposition of traffic impact fees to recover the cost of off-site road improvements necessitated by and attributable and directly related to new development. Municipal officials in the Quakertown Area should evaluate Act 209 traffic impact fees as a means of providing infrastructure improvements that are necessitated by new development.

A transportation study must be performed before traffic impact fees can be assessed. Elements of the study include the establishment of growth areas, calculation of future land development activity and capacity, an assessment of the impact of existing and projected future traffic on the roadway network, and capital improvements planning. Specifically, the study involves review of existing and projected future traffic conditions, development of a land use assumptions report, preparation of a roadway sufficiency analysis and a capital improvements plan.

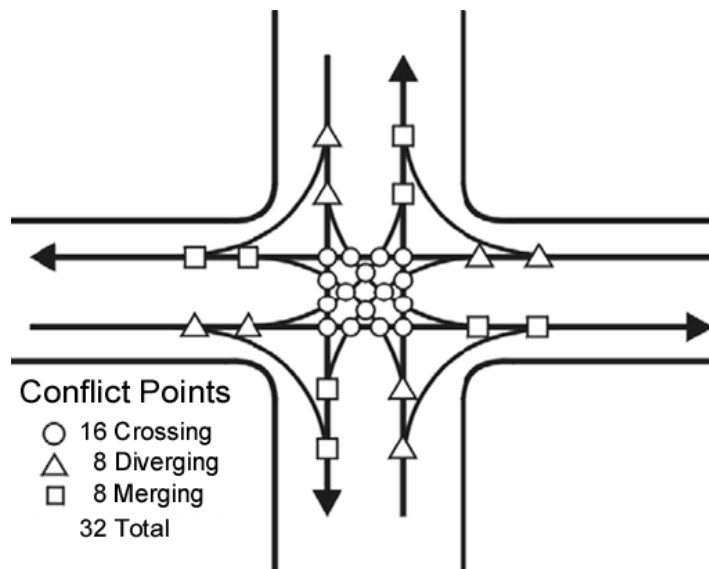
The land use assumptions report involves the review of existing and projected development, types of land uses, densities, and population growth. The roadway sufficiency analysis involves establishing existing and preferred levels of service for intersections within the study area. Needed transportation improvements will be attributed to new development, pass-through trips, or existing development and identified in the capital improvements plan. A preliminary implementation schedule and budget for the recommended infrastructure improvements should also be developed as part of the capital improvements plan.

## Access Management

The Quakertown Area has several arterial roadways (e.g., Route 663) that are 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 has long been recognized as a limiting constraint in traffic operations and transportation systems management.

The basic approach is to minimize the number of conflict points along these roads and to provide safe and efficient access to properties along roads. A conflict point is a place where two vehicles come together or their paths cross and one or both drivers must take evasive action to avoid collision. The simple intersection of two roads results in 32 conflict points, as illustrated in the following diagram.



Access management includes such techniques as shared driveways, providing access to secondary roadways, driveway spacing, planted median strips, protected left turn lanes, and any other appropriate access control measures. The 1992 update of the Quakertown Area Zoning Ordinance, adopted by four of the Quakertown Area municipalities, incorporated regulations for an Arterial Corridor (Overlay) District applicable to specific segments of arterial roadways in the region.

District provisions include requiring conditional use approval for any development within the overlay district, and access management regulations which limit the number of accessways and require separation distances between accessways. Milford Township, in particular, has been proactive in applying access management techniques such as the creation and use of reverse frontage roadways along portions of Route 663 near the turnpike and the turnpike slip-ramp.

Access management is both a land use and traffic issue. It calls for land use controls and incentives that are keyed to the development policies of the community and the capabilities of the transportation system.

The planning challenge is not merely how to provide driveways, or how to design roadways, storage areas, or parking. The challenge is to permit development without negatively impacting traffic flow. Therefore, the Quakertown Area must also take into account the access requirements of businesses that may relocate into the area, as well as those vehicles traveling through the Quakertown Area.

The QAPC, on behalf of the member municipalities, should develop an access management plan. This plan could be developed as an area-specific plan or it could be developed for the entire region.

Such a plan should include an analysis of current and projected land uses and their associated traffic conditions. The plan should include an implementation plan that establishes priorities and the responsible agencies for completing the roadway improvements or municipal ordinance amendments.

PennDOT has recently completed developing model ordinance language for access management. PennDOT's Center for Program Development should be consulted during development of the access management plan. This plan should be adopted by the Quakertown Area municipalities and included in the subdivision and land development review process.

## **Traffic Calming**

Old Bethlehem Pike and Mill Street currently serve as parallel roadways to Route 309 and Route 313, respectively. Both serve cut-through traffic as motorists attempt to avoid congestion on routes 309 and 313. While Old Bethlehem Pike has fewer curb cuts since there are fewer residences along its length, Mill Street provides access to many homes, as well as Quakertown's Memorial Park, the Quakertown Pool, and the James A. Michener Branch of the Bucks County Free Library.

Speeding and high cut-through traffic volumes on neighborhood streets like these create an atmosphere in which nonmotorists are intimidated, or even endangered by motorized traffic. 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 a neighborhood.

The role of physical measures in traffic calming is usually emphasized because these measures are self-policing. In other words, by utilizing speed humps and/or traffic roundabouts, motorized vehicles will slow down in absence of police presence.

Some potential traffic calming measures include speed humps, speed tables, chicanes, planted medians, roundabouts, and curb extensions. Richland Township constructed a roundabout at the intersection of Station Road and Old Bethlehem Pike in 2004. This roundabout has proven to be a valuable traffic calming device, as well as a suitable means of reducing congestion at this intersection.



*Roundabout in Richland Township*

To initiate traffic calming, the QAPC should develop policies specific to the Quakertown Area for member municipalities to follow. These policies should include the participation of any neighborhood that could be impacted by the addition of traffic calming measures. Some of the goals of a traffic calming program should include the following:

- achieving safe, slow speeds for all vehicles;
- improving the safety and the perception of safety for nonmotorized 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 violation enforcement on local roads.

Traffic calming techniques should affect driver behavior and improve the safety of the street for all roadway users, including pedestrians and bicyclists. However, traffic calming techniques must be designed so they do not impede emergency access by police, fire, ambulance or rescue personnel. Finally, allowing for public participation during the designing of traffic calming facilities will help to ensure acceptance of these facilities.

### **Pedestrians and Bicyclists**

Providing a walkable environment is essential to efficient ground transportation. Every trip begins and ends with walking. Walking remains the cheapest form of transportation, and the construction of a walkable community provides the most affordable transportation system any community can plan, design, construct, and maintain.

Walkable communities put urban environments back on a scale for sustainability of resources (both natural and economic) and lead to more social interaction, physical fitness, and diminished crime and other social problems. Walkable communities are typically more livable communities and can lead to whole, happy, healthy lives for the people who live in them.

Through the provisions of the subdivision and land development ordinance, the municipalities within the Quakertown Area are able to ensure new developments, both residential and nonresidential, are provided with sidewalks. Sidewalks provide an alternative option for individuals to choose when making certain needed trips, in addition to their use for exercise and recreation.

It is important that sidewalks be provided in the higher-density 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. There should be compelling reasons for the waiver or modification of sidewalk standards in municipal ordinances.

In many communities, bicycle systems are important and much appreciated facilities. Municipal subdivision and land development ordinances could be revised to include requirements for bicycle improvements in place of sidewalks in appropriate areas.

A bicycle plan should be prepared to determine the best routes to connect existing and anticipated developments with schools, shopping areas, parks and playgrounds, employment centers, and other key community locations. The bicycle system would be used and enjoyed by all the Quakertown Area residents, as well as people who work, shop, or visit in the Quakertown Area.

In the resident survey, nearly half of all respondents rated sidewalks and trails as excellent or good in their municipality and in the Quakertown Area. Walking trails and bicycle facilities ranked as the two most desired additions or improvements to municipal park facilities, chosen by 17.1 percent of respondents and 10.5 percent, respectively. More information on trail development can be found in the Park, Recreation and Open Space Planning chapter of this plan.

## **Recommendations**

In order for the Quakertown Area to continue to grow and redevelop in a healthy manner, specific actions are needed by the QAPC and member municipalities. These actions include the following:

- Continue to require the submission of a traffic impact analysis for proposals that would generate a significant amount of traffic and those that represent a change in land use planned for an area.
- Coordinate with the BCTMA regarding future bus service routes and schedules and promote future bus service as a public transportation service option.
- Coordinate land use planning to allow for necessary infrastructure associated with reactivation of the Quakertown-Stony Creek rail line.
- Ensure that municipal projects incorporate the use of public transportation services.
- Prepare and adopt subdivision and land development ordinance regulations that require developers incorporate transportation improvements and/or public transportation into land development projects by providing the following:

- designing office complexes with bus pull-off areas and transit shelters to encourage public transit use;
  - reducing the distance from the main road to the building entrance so employees will have a shorter walk from the street to the building;
  - providing priority parking areas for carpoolers as an incentive to utilize carpools.
- Consider transportation improvements from a context-sensitive approach by considering scenic, aesthetic, historic, environmental, and other community values.
  - Periodically review, and update when necessary, the existing highway classification of the region's roadways and develop improvement standards to address aesthetic and environmental qualities.
  - Ensure consistency between defined roadway terms and the categories used in the highway classification.
  - Continue to require dedication of needed rights-of-way during the subdivision or land development process, so that sufficient land is provided for improvements which may become necessary in the future.
  - Consider the recommended transportation projects from the Quakertown Area TIP, as well as other locally identified transportation projects, when subdivision or land development plans are submitted.
  - Municipal officials and members of the QAPC should coordinate with the Bucks County Planning Commission to develop a prioritized list of needed transportation improvements for consideration on the regional TIP.
  - Consider conducting municipal transportation studies in order to begin assessing traffic impact fees.
  - Develop an access management plan for the Quakertown Area.
  - Develop a traffic calming plan for the Quakertown Area.
  - Prepare and adopt subdivision and land development ordinance regulations consistent with traffic calming techniques in residential developments to discourage speeding and high cut-through traffic volumes on neighborhood streets.
  - Provide pedestrian/bicycling facilities as an alternative to automobile use.
  - Preserve and create rights-of-way for bicycle and pedestrian use.
  - Promote compact mixed-use development that is conducive to pedestrian and bicycle travel.



## Chapter 6

# Community Facilities and Services

One goal of the comprehensive plan is to anticipate the need for community services and facilities, so they may be provided at adequate levels and within budget. Growth in the Quakertown Area should be correlated with these essential services and facilities. This approach is central to the development area concept, as embraced in the 1992 version of the comprehensive plan and reaffirmed in this one.

In the more rural parts of the Quakertown Area, limited types of services and facilities may be required or provided. In the more developed sections, a greater number and variety of services and facilities exist. Facilities in the more densely populated sections of the Quakertown Area—and in neighboring places—may serve a regional function.

In the survey taken for the comprehensive plan, residents placed high importance on planning for key public services. Planning for public schools was rated very important or important by more than 90 percent of respondents, as was planning for medical facilities, and the protection of drinking water resources.

Residents also expressed satisfaction with the provision of many types of public services in the Quakertown Area. Fire protection, police protection, public schools, and garbage collection drew ratings of excellent to good from 60 percent or more of all respondents. Those residents who expressed opinions on public water and sewer service generally responded favorably. An exception was stormwater management, where opinion was nearly equally divided between excellent to good and fair to poor.

These facilities and services are covered in this section:

### ***Community Services/Facilities***

- Emergency services
  - Police protection
  - Fire protection
  - Emergency medical service
- Hospitals
- Schools
- Libraries
- Municipal administration

### ***Utility Services/Facilities***

- Water resources and wastewater facilities
  - Water supply and quality
  - Stormwater management
  - Wastewater treatment
- Solid waste management

## **Community Services**

Community services and facilities are necessary to maintain the health, safety and social needs of communities. They enhance the quality of life. They are provided by a range of public, private, and nonprofit agencies.

Growth in the Quakertown Area is prompting many providers of community services and facilities to make plans for expansion. Land use planning in the Quakertown Area should take into account the current state and future needs of such organizations, even though they may not be under municipal control. Figure 9 highlights community facilities in the Quakertown Area.

## **Emergency Services**

### ***Police Protection***

Two of the most populous Quakertown Area Planning Committee (QAPC) member municipalities, Quakertown and Richland, maintain their own police forces. The other four rely on police services by Troop M of the Pennsylvania State Police, stationed at 3218 Rickerts Road in Dublin Borough. The level of police service in the QAPC municipalities is deemed satisfactory by local officials and police.

Wildlife conservation officers under the jurisdiction of the Pennsylvania State Game Commission provide wildlife, forestry, and general law enforcement service within state game lands in Haycock. Pennsylvania Department of Conservation and Natural Resources Park Rangers provide police and public safety service in Nockamixon State Park and Lake Towhee Park in Haycock.

State police in Pennsylvania are required to serve municipalities that do not operate a local police force. Using state troopers for police services affords tax savings to communities that choose this option, because they do not pay for state police coverage; the costs are shared by all Pennsylvania taxpayers.

State police investigate major crimes and provide high-tech services like crime lab analysis, accident reconstruction, and polygraph tests. But state troopers do not issue citations for violations of local ordinances, such as noise or parking, and do not routinely enforce speed limits on nonstate roads.

The Quakertown Police Department headquarters are located at Borough Hall, 15-35 North 2nd Street. Future departmental facilities needs include on-site expansion and renovation to add a secure entrance portal and more room for processing, evidence, and storage.

Richland is in the process of transitioning from shared policing by municipal and state police to full coverage by the township police department, although no timetable has been set for completion of the transition. As of 2006, the coverage ratio was 70 percent local police and 30 percent state police.

The Richland Police Department occupies the former Bucks County library building at 229 California Road. The building was renovated before the police took occupancy in 2005, and is expected to accommodate departmental needs well into the future.



*Richland Police Station*

**Fire Protection**

There are eight fire companies within the Quakertown Area, all staffed and operated by volunteers. Milford and Quakertown each have two companies, and one company is located within each of the other four QAPC member municipalities. Table 25 lists the fire companies and their locations.

**Table 25. Volunteer Fire Companies Serving the QAPC Region, 2006**

<b>Name of Company</b>	<b>Address</b>
Haycock Fire Co.	850 Old Bethlehem Road
Milford Twp. Fire Co. #57	2185 Milford Square Pike
Milford Twp. Fire Co. Substation	1330 Kumry Road
Quakertown Fire Co. #1	503 West Broad Street
West End Fire Co. (Quakertown)	1319 Park Avenue
Richland Twp. Fire Co.	64 Shelly Road
Richlandtown Fire Co.	125 South Main Street
Trumbauersville Fire Co.	142 North Main Street

Sources: Bucks County Fire Marshal; fire company interviews

The Insurance Service Office, a national insurance industry group, recommends that suburban communities be within 2.5 miles of a fire station with a first-response engine, and that rural areas be within a four-mile radius. A first-response engine answers the first alarm and provides primary fire protection. Most of the Quakertown Area lies within the recommended maximum distance from a first-response station, except for some state game lands and parkland in Haycock Township.



*Richlandtown Fire Company*

Although the need for rapid response makes it desirable for communities to have their own firehouses, territory sharing and mutual aid compacts lead to a regional approach to fire protection. Fire companies in the Quakertown Area often serve portions of adjoining municipalities, in addition to their own, as first responders, because the closest company to the fire scene is dispatched through the 911 emergency response system. Mutual aid, when needed, is provided by fire companies from elsewhere in Bucks County, or by companies in neighboring Montgomery and Lehigh counties.

The Richland Emergency Services Association meets periodically to coordinate provision of fire, police, and emergency medical services, including financial support and cooperative purchasing. Fire

companies in the Quakertown Area generally get much of their funding from municipal budgets, supplemented by volunteer fundraising. Milford is the only QAPC municipality that has a fire tax to support its fire companies.

Although recruitment of volunteer firefighters, particularly for daytime shifts, is becoming more difficult because of social changes and increased training loads, the fire companies report no major shortfalls of staff and equipment. Several area fire companies anticipate the need to expand their buildings within the 10-year term of this comprehensive plan, because of the greater size of fire vehicles and equipment and/or increased call on their services resulting from municipal growth or other factors.

The Milford Township Fire Company is in the process of expanding its main firehouse at Milford Square to provide a bunkhouse, meeting rooms, and more equipment space. The Haycock Fire Company is considering construction of a second-story addition to its building. The Quakertown Fire Department, which operates the two fire companies in the borough, is considering the possibility of building a third firehouse to accommodate increased activity resulting from development within its Richland service radius. The Richland Fire Company expects to expand its firehouse. The Trumbauersville Fire Company expects either to replace its firehouse or to add onto it.

### ***Emergency Medical Services***

St. Luke's Emergency and Transport Services provides ambulance and emergency medical services to nearly all of the Quakertown Area from its location at 124-126 South 10<sup>th</sup> Street in Quakertown. St. Luke's has two other facilities, one in Lehigh County and one in Schuylkill County.

St. Luke's Quakertown operation maintains 9 ambulances and a total staff of 75. The staff consists of 80 percent emergency medical technicians (EMT) and the other 20 percent, more highly skilled paramedics. EMTs provide basic life support services, while paramedics provide advanced life support and may perform medical procedures under the direction of a doctor.

The service handles about 2,500 yearly calls for 911 emergency assistance and another 1,000 calls a year for non-emergency transport, plus 5,000 calls a year for van service to doctors' offices or clinics. The demand for service has been growing at a pace of 3 percent to 4 percent a year. Demand for service has been driven by increases in traffic and development, especially by new commercial growth and the advent of "active adult" communities housing older people.

Funding sources for the service include Medicare, Medicaid, private insurance and state or federal grants. St. Luke's anticipates need for expansion and modernization of its Quakertown facility within the next 5 to 10 years. The size, nature and site of the expansion are to be determined.

The Upper Bucks Regional Emergency Medical Service handles calls in Haycock and a small part of Richland Township from its office in the village of Revere in Nockamixon Township. The organization also has an office in Springfield Township. Their facilities are located in a new surplus FEMA trailer and should be adequate for the foreseeable future.

### **Hospitals**

Several hospitals in Bucks and Lehigh counties are situated within 5 to 25 minutes' driving time of Quakertown Area communities. The sole hospital within any of the six QAPC member municipalities is St. Luke's Quakertown Hospital, a 62-bed facility that is part of St. Luke's Hospital and Health Network and serves about 3,200 inpatients per year. St. Luke's Quakertown expects to

expand and renovate the hospital within the next 5 to 10 years to better serve the area's growing and aging population.

Other Bucks County hospitals that serve Quakertown Area residents are Grandview Hospital in Sellersville, which has 206 beds, and Doylestown Hospital, which has 196 beds. Hospitals in Lehigh County that are used by Quakertown Area residents include facilities in Allentown and Bethlehem operated by the St. Luke's health care network and by the Lehigh Valley Hospital and Health Network. The Lehigh Valley Hospital in Allentown has a Level 1 trauma center that serves the region.

### Schools

The member municipalities of the QAPC are served by the public schools of the Quakertown Community School District. The 11 district schools comprise a senior high school, a freshman center, two middle schools, and seven elementary schools. Table 26 lists public schools, their addresses and building information for the 2005-2006 school year.

**Table 26. Public Schools in Quakertown Community School District, 2005**

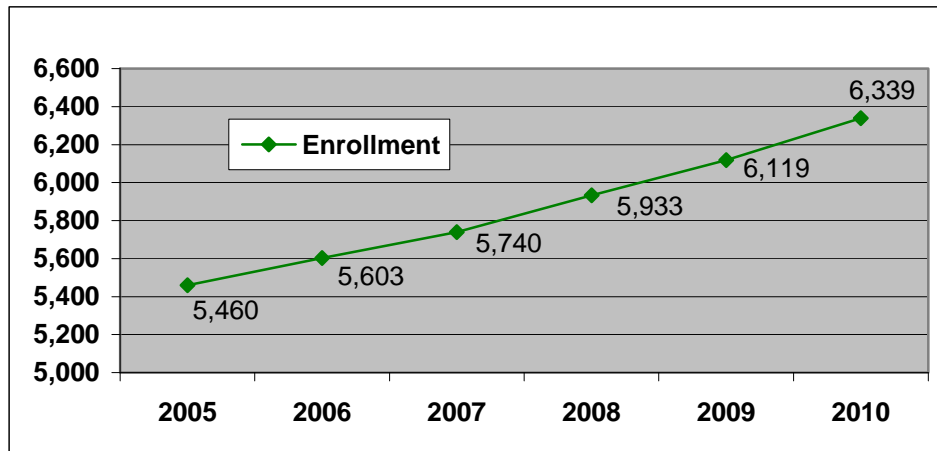
<b>Building</b>	<b>Address</b>	<b>Date built</b>	<b>Additions</b>	<b>Size (sq. ft.)</b>	<b>Student capacity</b>
Senior High	600 Park Avenue, Quakertown	1955	1966, 1972 1987, 2001	204,354	1,428
Freshman Center	349 South 9th Street, Quakertown	1966	2005	86,579	
Strayer Middle School	1200 Ronald Reagan Drive, Richland	2004		190,000	800
Milford Middle School	2255 Allentown Road	1974		78,042	656
Haycock Elementary	1014 Old Bethlehem Road	1954	1971, 1984	12,285	125
Neidig Elementary	201 Penrose Street, Quakertown	1958	1987	45,764	400
Quakertown Elementary	123 South 7th Street	1928	1967	41,172	325
Richland Elementary	500 Fairview Avenue	1956	1965	40,406	475
Trumbauersville Elementary	101 Woodview Drive	1999		54,647	732
Tohickon Valley Elementary	2360 Old Bethlehem Pike North, Milford	1951	1982, 1989 1999	31,025	425
Pfaff Elementary	1600 Sleepy Hollow Road, Milford	2005		85,000	500

*Source: Quakertown Community School District*

Student enrollment as of October 2005 totaled 5,460. That figure represents an increase of 13.4 percent since 1994. In addition, the district reported 112 students receiving home schooling in the 2005-2006 school year.

Student enrollment growth projections for school years 2005-2006 through 2009-2010 are in Figure 6A. The district anticipates the student population will climb by 16.1 percent during that time, reaching 6,339.

**Figure 6A. Quakertown Community School District Enrollment Projections 2005 –2010**



Source: Quakertown Community School District

The school district completed construction and renovation work based on its 5-year capital plan. Those projects are expected to address projected growth in the district for the next 8 to 10 years.

Key capital projects recently completed by the school district include construction of the new Strayer Middle School in Richland, completed in 2004, and of the Pfaff Elementary School in Milford, completed in 2005. The former Strayer Middle School was renovated and converted into the Quakertown High School Freshman Center, to alleviate overcrowding at the high school.



*Pfaff Elementary School in Milford*

In the immediate future, the district plans to move its administrative offices to the Milford Commons Conference Center in order to free up flex space at Quakertown High School. The district is in the process of formulating a new 5-year capital plan to identify and prioritize building renovations. The district encourages community groups to make use of school facilities during after-school hours.



*Strayer Middle School in Richland*

A number of nonpublic schools enroll students who live in the school district. A total of 576 district students attend 28 nonpublic schools in Bucks, Montgomery and Lehigh counties. The five nonpublic schools with the greatest enrollment of students from the district as of 2005–2006 are: Saint Isidore’s Parochial School in Quakertown (171); Faith Christian Academy in Sellersville (71); Upper Bucks Christian School in East Rockhill (71); Quakertown Christian School (67); and United Friends School in Quakertown (23).

## **Libraries**

The public library providing primary service to the Quakertown Area is the James A. Michener branch of the Bucks County Free Library. The library in 2004 moved from Richland to a new building along West Mill Street in Quakertown.

Its total collection encompasses 95,123 items, including about 86,000 books and more than 1,800 magazines. The space and amenities there are expected to accommodate library needs for the term of this comprehensive plan.



*Michener Library in Quakertown*

Quakertown Area residents also use other county library branches, particularly the Samuel Pierce Library in Perkasio and the main library center in Doylestown. The Richland Library Company at 44 South Main Street in Quakertown has special collections on Quaker and local history and is open to the public.

## **Municipal Administration**

A majority of the QAPC municipalities report that administrative offices and related facilities are expected to be adequate for the next 5 to 10 years. The exceptions are Richland and Haycock.

Richland anticipates future needs for additional space. The township plans to relocate its municipal building to the former site of the Upper Bucks branch of the county library, on California Road, at some time in the future. The police department has already relocated there.

Haycock plans to expand its municipal garage, to better store service vehicles and equipment. Haycock has acquired 10 acres of land on Route 563 near Mountain View Drive in anticipation of future municipal needs, but a use has not yet been determined.

## **Recommendations—Community Services**

- Promote and expand mechanisms for communication and cooperation between QAPC municipalities and other government and nonprofit service providers, particularly when facility needs or changes in service levels might have an impact on land use planning at the municipal or regional level.
- Coordinate information sharing and planning among the various governmental entities that operate within each municipality to enhance the effectiveness of land use planning, to improve the delivery of services, and to plan for the future needs of service providers and the communities they serve.

- Continue current efforts and explore new opportunities for sharing information, services, or resources among the QAPC municipalities and among service providers to reduce costs and duplication of effort and to promote greater efficiency in service delivery.

## **Utility Services**

### **Water Resources and Wastewater Facilities**

Land use planning and planning for sewer and water services should be closely integrated. Maintaining proper regional water balance is an important consideration. Water resources encompass three main factors—water supply, water quality, and stormwater management.

Water and wastewater facilities are key factors in determining the location, nature, and intensity of future development. Periodic assessment of water resources, wastewater disposal methods, and service areas is necessary to ensure that adequate facilities can be provided to satisfy future development needs. Effective stormwater management practices protect water quality, control peak stormwater flows, and enhance groundwater recharge.

Public or off-site water and sewer service is essential in certain areas to ensure public health, safety, and welfare and to provide the quality of life expected in boroughs and suburban areas. Individual on-lot and community water and wastewater systems in the more rural sections of the Quakertown Area will help achieve goals of maintaining rural character and replenishing, or recharging, ground water.

Public or off-site sewer and water services should be considered service resources with limited capacities. These resources should be provided in areas where they are needed to implement the region's planning policies. They should not be provided outside the intended service areas until uses within the areas are fully served and municipal officials determine that expansions of development areas and utility service areas are warranted.

### ***Water Supply and Quality***

The water cycle is instrumental in determining the quality and quantity of the water supply, both surface water and groundwater. The cycle consists of precipitation (rain and snow), stormwater runoff, and infiltration of water back into the ground.

To maintain a balanced water cycle, a comprehensive approach to managing these components is critical. All aspects of land use planning should aspire to maintain, if not improve, water quality. Communities throughout Bucks County are concerned with water supply issues related to the safe yield of groundwater withdrawal and the potential reduction in groundwater recharge to aquifers.

The Pennsylvania Municipalities Planning Code directs municipalities to consider water facilities in municipal comprehensive planning, zoning, and the development review process. It also requires a comprehensive plan to include a water supply component. A comprehensive plan should be consistent with the State Water Plan and any applicable water plan adopted by a river basin commission – in this case, that of the Delaware River Basin Commission (DRBC).

The water supply of the Quakertown Area – both public water and well water – comes from groundwater, rather than surface water. (Groundwater is water from aquifers within the earth;



surface water is from sources open to the atmosphere, like lakes, rivers and reservoirs.) The water supply must support increasing demand for domestic consumption and uses, industrial and commercial uses, wastewater treatment, agriculture, and recreational activities. Figure 10 shows the existing public water service areas in the Quakertown Area.

The DRBC has designated within its groundwater protection area in southeastern Pennsylvania all of the QAPC member municipalities other than Haycock. The protection area has been designated to combat shortages of groundwater resulting from withdrawals that exceed the capacity of existing wells during dry years, when precipitation is scarce and recharge rates are low.

Water suppliers within the protection area must report on daily withdrawals of 10,000 gallons or more. The DRBC monitors such withdrawals and plans for future water demand.

One means of protecting water resources is to ensure they are not wasted and are used wisely. Two of the QAPC municipalities – Milford and Richland – have enacted a water conservation ordinance that sets performance standards for plumbing fixtures and fittings. These ordinances should be reviewed for currency, and the other municipalities should enact such ordinances.

Efforts to promote groundwater recharge also serve to protect water resources. Many of these efforts entail stormwater management, which is discussed later in this section. Other methods of protecting water supply and quality involve land use regulation.

The QAPC zoning ordinance and its municipal variants require a water resources impact study for zoning changes or expansion of the development district. These provisions should be enforced and revised if necessary.

Zoning regulations in the QAPC municipalities also protect floodplain, wetlands, pond shore, and other environmentally sensitive land that protects water quality and facilitates aquifer recharge. Those municipalities that do not now protect wetland margins and the floodplain fringe by ordinance should consider adding such provisions. QAPC municipalities should also ensure that their subdivision ordinances provide for controlling erosion and sedimentation resulting from construction activity.

In the RP Resource Protection zoning district, development of various types of environmentally sensitive land is limited to low intensity. The description of the purposes of the RP District does not explicitly cite aquifer recharge or protection of groundwater quality and supply. Municipal officials should consider incorporating that provision when revising the QAPC zoning ordinance.

RP District regulations should be reviewed to ensure that they adequately protect critical groundwater recharge areas. Proposed zoning changes involving the RP District should be considered, in part, with regard to the effect that any changes might have on areawide groundwater recharge.

Water is a shared resource that flows between and beyond municipal boundaries. A comprehensive study of the groundwater within the Quakertown Area has not been undertaken. Such a study of the region's hydrology would help the QAPC municipalities determine the state of their collective

groundwater resources and to assess the effectiveness of current protection efforts. It would also provide data to guide any future regulation.

A recent water resources planning initiative conducted by the Pennridge Area Coordinating Committee could serve as a model. The recommendations of the *Pennridge Water Resources Plan* include measures like forming an intermunicipal water resources committee, developing a model water resources management ordinance, and preparing a water resources plan.

Any consideration of water supply must take into account the presence and extent of public water service in the region. There are five major suppliers of public water in the Quakertown Area. They include three municipally owned and operated water systems (Quakertown, Richlandtown, and Trumbauersville waterworks) and two municipal water authorities (Milford and Richland).

Public water suppliers in the Quakertown Area report adequate water and infrastructure available to serve existing and anticipated customers for at least the next 10 years. Some of the water suppliers have interconnections that allow them to import water from one another in case of emergency. Table 27 lists the major public water suppliers to QAPC municipalities.

**Table 27. Major Public Water Suppliers to QAPC Municipalities**

<b>Name</b>	<b>Service area</b>
Milford Twp. Water Authority	Milford
Quakertown Municipal Waterworks	Quakertown, Milford, Richland
Richland Twp. Water Authority	Richland
Richlandtown Municipal Waterworks	Richlandtown
Trumbauersville Municipal Waterworks	Trumbauersville, Milford

*Source: Bucks County 2005 Water Supply Inventory*

The availability of public or other large, off-site water supply promotes growth and should be permitted only in areas planned for nonresidential or higher-intensity residential development. Public or off-site water systems should generally serve the same areas as are served by public sewer systems.

The two fastest-growing townships in the Quakertown Area—Milford and Richland—have had high rates of residential growth in expanded, rather than existing, water service areas. Such rapid expansion of water service area may be a sign that there is a need for greater consideration of coordinating growth management with the provision of water service.

Those two growth municipalities, in particular, should consider the appropriateness of zoning and current or planned availability of water and sewer service in approving larger-scale development proposals. These communities may want to enact into their subdivision and land development ordinances regulations requiring a water resources impact study for proposed developments meeting a certain intensity threshold and situated outside of public water service areas.

Groundwater quality is continually threatened by land uses and the activities that take place on those lands. Some land uses and activities are more compatible with maintaining good water quality, and some are less compatible. Common sources of groundwater contamination are in Table 28.

**Table 28. Common Sources of Groundwater Contamination**

<b>Category</b>	<b>Contaminant Source</b>	
Agricultural	Animal burial areas Animal feedlots Fertilizer storage/use	Irrigation sites Pesticide storage/use Manure spreading areas/pits
Commercial	Auto repair shops Construction areas Car washes Cemeteries Dry cleaners Gas stations Golf courses	Laundromats Paint shops Photography Railroad tracks and yards Research laboratories Scrap and junkyards Storage tanks
Industrial	Asphalt plants Chemical manufacture/ storage Electronics manufacture Foundries/metal fabricators Machine/metal working shops Mining and mine drainage	Petroleum production/ storage pipelines Septage and sludge lagoons Toxic and hazardous spills Wells (operating/abandoned) Wood preserving facilities
Residential	Fuel oil Furniture stripping/refinishing Household lawn chemicals Household hazardous products	Septic systems, cesspools Sewer lines Swimming pools (chemicals)
Other	Hazardous waste landfills Highway spills Municipal incinerators Municipal landfills Municipal sewer lines Open burning sites	Recycling/reduction facilities Road de-icing operations Road maintenance depots Stormwater drains/basins Transfer stations

Source: Adapted from *Protecting Local Groundwater Supplies through Wellhead Protection*, U.S. Environmental Protection Agency, 1991

The Bucks County Department of Health (BCDH) monitors the water quality of public supplies and enforces the water quality standards set by federal and state agencies. But private water supplies are owned and operated by individual property owners, so the quality of the private water supply is the responsibility of the property owner. As state laws do not require testing of private water supplies and regulatory agencies do not regularly monitor them, there is little information on water quality problems of private wells.

The BCDH has recently begun certifying new private wells to help prevent people from drinking contaminated water. This regulation applies to new, but not existing, private wells. One of the key components of the program is to certify that each well has a proper sanitary seal that can safeguard against groundwater contamination.

Since the BCDH inspection occurs only when a well is constructed, those who rely on private wells should have them tested for safety every year or so. Haycock and Milford have well testing ordinances. It is recommended that Richland enact one.

Amendments to the federal Safe Drinking Water Act of 1986 require states to enact a wellhead protection program to protect through local land use planning and other management techniques the quality of groundwater used for public drinking water. A wellhead is the source of a well or stream. Open space and low-density land uses are appropriate uses near high-protection well fields. Wellhead protection programs are tools for both pollution prevention and water supply planning. They are especially necessary when development occurs in areas where the expansion of public water service is not possible or desired.

The QAPC municipalities in which all or some residents rely on well water should review or enact wellhead protection ordinances. Milford has a wellhead protection ordinance; Richland should enact one.

### **Recommendations—Water Supply and Quality**

- Review or enact water resource impact study requirements for zoning changes, inclusions in development districts, and new high-intensity development situated outside existing or proposed public water service areas.
- Consider undertaking a regional water resources planning program that includes a comprehensive study of groundwater resources.
- Review ordinances that protect environmentally sensitive land, and strengthen them, if necessary.
- Review or enact wellhead protection ordinances.

### ***Stormwater Management***

Stormwater management involves controlling surface water runoff resulting from rainfall. As rainwater drains through a watershed, the volume and rate of runoff are affected by the type of land cover, soils, and slope of the land.

In developed or developing areas, the amount of runoff can increase dramatically due to the conversion of natural landscape to impervious surface like roads, driveways, rooftops and buildings. Unable to absorb rainwater, impervious surfaces discharge runoff as precipitation begins.

The alteration of natural runoff patterns affects groundwater supplies as well as stream flow. Failure to properly manage runoff can cause flooding, stream bank erosion, siltation and sedimentation, and reduction in groundwater recharge. Frequent flooding can affect the health of a stream system, diminishing water quality and threatening species diversity.

Stormwater best management practices (BMPs) are used to control runoff by capturing it and routing it into structures (e.g., infiltration basins, trenches, vegetated swales, porous pavement, etc.) that allow the water to permeate the soil and eventually recharge the groundwater. The soil filters out pollutants, resulting in improved water quality.

Act 167, the Pennsylvania Stormwater Management Act of 1978, was enacted to address problems generated by uncontrolled runoff. The act lays the groundwork for the scope of comprehensive stormwater management throughout watersheds that is necessary to achieve widespread, long-term control of runoff. Counties prepare stormwater management plans for the watersheds within their jurisdiction, and municipalities must adopt ordinances to implement the standards and criteria of the county plans.

Quakertown Area residents, in the comprehensive plan survey, expressed a divided opinion on the adequacy of local stormwater management, with about 40 percent rating it excellent or good, and about 37 percent viewing it as fair or poor. (Another 23 percent had no opinion.)

The QAPC member municipalities are situated entirely or largely in the Tohickon Creek watershed, with a few exceptions. Most of Milford, the southern half of Trumbauersville, and small areas of Quakertown and Richland lie in the Perkiomen Creek watershed. Extremely small areas in the far northeastern corner of Richland and the northwestern corner of Haycock lie within the Delaware River North watershed.

The Bucks County Planning Commission issued both the *Tohickon Creek Watershed Act 167 Stormwater Management Plan* and the *Delaware River (North) Watershed Act 167 Stormwater Management Plan* in 2002. Major program objectives identified within each plan include:

- managing stormwater runoff from new development, taking into account cumulative basinwide impacts from peak runoff rates and volume;
- preserving natural drainage ways and watercourses and providing for proper management of all stormwater management facilities;
- maintaining or improving water quality, especially in areas that drain to lakes and reservoirs, by preventing stormwater runoff pollutants from entering the stream system;
- maximizing groundwater recharge throughout the watershed; and
- providing sound guidelines and methods for stormwater management for communities in the watershed.

In the Quakertown Area, all municipalities within the Tohickon Creek and Delaware River North watersheds have enacted ordinances designed to implement standards of those stormwater management plans. Since there is no stormwater plan in place for the Perkiomen watershed, Quakertown Area municipalities with land area in that watershed should review and update their ordinances to ensure that general-purpose, state-of-the-art stormwater management performance standards and facility design practices apply throughout the community. The QAPC did develop provisions that attempt to address these issues in the model Quakertown Area subdivision and land development ordinance prepared in 2003, which Milford Township has adopted.

The National Pollutant Discharge Elimination System (NPDES) is a federal program that seeks to establish local regulations to result in a nationwide reduction of pollutants in waterways. It includes

stormwater discharge regulations. The municipal NPDES program must be correlated with the community's Act 167 stormwater management plan.

Phase 1 of NPDES targeted storm sewer systems in medium and large communities, as well as major industrial facilities and development projects. Phase 2 of NPDES, aimed at smaller communities and construction activities on sites of 1 to 5 acres, requires municipalities to develop a stormwater management program that meets state permit requirements and includes six minimum control measures:

1. public education and outreach
2. public participation
3. illicit discharge detection and elimination
4. construction runoff control
5. post-construction runoff control
6. pollution prevention.

The community must implement the NPDES program, set program goals, and evaluate its effectiveness.

The Quakertown Area communities that have received NPDES permits are Milford, Quakertown, Richland, and Trumbauersville. Haycock and Richlandtown were exempted from program participation because they do not exceed the prescribed density threshold for mandated communities. They, too, should nevertheless implement stormwater BMPs to preserve and improve water quality.

The state Department of Environmental Protection (PaDEP) has expressed some concerns about continuing NPDES permit compliance in Milford, Richland and Trumbauersville, regarding issues that encompass ordinances, municipal operations and maintenance, outfall inspections, and public education. In the coming years, the three municipalities will be expected to address those concerns.

Bucks County is helping municipalities meet NPDES requirements by advising on methods and ordinance language. This assistance is provided in accordance with Act 167 guidelines and goals to merge critical stormwater management issues, including groundwater recharge, under the umbrella of water resources protection.

Stormwater management planning should involve determining responsibilities and scheduling maintenance for stormwater facilities. The municipality and the end user should receive written information on short-term and long-term maintenance and operations and the estimated lifespan of each stormwater facility.

Ensuring proper operations and maintenance help municipalities comply with NPDES and other regulatory programs. Projected maintenance scheduling allows facility users to budget time and funds to inspect, repair, or condemn facilities as necessary throughout their lifespan.

## **Recommendations—Stormwater Management**

- Continue to enforce the recommendations of the *Tohickon Creek Watershed Act 167 Stormwater Management Plan* and the *Delaware River North Watershed Act 167 Stormwater Management Plan*. Those QAPC municipalities with land area within the Perkiomen Creek watershed should also enact ordinances to implement and enforce stormwater BMPs in areas that lie within that watershed.
- Continue to maintain compliance with NPDES program and file program reports. Because of the regional nature of stormwater management, QAPC municipalities not required to take part in the program should nevertheless review their ordinances to ensure they are implementing state-of-the-art stormwater BMPs.
- Identify flood-prone areas at the municipal level and determine if remediation is possible.
- Establish regular maintenance programs for stormwater management facilities.
- Evaluate alternative BMPs for maintaining and retrofitting existing substandard stormwater management facilities.

### ***Wastewater Facilities***

Wastewater collection, conveyance, treatment, and disposal are critical factors in comprehensive land use planning. Planning for the proper types of wastewater (sewage) systems helps to implement land use goals and to ensure a high quality of the natural and built environments.

Coordination of municipal sewage facilities planning and regional land use planning is a primary intent of this regional comprehensive plan. The Quakertown Area zoning ordinance supports such coordination by establishing sewage facilities impact analysis requirements for expansion of the development district and zoning changes.

Comprehensive sewage facility planning is a complex process. For public or off-site wastewater services, considerations include methods to collect, convey, treat, and dispose of wastewater and related solids. Interaction among the municipality, various agencies, and service users is essential in the planning process. For areas where public sewer service is not appropriate, procedures and standards to ensure adequate on-site or off-site land application disposal methods should be established. These matters are addressed in the official sewage facilities plan of each municipality.

Pennsylvania laws, which authorize sewage facility and land use planning functions, direct and encourage municipalities to coordinate these actions. The Pennsylvania Sewage Facilities Act, Act 537, assigns to municipalities certain responsibilities for wastewater planning. Each municipality is required to have an official Act 537 sewage facilities plan and, unless proposed facilities are consistent with the plan, PaDEP cannot issue permits for the facilities.

But a landowner has the option to request revisions to the municipal sewage facilities plan and may appeal a refusal to revise the plan. The DEP is required to consider a municipality's zoning and comprehensive plan in the evaluation of private requests to change the Act 537 Plan. Thus, it is important that the comprehensive plan, zoning, and sewage facilities plan be coordinated.

The *Wastewater Facilities Component of the Quakertown Area Comprehensive Plan* (1985) remains the official Act 537 Plan for Haycock, Quakertown, Richland, Richlandtown, and Trumbauersville. Richland amended its plan in 1998 to provide for an expanded service area in the southern part of the township, and is now in the process of completely revising its Act 537 Plan. The Act 537 Plan for Milford is the *Milford Township Sewage Facilities Plan*, adopted in 2003.

It has been the policy of Act 537 Plans in the Quakertown Area to limit public sewer service areas to designated development districts. An exception has been Richland's 1998 Act 537 Plan amendment, which extended the township's planned sewer service area into a RA Rural Agricultural zoning district around Morgan Creek.

While the Quakertown Area's older, densely populated boroughs are served in their entirety by public sewers, its more rural townships rely on a combination of public sewerage, on-lot systems, and a small number of individual alternative wastewater treatment systems that use spray irrigation, stream discharge, or other methods. Three public sewer agencies serve five of the six QAPC municipalities. (All of Haycock is served by on-lot subsurface sewage disposal systems, as are portions of Milford and Richland.) Figure 11 shows the existing public sewer service areas in the Quakertown Area.

The sewer agencies in the Quakertown Area are the Milford-Trumbauersville Area Sewer Authority, the Quakertown Borough Sewage Treatment Plant, and the Bucks County Water and Sewer Authority (BCWSA), which provides collection and conveyance infrastructure in Richlandtown and Richland. Quakertown maintains and operates its own sewer infrastructure. The Milford-Trumbauersville authority serves about 60 percent of Milford, all of Trumbauersville, and a small number of users in Richland, Quakertown, and Springfield Township. The Quakertown treatment plant receives wastewater from virtually all of Quakertown, part of Richland, and all of Richlandtown.

The Milford-Trumbauersville authority serves about 2,500 households in Milford, mostly in the southeastern part of the township. It also serves 285 households in Trumbauersville, 220 in Richland and 3 in Quakertown. Its treatment capacity is 800,000 gallons a day. Usage as of 2006 was about 550,000 gallons a day, with reserve capacity to serve about 625 households, or the equivalent (EDUs).



*Quakertown Sewer Plant*

The authority maintains an ongoing program of inspections and maintenance. Adequate capacity exists for the 10-year term of this comprehensive plan, but the authority could expand capacity in the long term, if necessary, after consultation with its sponsoring municipalities and PaDEP.

Quakertown uses its own sewer lines to transport wastewater from the borough to the treatment plant. The treatment plant was last upgraded in 1986 and has a maximum capacity of 3.1 million gallons a day, which has been reached, taking into account capacity reserved for development that is under way. Aging



terra cotta sewer lines have been fitted with plastic liners to reduce inflow and infiltration. The borough serves about 3,500 customers, with usage on the order of 1.66 million gallons a day in 2005.

The BCWSA system transports sewage from Richland and Richlandtown to the Quakertown treatment plant. The BCSWA in 2006 served a total of 3,465 customers in Richland and Richlandtown, conveying some 1.04 million gallons of wastewater daily.

The BCWSA has suspended new sewer connections, pending Richland Township's completion of a revised Act 537 wastewater facilities plan. Completion of the plan is necessary for determination of need for expansion of the Quakertown treatment plant or construction of a new plant. Public sewer service in Richland is largely concentrated in sections of the township along Route 309 or adjoining Quakertown.

The analyses of residential and nonresidential development areas undertaken for this comprehensive plan show enough vacant land within designated municipal development areas in the Quakertown Area to accommodate anticipated regional growth within the next 10 years. (Development areas comprise land zoned for one or more housing units per acre, or for commercial or industrial use.) Any proposed expansion of sewage treatment capacity in the Quakertown-Richland area should be situated so as to facilitate sewer service to *developable land already zoned as part of the designated development area*.

In addition to public sewer facilities, Milford and Richland each have a few nonmunicipal treatment facilities, mainly aeration or spray irrigation systems. In Milford, two campgrounds and a research firm have their own systems, and in Richland, two churches, two business firms and the Melody Lakes and Richland Meadows mobile home parks have their own systems. The municipalities should consider providing inspection and monitoring of these and future facilities in addition to that conducted by the PaDEP and the Bucks County Health Department (BCDH).

All of Haycock and the more rural portions of Milford and Richland continue to rely on on-lot subsurface disposal systems. Since soils in many parts of these townships may be marginal for on-lot systems, they should be carefully maintained and watched for problems.

Richland has an on-lot disposal system (OLDS) ordinance that includes both a public education component and operating and maintenance standards for the systems; Haycock and Milford should adopt or update OLDS management programs to include both components.

The three townships should prepare feasibility studies to determine the degree of OLDS malfunctions, potential wastewater facility alternatives to address areas of concentrated malfunctions, and funding sources to offset the cost of any construction. Any time developments that would use community wastewater systems are proposed near on-site problem areas, there should be an area-wide evaluation of wastewater management that includes remediating such problems.

Finally, municipalities should consider integrating into their OLDS management programs assurances that septage (septic tank waste that needs to be pumped out periodically to ensure proper system operation) is properly disposed of by local septage haulers. Future wastewater planning

should evaluate methods to shore up capacity at septage disposal sites, which may in turn reduce property owners' cost of septage pumping and thus provide an incentive for proper OLDS maintenance.

### **Recommendations—Wastewater Facilities**

- Consider production of an updated, consolidated Act 537 Plan for the entire Quakertown Area, incorporating recent updates undertaken by Milford and Richland. The other four QAPC communities should also review and update sewage facilities plans at the municipal level.
- Require detailed wastewater facilities alternatives for proposed extensions of sewer service outside delineated development areas. These analyses should include evaluations of community systems and the impact of such service extensions on capacity intended for development areas.
- Conduct facilities studies in connection with any proposed expansion of sewer treatment or service capacity, so as to channel expanded service potential to delineated development districts.
- Continue enforcing sewage facilities impact analysis provisions of the zoning ordinance.
- Consider providing inspection and monitoring of nonmunicipal, industrial, and individual alternative wastewater facilities in addition to that provided by the PaDEP and the BCDH.
- Identify concentrated areas of OLDS malfunctions and prepare or update feasibility studies for techniques and financing of remediation.
- Ensure evaluation of area-wide wastewater management when development is proposed in the vicinity of on-site problem areas.
- Adopt ordinances that address operation and maintenance requirements and design requirements of individual alternative systems (e.g., spray irrigation or stream discharge systems) supplemental to PaDEP and BCDH regulations.

### **Solid Waste Management**

Solid waste management is the process of providing an economically and environmentally sound means of storing, collecting, transporting, processing, and disposing of waste and recyclable materials. In Pennsylvania, Act 101, the Municipal Waste Planning, Recycling, and Waste Reduction Act of 1988, requires municipalities to adopt resolutions, ordinances, regulations and standards to carry out the responsibilities of solid waste management. These responsibilities are accomplished through municipal programs or through the regulation of private firms that collect and haul waste.

Act 101 authorizes counties to prepare and periodically update a 10-year plan to guide the management of municipal solid waste. Bucks County's Act 101 plan was revised in 2005. The

revised plan provides continued guidance for solid waste management throughout the county to the year 2014 and makes recommendations for attaining the statewide goal of recycling 35 percent of the waste stream.

Homeowners in Haycock, Milford, and Richlandtown contract directly with private haulers for solid waste disposal. In Quakertown and Trumbauersville, the municipality contracts with a hauler to provide waste disposal service to its residents. In Richland, the township contracts for residential recycling services while the homeowner is responsible for contracting with a hauler for waste collection. Business owners in the region contract directly with a hauler for waste disposal and recycling services.

The haulers deliver collected waste for disposal at a landfill or waste-to-energy facility in the region. Some of the waste may be delivered to a transfer station in Bucks or other counties before disposal.

Under Act 101, large municipalities and smaller municipalities with a population of 5,000 to 10,000 and a population density of more than 300 residents per square mile must carry out a program to source-separate and collect at least three types of recyclables, plus yard waste. The QAPC member municipalities mandated under those criteria to establish curbside recycling programs are Milford, Quakertown, and Richland. Haycock, Richlandtown, and Trumbauersville at present do not meet the population and density standards for mandated communities.

Quakertown and Richland have mandatory curbside recycling programs. Curbside collection is voluntary in Haycock, Milford, and Richlandtown. Milford and Trumbauersville residents may drop off recyclables at the municipal site in Milford. Milford and Richland maintain municipal mulching sites for recycling yard waste.

The materials collected as part of the curbside programs include aluminum/steel food/beverage containers, three colors of glass food/beverage containers, #1 and #2 plastic bottles, newspaper, magazines, catalogs, and junk mail. The drop-off program at the Milford municipal complex accepts aluminum cans, steel cans, three colors of glass food/beverage containers, #1 and #2 plastic bottles, newspaper, and magazines. Haycock residents may drop off aluminum cans, steel cans, all glass food/beverage containers, all plastic bottles, newspapers, magazines and cardboard at the municipal building. Figures on recycling by municipality for 2005 are in Table 29.

**Table 29. Total and Commercial Recycling by Municipality, 2005**

<b>Municipality</b>	<b>Total Reported Recycled (tons)</b>	<b>Commercial Recycling (tons)</b>	<b>Recycling Rate (%)</b>
Haycock	308.04	6.7	17.7
Milford	869.96	20.8	12.3
Quakertown	2,482.2	1,657.0	34.7
Richland.	3,227.3	1,640.8	40.7
Richlandtown	0	0	0
Trumbauersville	0	0	0

*Source: Municipal annual recycling reports*

The state has set a goal of recycling 35 percent of municipal waste. Although the Commonwealth and Bucks County have reported reaching this goal in recent years, most of the individual Quakertown Area municipalities appear to have fallen short, although Richland has exceeded it and Quakertown has come close to achieving it. The shortfall may be at least partially due to lax reporting procedures.

Municipalities qualify for performance grants from the state based on the amount of material recycled. More public education and strengthened reporting procedures to track recycling tonnage would further attainment of recycling goals and result in greater performance grant (Act 101, Section 904) returns to municipalities. Municipalities, by ordinance, could require haulers operating within their borders to report the weight of all recyclables collected from residential and nonresidential customers.

Recycling saves limited landfill space and contributes to the long-term sustainability of the environment. Milford should continue efforts to institute the necessary mandatory ordinances and educational programs to implement a curbside program for recyclables and yard waste. In addition, those Quakertown Area municipalities not currently required to recycle under Act 101—Richlandtown, and Trumbauersville—should consider strengthening their voluntary recycling programs, providing recycling education to their residents and make recycling as convenient as possible.

### **Recommendations—Recycling**

- Milford is required to enact a mandatory curbside program for recyclables and yard waste.
- The QAPC municipalities required to recycle—Milford, Quakertown, and Richland—should institute a recycling education program for residents and commercial and industrial facilities and strengthen reporting procedures in order to increase their municipal performance grants.
- The QAPC municipalities not required to recycle—Richlandtown, and Trumbauersville—should strengthen public education and voluntary recycling programs, including the use of yard waste drop-off sites in their municipalities, when practicable.

## Chapter 7

# Parks, Recreation, and Open Space

Park, recreation, and open space resources are important parts of a community's identity and contribute to the quality of life. Open space contributes to a municipality's character, preserves the natural ecosystems upon which we depend, and provides an attractive setting in which to live and work. Park and recreation facilities provide an opportunity for residents to interact and recreate and help create a sense of community.



*Quakertown Memorial Park*

Future planning for community recreation facilities and open space/agricultural areas ranked as important or very important to 81 percent of those responding to this question in the Quakertown Area Comprehensive Plan resident survey. In addition, survey results also indicate that residents overwhelmingly approve municipal acquisition of key open space areas, wildlife corridors, and trail linkages (77 percent of responses).

Parks and open space resources can be classified into three categories: permanently protected lands, temporarily protected lands, and unprotected lands.<sup>16</sup> Permanently protected lands include areas that are more likely to be preserved due to their ownership, such as publicly owned lands (e.g., parks or dedicated open space), and lands owned by nonprofit conservation organizations or homeowners' associations.

Temporarily protected lands are areas that are in open space use or partial open space use in conjunction with existing recreational facilities. However, the owner reserves the right to develop the land in the future (under the parameters of the underlying zoning). The most common temporarily protected open space areas are lands that are enrolled in preferential tax assessment programs. Other types of temporarily protected open space include private recreational lands (golf courses, camps and campgrounds, nature preserves) and school facilities.

Unprotected lands include open areas that do not have an inherent mechanism in place that would discourage or prevent the land from being developed or affected by development in the future. They include a significant portion of the Quakertown Area's natural, historical, cultural, and scenic resource lands.

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<sup>16</sup> This chapter attempts to identify and classify open space and park resources into several subcategories to provide an overview of what resources are protected and how well those resources are protected. The acreage totals provided by this chapter may not match park, recreation, and open space land use totals found in other sections. For example, transportation and utility lands are not inclusive of roads in this chapter but are included in the transportation and utilities category in other components of this update.

## Permanently Protected Lands

The following provides a brief description of all permanently protected open space lands. Approximately 7,274 acres of protected lands exist within the Quakertown Area. The location and extent of these lands are illustrated in Figure 12.<sup>17</sup>

### State-Owned Park and Open Space

The Commonwealth of Pennsylvania owns significant land in the Quakertown Area primarily in the form of State Park Land and State Game Land. Nockamixon State Park is located within portions of Haycock, East Rockhill, Nockamixon, and Bedminster townships. With a total acreage of 5,283 acres, Nockamixon is the largest state park within Bucks County and one of the largest in southeastern Pennsylvania. Consisting primarily of forests and fields, the park surrounds a 1,450-acre lake. A majority of the park, approximately 2,091 acres, is located in the southeastern portion of Haycock, mostly south of Route 563 (Mountain View Drive).



*Lake Nockamixon (State Park)*

The park contains facilities for a variety of recreational activities including boating, sailing, hiking, biking, fishing, kayaking, horseback riding, swimming, sledding, cross-country skiing, and picnicking. Approximately 3,000 acres of the park are open to hunting and trapping during established seasons. Common game species are deer, pheasant, rabbit, and turkey. The park also offers environmental education and interpretive programs.

The region contains several areas of State Game Land. Encompassing 2,046 acres in Haycock, including Haycock Mountain, State Game Land 157 is the largest in the Quakertown Area. This land adjoins the northeast border of Nockamixon State Park and provides opportunities to hunt, hike, and enjoy wildlife. Shotgun areas for clay pigeon shooting and a rifle range, which only allows paper targets and single-projectile ammunition, are available for use at this location.

The other State Game Land in the area is located within Richland. Two of the four tracts comprising State Game Land 139 are in the southeastern portion of the township, along Muskrat and Rich Hill roads and along Rocky Ridge and Rockhill roads. These two tracts combined total almost 119 acres and are located in the vicinity of the Quakertown Swamp within Richland.

### County Park and Open Space

County-owned land in the Quakertown Area consists primarily of the 501-acre Lake Towhee Park. Adjacent to the village of Applebachsville in Haycock, this county park contains a lake surrounded by forests and fields. The park provides opportunities for picnicking, hiking, boating, fishing, camping, ice skating, and horseback riding. Other park facilities include playgrounds, ballfields, and rest rooms.

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<sup>17</sup> The map may not necessarily reflect the actual area of conservation easements and may include portions of a lot that are not covered under easement restrictions.

The *Bucks County Park and Recreation Plan* (1986) identifies a proposed link connecting Lake Towhee Park and Nockamixon State Park. According to the Bucks County Department of Parks and Recreation, the link would include a walking trail between the two parks. Since 1989, approximately 60 acres of land has been purchased, but not for the purpose of linking the two parks. Improvements to the park such as dredging (1990), dam and spillway repairs (2001), and resurfacing and new playground equipment (2001), have enhanced park attendance in recent years.



*Lake Towhee Park sign in Haycock*

### **Municipal Park and Open Space**

Municipal park and open space encompasses land owned entirely by the six Quakertown Area municipalities. Municipal totals are as follows: Haycock—272.4 acres, Milford—728.8 acres, Quakertown—91.1 acres, Richland—660.45 acres, Richlandtown—15.9 acres, and Trumbauersville—7.1 acres. These acreages include land dedicated to municipalities from residential developments, open space purchases and conservation easements, and donated land. The following tables detail the name of the land or park, its location, use or facilities, and acreage.

### **Municipal-Owned Land**

**Table 30. Haycock Township Parks and Open Space**

<b>Name</b>	<b>Location</b>	<b>Use/Facilities</b>	<b>Acreage</b>
Kinzler Farm easement*	East Saw Mill and Kinzler roads	Open space preservation	66.00
Beagle Club easement*	Cobbler Road and Mountain View Drive	Open space preservation, contains sportsmen-oriented facilities	110.40
Schoenfeld Easement/Top Rock Trail Meadow**	Top Rock Road	Natural features	68.00
Combs easement**	Church View Drive	Natural features	28.00

\*Purchased through the Bucks County Open Space Program.

\*\*Conservation easement purchased through Bucks County Natural Areas Program.

**Table 31. Milford Township Parks and Open Space**

<b>Name</b>	<b>Location</b>	<b>Use/Facilities</b>	<b>Acreage</b>
Molasses Creek Park (upper portion)	Krammes Road	Recreation facilities, municipal complex	40.5
Molasses Creek Park (lower portion)	Krammes Road	Various recreational courts, multi-purpose field, playground, handball wall, fitness/walking track, picnic/barbecue facilities	22.5
Unami Creek Park	Allentown Road	Baseball/softball fields, various recreational courts, playground, nature trail, picnic/barbecue facilities	72.8
Lands along Barrel Run Creek	Near Creamery and Trumbauersville roads	Open space preservation	50.91

<b>Name</b>	<b>Location</b>	<b>Use/Facilities</b>	<b>Acreage</b>
Spinnerstown Area	Near Spinnerstown Road	Open space preservation	47.84
Milford Square Estates/Mill Valley	Milford Square Pike	Tennis courts, open space	12.31
Cedarfield	Cedarfield Lane	Open space preservation	2.65
Wise	Benners School Road	Open space preservation	14.95
Park View Estates	Allentown Road (Park View Drive)	Walking path/trail	2.58
Rosenberger*	Breisch Lane	Open space preservation	95.68
Harry Terry	Esten Road	Open space preservation	20.00
Wheelin*	Wright Road	Open space preservation	15.65
Shelps*	Krammes Road	Open space preservation	26.81
Peeper Pond (Wilsey)*	Fennel Road	Open space preservation	5.05
McKay	Trumbauersville Road	Open space preservation	0.35
Frankenfield**	Trumbauersville Road	Open space preservation	2.31
Finland	Trumbauersville Road	Open space preservation	0.45
Milford Industrial Commons	Portzer Road	Open space preservation	8.25
Sroka	Old Bethlehem Pike	Open space preservation	2.70
Walnut Bank	Steinsburg Road	Stormwater facilities	5.29
Downing/Coakley**	Fels Road	Open space preservation	1.28
Hallman	Trumbauersville Road	Open space preservation	0.29
Carson**	Kumry Road	Natural areas	11.16
Kaufman easement**	Upper Ridge Road	Natural areas	76.00
Ondra easement**	Fennel Road	Natural areas	36.7
Reiss easement**	Fennel Road	Natural areas	13.2
Inkpen***	Wieand Road		16.01
Cole***	Spinnerstown Road		4.77
Sutton***	Klines Mill Road		9.56
Heinrich***	Fennel and Canary roads		31.11
Camburn***	Fels Road		22.65
Williams***	Canary Road		32.31
Blattner***	Fels Road		24.22

\*Purchased through the Bucks County Open Space Program.

\*\*Purchased through Bucks County Natural Areas Program.

\*\*\*Other Milford Township lands under conservation easements.



**Table 32. Quakertown Borough Parks and Open Space**

<b>Name</b>	<b>Location</b>	<b>Use/Facilities</b>	<b>Acreage</b>
Quakertown Memorial Park	Mill Street	Softball, soccer, and football fields, basketball courts, swimming pool, tennis courts, skating pond playground	62.0 <sup>18</sup>
Cedar Grove Park	Berks Court	Softball field, basketball court	4.9
Main Street Park	Main Street (Old Bethlehem Pike)	Softball field, basketball courts, skateboard park	9.0
Quakertown Borough open space easement* (Kratz property)	West Broad Street	Open space preservation	15.20

\*Purchased through the Bucks County Municipal Open Space Program.

**Table 33. Richland Township Parks and Open Space**

<b>Name</b>	<b>Location</b>	<b>Use/Facilities</b>	<b>Acreage</b>
Richland Township Nature Center	California Road	Municipal complex, nature center with nature trails	34.5
Quakertown Memorial Park	California Road	Softball, soccer, and football fields, basketball courts, swimming pool, playground	47.00 <sup>19</sup>
Lisbon Tract—Morgan Creek trail*	Doylestown Pike	Future recreation trail planned	47.99
Spring Meadow Estates	Station Road	Future park	38.02
Pennfield	Station Road	Future park	10.34
Heather Valley	East Pumping Station Road, near Route 212	Open space preservation	13.4
Richland Farms	East Pumping Station Road, near Route 212	Open space preservation	10.4
Brayton Gardens I	Near Tollgate Road	Open space preservation	52.6
Walnut Bank Farm	Walnut Bank Farm Road	Open space preservation	77.2
Romano tract*	East Paletown Road	Open space preservation	11.61
Henninger easement*	Dickert and Mine roads	Open space preservation	17.58
Thompson tract*	Union Road	Open space preservation	40.80
Kelly**	East Pumping Station Road	23 acres for active recreation—under construction. Softball and multi-use fields, tot lot, picnic facilities, fitness trail	106.64
Shaffer	East Pumping Station Road	Open space preservation	0.95

<sup>18</sup> The total acreage of Quakertown Memorial Park is 109 acres, of which 62 acres are located within Quakertown. The remaining 47 acres are in Richland.

<sup>19</sup> The total acreage of Quakertown Memorial Park is 109 acres, of which 47 acres are located within Richland. The remaining 62 acres are in Quakertown.

<b>Name</b>	<b>Location</b>	<b>Use/Facilities</b>	<b>Acreage</b>
Place Properties easement	Apple and Union roads	Open space preservation	45.25
Christman easement	Meadow Road	Open space preservation	20.26
Berger easement*	Paletown Road	Open space preservation	73.10
Mann easement	Scholl's School Road	Open space preservation	12.81

\*Purchased through the Bucks County Open Space Program.

\*\*Purchased through the Bucks County Natural Areas Program.

**Table 34. Richlandtown Borough Parks and Open Space**

<b>Name</b>	<b>Location</b>	<b>Use/Facilities</b>	<b>Acreage</b>
Borough Park	West Union Street	Skating pond	3.06
Borough land	Main and Walnut streets	Open space, park benches	1.10
Borough land	East Cherry Road	Benner Hall, recreation facilities	11.78

**Table 35. Trumbauersville Borough Parks and Open Space**

<b>Name</b>	<b>Location</b>	<b>Use/Facilities</b>	<b>Acreage</b>
Municipal park	North Main Street	Softball field, basketball court, playground, walking path	4.70
Woodview	Woodview Drive	Combined open space areas from residential development	2.38

### **Open Space with Residential Developments**

Many residential subdivisions in the Quakertown Area have some type of open space associated with them. While some of this space has been dedicated to the municipalities (as indicated in the Municipal Park and Open Space tables); much of it remains in the hands of homeowners' associations.

A total of 424.72 acres of land are owned by homeowners' associations in the Quakertown Area. Of that number, each area municipality, other than Richlandtown, contains the following: Haycock – 31.17, Milford – 181.97, Quakertown – 5.03, Richland – 204.92, and Trumbauersville – 1.63.

Quakertown Area municipal ordinances contain several mechanisms for requiring open space and recreation land when residential subdivisions/land developments are proposed. The model Quakertown Area Zoning Ordinance requires the submission of site capacity calculations for all subdivisions and land development in which required open space and, when applicable, required recreation land, are determined. In addition, the model ordinance includes requirements for open space in both single-family cluster and performance standard subdivisions.

Minimum open space ratios for each of these development types vary based upon the specific zoning district. Ratios range from 15 percent for single-family cluster subdivisions in the SRM Suburban Residential Medium and SRH Suburban Residential High districts to 80 percent for performance standard subdivisions in the SRC Suburban Residential Conservation District. Four of the

Quakertown Area municipalities, Haycock, Milford, Richland and Trumbauersville, have adopted these provisions.<sup>20</sup>

Also, subdivision and land development ordinances for both Haycock and Richland contain provisions requiring the dedication of recreation land or a fee in lieu of such dedication that can be used for the purpose of purchasing, developing and maintaining park and recreation land. In Haycock, a minimum of 1,322 square feet of suitable recreation land per dwelling unit within all residential subdivisions or land developments is required. The recreation land requirement in Richland ranges from one acre to nine acres or more, depending on the number of dwelling units to be served.

### **Agricultural Conservation Easements**

Noted as a farmland preservation strategy in the Natural Resources section of this document, the Bucks County Agricultural Land Preservation Program (BCALPP), established in 1989, enables the acquisition of agricultural conservation easements on viable farmland within the county.

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

Once a farm is accepted into the program, the property owner may sell or convey a conservation easement and receive cash for the development rights. The easement permanently prohibits the development of the property. As of 2006, approximately 8,613 acres of agricultural land in Bucks County (consisting of 96 farms) had been preserved through the BCALPP.



*Mood Farm in Milford*

Three farms in the Quakertown Area totaling 190.2 acres, all located in Milford, have participated in this program. The Mood farm (95.62 acres), the Nichols farm (50 acres), and the Myers farm (44.40 acres) have been preserved through the purchase of development rights through the BCALPP. Farmers within Agricultural Security Areas should be encouraged to enroll in the BCALPP.

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<sup>20</sup> While these municipalities have adopted the model ordinance provisions, not all districts are located in all of the municipalities.

## **Other Conservation Lands**

When considering other potential lands that are effectively acting as permanent open space, properties and easements owned by conservancies or land trusts also qualify. The Heritage Conservancy owns a 10-acre parcel and conservation easements on other parcels that total 24.57 acres in Haycock. The Heritage Conservancy also owns four parcels in Richland totaling 73.45 acres, containing lands associated with the Quakertown Swamp. In Milford, the Natural Lands Trust owns an 8.34-acre parcel.

## **Temporarily Protected Lands**

The following provides a brief description of all temporarily protected open space lands within the six Quakertown Area municipalities.

### **Lands with Preferential Assessment**

Numerous residents within the Quakertown Area have registered their properties with the county under the Pennsylvania Farmland and Forest Land Assessment Act of 1974 (Act 319). Act 319, also known as the “Clean and Green Act,” is available to landowners for the following uses: agricultural use, agricultural preserve, and forest preserve. Bucks County has entered into voluntary covenants with owners who have these valuable open space resources in order to preserve open space.

Under this program, land is assessed by the county at its current use value as farmland or woodlands. As a result, the property owner is afforded a significant savings through a preferential property tax assessment as an incentive to maintain the land as open space. Enrollment in this program is continuous unless dissolved by the landowner or eligibility requirements are not met.

Lands covenanted under Act 319 are technically only temporarily protected because the property owners have the right to terminate the agreement at any time. But if the agreement is terminated, the property owner must pay a penalty in the form of up to seven years of rollback taxes (i.e., the difference between the preferential assessment value and the original assessment) and accumulated interest.

Although covenanted lands are only temporarily protected, it shows the willingness of landowners to maintain their properties in open space. Commitment of land into Act 319 is an example of a local grassroots action that should be considered in the open space planning process. In total, there are almost 13,000 acres of land covenanted under Act 319 within the Quakertown Area (3,206 in Haycock, 6,444 in Milford, 3,243 in Richland, and 43 in Trumbauersville).

### **Agricultural Security Areas**

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

Initially, for an ASA to be established, an aggregate total of 250 acres of viable farmland is required. Zoning for such properties must permit agricultural uses.

Individual parcels adjoining an established ASA do not need to meet a minimum acreage requirement to join. However, for stand-alone parcels that are not contiguous with an ASA to be considered for enrollment, a 10-acre minimum with at least 50 percent of the farmland containing Class 1-4 soils is required.

The required minimum acreage for noncontiguous properties would not apply if landowners prove receipt of at least \$2,000 a year in farm income. Respective property owners must petition the governing body in order to gain approval into the program. Once enrolled, farmers gain the following benefits:

- protection from municipal nuisance ordinances which restrict odors and noise in a community;
- protection from governmental acquisitions of land through condemnation or eminent domain; lands proposed for such action within an ASA must first be approved by the Agricultural Lands Condemnation Approval Board;
- eligibility to enroll in the BCALPP.

Within this region of Bucks County, ASAs have been established in Bedminster, Milford and Springfield townships. In the Quakertown Area, a total of 4,502 acres of farmland is enrolled in an ASA.

Five parcels totaling 350 acres in Haycock are scheduled to be enrolled in the Haycock Township ASA that should be in place by September. In Milford, 109 parcels totaling 4,152 acres are enrolled in the Milford Township ASA.

Although Richland Township does not currently have an ASA, three farms consisting of approximately 189 acres in the township are proposed for inclusion in the Springfield Township ASA. Efforts are currently underway within Richland Township to create a Richland Township ASA.



*Trumbauersville Elementary School recreation facilities*

### **Public and Private Schools**

The Quakertown Area contains private and public schools, many of which provide areas of open space, as well as park and recreation facilities that are generally available to the community. Municipal officials should coordinate with public and private school officials regarding shared use of facilities for community recreation opportunities during after-school hours.

The Quakertown Community School District consists of 11 separate school facilities on a total of 300 acres throughout five of the six area municipalities (there are no school facilities within Richlandtown Borough). Private schools in the region include the Quakertown Christian School, which contains several parcels in Richland totaling over 69 acres, and St. Isidore School on 4.8 acres and United Friends School on 1.7 acres,

both in Quakertown. The following table provides information on school facilities, their location, and acreage within each of the six Quakertown Area municipalities.

**Table 36. Schools**

<b>Municipality and school</b>	<b>Address</b>	<b>Land size (acres)</b>
<b>Haycock</b>		
Haycock Elementary	Old Bethlehem Road	13
<b>Milford</b>		
Milford Middle School	Allentown Road	40
Pfaff Elementary	Sleepy Hollow Road	19.5
Tohickon Valley Elementary	Old Bethlehem Pike North	17
<b>Quakertown</b>		
Senior High	Park Avenue	44
Freshman Center	South 9th Street	31
Neidig Elementary	Penrose Street	14
Quakertown Elementary	South 7 <sup>th</sup> Street	13
St. Isidore School	West Broad Street	4.8
United Friends School	West Broad Street	1.7
<b>Richland</b>		
Strayer Middle School	Ronald Reagan Drive	65
Richland Elementary	Fairview Avenue	26.5
Quakertown Christian School	East Paletown Road	66.4
Quakertown Christian Preschool	Rocky Ridge Road	2.9
<b>Trumbauersville</b>		
Trumbauersville Elementary	Woodview Drive	17*

\* Part of the land area associated with Trumbauersville Elementary School is also located within Milford Township.

### **Private Recreational Areas**

Other types of temporary protected lands include private recreational areas, such as golf courses, camps, and campgrounds, outdoor/sporting clubs, and nature preserves. Fox Hollow Golf Course, a privately-owned public 18-hole golf course on 136 acres, is located along Trumbauersville Road, just east of the northeast extension of the Pennsylvania Turnpike, in Milford Township.

There are several campgrounds in the Quakertown Area. Camp Tohikanee, a 230-acre campground owned by the Girl Scouts of America, is located in both Haycock and East Rockhill townships. Approximately 148.16 acres of the campground is within Haycock. Also within Haycock is The Little Red Barn Campground, a private campground located on 19.5 acres.

Milford is home to several campgrounds totaling 365 acres, which include: Camp Men-O-Lan (156.2 acres), the Milford Township Fish and Game property (91.5 acres), Boulder Woods Campground (58.5 acres), and Quaker Woods Campground (58.5 acres).

Within Richland, the Paletown Rod and Gun Club and North Penn Gun Club are located on 17.5 and 5.9 acres, respectively.

### **Other Temporarily Protected Lands**

Some parcels owned by government or quasi-government agencies also qualify as temporarily protected. The largest single area that falls within this category is the Upper Bucks County Airport in Milford which encompasses 153.75 acres along Milford Square Pike. Entities such as local water and sewer authorities, railroad companies, PPL Utilities, and the Pennsylvania Turnpike Commission, also own land within the Quakertown Area that falls within this category.

### **Planning for Open Space and Park and Recreation Development**

The following describes how each of the six Quakertown Area municipalities and the Quakertown Area Planning Committee (QAPC) has planned for open space and park and recreation facilities to serve present and future residents. Also, a general park needs assessment for the area is provided, along with a listing of other issues/initiatives that should be considered when planning for open space and/or park and recreation facilities.

### **Municipal/Regional Planning Efforts**

#### ***Haycock Township***

Haycock Township adopted a municipal open space plan in 2000. *Haycock Township: An Open Space Plan* includes the township's open space preservation goals and objectives, identifies land and resources that are important to the community, and outlines specific actions that may be undertaken to preserve those resources.

Haycock's open space preservation goals are to: (1) preserve the township's rural character; (2) protect significant natural resources; (3) provide recreational areas and facilities; and (4) preserve the character of existing villages and historic resources. Using these goals as a guide, the plan identifies 18 properties that could meet one or more of the following criteria: suitability for active recreation facilities to serve local residents, particularly tot lots for families with young children; suitability for establishing a village entrance around Applebachsville or Strawntown to preserve the edges of these villages; suitability for protecting farmland that contributes to the township's rural character; and suitability for protecting scenic areas or vistas.

Through easement purchase of development rights, the township has successfully preserved three of the 18 properties identified in the plan. The township intends to keep these properties as natural open space. The township does not have a park and recreation plan.

#### ***Milford Township***

The *Milford Township Open Space Plan* was adopted by the municipal governing body in 1999. The plan provides chapters on community background, goals and objectives, protected land, vulnerable natural resources, identification of potential open space linkages, evaluation of open space needs, and implementation.

Stated priorities in the document are to preserve and restore the township's natural resources with recommendations for strengthening the existing resource protection standards, to provide open space

linkages along stream corridors with portions of such linkages to be used for a township-wide trail system, preservation of the township's rural atmosphere, expansion of the township's park system, and preservation of the township's historic resources particularly the township's farms.

An important element of the plan includes maps identifying primary and secondary conservation areas – these are areas the township would like to preserve as open space. Primary conservation areas include land with significant natural resources that are considered unbuildable by current municipal regulations, such as streams, floodplains, wetlands, and steep slopes. Secondary conservation areas include areas with resource value but would be developable, in part, by municipal regulations. Such areas include agricultural soils and woodlands.

Following a recommendation in the municipal open space plan of 1999, the township adopted the *Milford Township Park and Recreation Plan* in 2003. The plan's purpose focuses on how to expand park and recreation opportunities in the township, as well as how to create a multi-use trail network. A needs evaluation produced the following goals:

- Create a greenway/trail network in accordance with an overall plan.
- Establish more conveniently located active recreation facilities as the demand for such facilities develops.
- Use more partnerships to expand recreation opportunities for people of both genders and all ages.
- Continue improving how the township manages, funds, and publicizes its park, recreation and open space resources.

The park and recreation plan includes a greenway concept map with a recommended greenway network linking township parks, preserved lands, and adjacent municipalities. Proposed linkages to Richland are consistent with that identified on Richland's trail system map, with the exception of Milford's Liberty Trolley Trail connection that is not shown on the Richland map. The proposed Butter Creek Trail greenway to West Rockhill Township is consistent with that shown in the *Pennridge Area Greenway Plan*.

Milford has also used its official map to designate a specific area of future park land along Hillcrest Road near Milford Square.<sup>21</sup> Milford is only one of two Quakertown Area municipalities to adopt an official map (the other is Haycock), and the only municipality to have designated future park land on the map.

Other Quakertown Area municipalities should determine the feasibility of utilizing an official map to identify parcels for future public lands (parks, playgrounds, open space and other public lands). In addition, consideration could be given to preparation of a map identifying future public lands on a regional level that could be used as reference for municipalities in preparing individual official maps. This could be undertaken by the QAPC, similarly to the way in which the *Quakertown Area Linked Open Space Plan* was prepared. Official maps are further discussed as a land use tool in the Future Land Use and Growth Management section of this document.

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<sup>21</sup> Article IV of the Pennsylvania Municipalities Planning Code authorizes municipalities within the Commonwealth to adopt an official map for the purpose of designating locations for future public facilities and public lands.



### ***Quakertown Borough***

The *Quakertown Borough Open Space Plan*, adopted in 2001, states the following goal: to maintain and enhance the quality of life in Quakertown Borough by preserving open space. Open space preservation will assist in the protection of the natural environment, the integrity of historic resource, and the health, safety, and general welfare of all residents, past and future. Plan objectives include: the pursuit of strategically located land within the borough as protected natural resource areas; preservation of lands that enhance the recreational opportunities; preservation of open space areas identified in open space link plans for the region, thereby enhancing pedestrian mobility within and beyond the borough; protection of the integrity of historic resources; and maintaining a continuing commitment to open space planning and preservation within both the borough and the Quakertown Area.

The plan identifies the following four areas within the borough that could provide open space links or connections to open space links suggested in the *Quakertown Area Linked Open Space Plan*:

- preservation of the Kratz and Stauffer parcels in the vicinity of Cedar Grove Park to benefit a linked trail along the creek;
- extension of open space at the Independence Place townhouse development near Route 309 to the eastern portion of the borough to benefit residents, preserve area for wildlife in Beaver Run Woods, and provide a connection to the Strayer Middle School's recreation facilities;
- preservation of land along the Licking Run Creek in the northern portion of the borough to connect residents in Richland to the borough's commercial areas and along the creek to the main park facilities in Memorial Park; and
- pursuing a link along the Tohickon Creek adjacent to the Neidig Elementary School.

To date, the borough has purchased an open space easement on the Kratz property, successfully creating an open space link along the Beaver Run Creek. The borough does not have a park and recreation plan.

### ***Richland Township***

The *Open Space Plan for Richland Township* was adopted in 1999. The plan lists open space goals, some of which are regionally oriented, specific to three separate areas of the township. A generalized list of the stated goals are:

- provision of hiking/bicycling trails connecting with neighboring municipalities, and consideration of an equestrian trail system;
- establishment of a greenway network linking other Quakertown Area municipalities and area parks;
- acquisition of environmentally sensitive lands for preservation, including lands adjacent to the Quakertown Swamp north of Route 313;
- preservation of working farms utilizing various programs;
- acquisition and development of active recreational areas in or adjacent to residential developments;
- provision of an active recreation area in the southwestern portion of the township;
- provision of revenue-producing recreation facilities that could defray acquisition and maintenance costs of open space lands.

Appendix A of the open space plan contains the township's recreation plan. One of the primary recommendations in the recreation plan is for the enactment of ordinance provisions for mandatory dedication of recreation land or a fee in lieu of dedication. The township has implemented this recommendation with the incorporation of such requirements in the subdivision and land development ordinance.

In 2002, the township developed the Richland Township trail system map. The Richland Township Trails Master Plan, dated March 2006, was readopted by the Richland Township Board of Supervisors and last revised in August of 2006. The map identifies the locations of existing sidewalks, trails, and rights-of-way, corridors with pending rights-of-way, and proposed trail locations where rights-of-way need to be acquired.

The trail system envisioned by Richland connects residential developments with parks, recreation areas, schools, commercial areas, and natural resource corridors within the township, and includes potential trail connections to adjacent municipalities. In addition to planning for trails linking the boroughs of Richlandtown and Quakertown, other possible connections are identified along Route 663 (Milford Township bikeway), and along the Barrel Run and Morgan Creek corridors that extend into Milford, and along the Tohickon Creek corridor extending into Springfield. Trail connections into East Rockhill Township would be along Route 313 and Old Bethlehem Pike (consistent with the Liberty Bell Trail location).

### ***Richlandtown Borough***

Adopted as the borough's official open space document in 2000, the *Richlandtown Borough Open Space Plan* aims to preserve and protect open space resources by protecting natural features, preserving scenic and historic resources, and providing park and recreation areas.

The plan identifies the following activities to implement the stated goals:

- Pursue discussions with the Richlandtown Playground Association, Inc., regarding purchase of its property on Cherry Street, which has been identified as the first-level priority property. If this property is unavailable, approach owners of the second-level priority properties identified in the plan.
- If first- and second-level priority properties are not available, consider applying for an open space development grant for improvements to properties currently held by the borough.
- Consider amendments to the zoning and subdivision and land development ordinances to include the protection of mature trees, updated landscape requirements, and the dedication of open space or fees in lieu of dedication. Also, consider zoning amendments to the RS District which would permit single-family homes on smaller lots with a requirement for open space.
- Cooperate with the QAPC to evaluate, revise, and implement the linked open space plan.
- Coordinate with Richland and Quakertown regarding the possibility of establishing a trail/greenway between Richlandtown and Quakertown to connect existing and future recreation areas.

The Richland Township trail system map identifies a proposed trail route linking Richlandtown with Quakertown. With the acquisition of additional right-of-way needed along this identified route, the

recommendation to establish a trail/greenway between the two boroughs will be closer to completion. Richlandtown borough does not have a park and recreation plan.

### ***Trumbauersville Borough***

Like several of the other Quakertown Area municipalities, Trumbauersville has adopted an open space plan. The stated goal in the *Trumbauersville Borough Open Space Plan*, adopted in 2000, is to provide a high-quality environment through open space preservation, which can be attained through the protection of scenic vistas.

The plan highlights the needs for additional recreation land, preservation of historic structures in the borough, protection of natural resources, and provision of open space links. The following recommendations are identified in the open space plan to address those topics:

- Expand the borough park to provide more land for recreation and provide passive recreation opportunities.
- Preserve the historic buildings and the historic character of the borough core.
- Protect natural resources along the tributaries to Barrel Run Creek and protect groundwater resources in the Unami Creek watershed.

The borough has successfully followed through on implementing the recommendation to expand the park. With the recent acquisition of a small sliver of land adjacent to the existing borough park on North Main Street, the park, now 4.4 acres, is adjacent to a 3.5-acre parcel that the borough is also interested in purchasing. The borough does not have a park and recreation plan.

### ***Quakertown Area Linked Open Space Plan***

In 1981, the QAPC prepared the *Quakertown Area Linked Open Space Plan*. The stated goal of the plan is to establish a system of linked open space areas that will serve as a multi-purpose community improvement for the present and future residents of the Quakertown Area. Plan objectives include the following: to assist with protection of sensitive environmental resources; to provide for a pedestrian system separate from roadways connecting various uses; to increase the outdoor recreation areas for all residents of the Quakertown Area; and to provide rights-of-way for future utility requirements of the residents of the Quakertown Area.

Utilizing stream and floodplain corridors, optimal open space links were established between existing residential areas and schools, parks, and community facilities. These proposed open space corridors provide a blueprint of a future linked park system throughout the entire Quakertown Area.

Many area municipalities have been successful in acquiring open space linkages when developments are proposed on lands with identified links. The *Quakertown Area Linked Open Space Plan* should be reviewed and updated to consider the substantial changes that have taken place in the region, specifically in terms of development and local open space and park and recreation planning efforts that have occurred since 1981.

## **Park Needs Assessment**

### *Park Types*

The National Recreation and Park Association (NRPA) is a national organization of recreational professionals whose guidelines are widely regarded as acceptable standards for determining the amount of parkland and types of recreational facilities necessary to meet the needs of area residents. The NRPA established a standard ratio of recreation acreage per 1,000 residents for several basic park types: regional parks, community parks, neighborhood parks, and mini-parks.<sup>22</sup> These ratios are useful in determining the baseline needs of the community and establishing standards for the mandatory dedication/fee in lieu of dedication ordinance.

The creation and administration of community parks, neighborhood parks, and mini-parks are generally the responsibility of the local municipality. The assessment of these park type needs is discussed above in the summary of individual municipal park and recreation plans. Municipalities should also consider updating these plans to address more current and future facility needs. For the purpose of evaluating park needs for the QAPC region, the following provides a brief assessment of regional, special-use, and linear parks.

**Regional parks** are defined as areas of natural or ornamental quality for outdoor recreation (including play areas), such as picnicking, boating, fishing, swimming, camping, and trail uses. The service area encompasses several communities, within one hour's driving time. The desirable size of a regional park is 200-plus acres. A range of between five to 10 acres per 1,000 population is recommended. Desirable site characteristics are that they are contiguous to or encompass natural resources.

In the QAPC region, Nockamixon State Park and Lake Towhee Park are both regional parks that meet the above criteria. Lake Towhee Park, and particularly, Nockamixon State Park, satisfy a significant portion of the park and recreational needs of residents throughout Bucks, Montgomery, Lehigh counties and beyond. Therefore, the QAPC region is more than adequately served by regional parks now and well into the future.

**Special-use parks** are areas that may be local or regional in nature and are unique to each community. They include areas used for specialized or single-purpose recreational activities.

State Game Lands are a type of special-use park offering archery and hunting opportunities. The three areas with this designation in the QAPC region are State Game Lands No. 157 in Haycock Township adjacent to Nockamixon State Park and two separate smaller areas in the southeastern portion of Richland Township. According to the NRPA, the service area, desirable size, and population-based area standards are variable for special-use parks.

Commonwealth and county officials should continue to monitor and address the park and recreation facility needs of future residents through observations directly expressed by residents and recreation facility users. In addition, municipal, county, and state officials should evaluate the need for and possibility of linking regional and special-use parks with local parks (i.e., community, neighborhood, and mini-parks) through a linear park system as discussed below.

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<sup>22</sup> *Recreation, Park and Open Space Standards and Guidelines*, 4<sup>th</sup> Printing, 1990, National Recreation and Park Association.

**Linear parks** are areas developed for one or more varying modes of recreational travel, such as hiking, biking, snowmobiling, horseback riding, and cross-country skiing. They may be local or regional in nature and are sufficient in width to protect the resource and protect maximum use. Desirable site characteristics of linear parks include built or natural corridors, such as utility rights-of-way, ridge lines, and roads that link other components of the park and open space system or points of interest in the community such as schools, libraries, commercial areas, and other park sites.

Planning and implementation of linear parks in the Quakertown region has been addressed in the *Quakertown Area Linked Open Space Plan*. As previously discussed, that plan should be reviewed and updated to consider the substantial changes that have taken place in the region, specifically in terms of development and local open space and park and recreation planning efforts that have occurred since 1981.

### ***Resident Input***

In addition to evaluating existing park areas, the NRPA recommends determining the recreational needs of a community by means of user surveys and observation. As part of the Quakertown Area resident survey distributed to all area households in mid-2005, residents were asked to identify recreational facilities and activities that they would like to see improved or added to the park system. Overwhelmingly, the top response was walking trails (17.1 percent), followed by bicycling (10.5 percent), nature center (9.7 percent), and concerts (9.5 percent).

Municipalities should consider resident input when planning for future facilities. Detailed survey results are located in Appendix A of this document.

### **Other Issues/Initiatives for Consideration**

*Growing Greener initiative.* Toward the latter part of the 1990s, the QAPC participated in the Growing Greener program sponsored by the Pennsylvania Department of Conservation and Natural Resources, the William Penn Foundation and the Alexander M. Stewart Foundation. Under the direction of the Natural Lands Trust, the focus of this program was to develop ordinance amendments aimed at open space preservation.

This effort culminated in suggested amendments to the model zoning ordinance of 1994 and incorporation of Growing Greener principles in the model subdivision and land development ordinance which was simultaneously being updated (*Quakertown Area Subdivision and Land Development Ordinance*, Final Draft—June 2003).

To date, none of the Quakertown Area municipalities have adopted the Growing Greener zoning amendments; Milford is the only area municipality to have adopted the model subdivision and land development ordinance incorporating many of the Growing Greener principles regarding open space layout and design. It is recommended that the other Quakertown Area municipalities consider incorporating Growing Greener principles into their subdivision and land development ordinances to help guide the location and design of open space on development sites.

*Ordinance provisions for open space preservation.* Municipal officials may want to consider establishing a transfer of development rights ordinance that would exchange development rights among property developers to preserve open space in designated areas. Applicable in municipalities

with both rural (or environmentally sensitive) and developing areas, the program's purpose is to shift development away from agricultural land or sensitive natural areas, and concentrate it in developing areas. This program is further discussed as a land use tool in the Future Land Use and Growth Management section of this document.

*Ordinance provisions for recreation land.* All the QAPC municipalities except Quakertown and Richlandtown boroughs have site capacity calculations in their zoning ordinances. These provisions are based on model site capacity calculations developed by the Bucks County Planning Commission in the early 1970s. The site capacity calculations contain a requirement that 1/3 of the required open space for a development be recreational land. The percentage, however, is not based on quantitative and/or national standards (e.g., NRPA) related to the recreational needs of future residents of the development.

The 1988 revisions (Act 170) to the Pennsylvania Municipalities Planning Code (MPC) included a stronger basis for recreation requirements. Unlike open space provisions that are contained in Article VI of the MPC pertaining to the requirements for zoning ordinances, the specific provisions for recreation land are found in Article V of the MPC, pertaining to the requirements of subdivision and land development ordinances.

Various Bucks County municipalities have revised their ordinances to ensure that their recreational land requirements are located in the subdivision and land development ordinance as referenced in the enabling legislation. Officials of QAPC municipalities should determine if there is a need to remove all reference to mandatory dedication of recreation land from the zoning ordinance and relocate these provisions to the subdivision and land development ordinance.

*Liberty Bell Trail Feasibility Study.* Completed in 2005, *The Liberty Bell Trail Feasibility Study* is an inter-governmental planning project that evaluated the feasibility of developing a trail along the historic Liberty Bell Trolley route. The 22-municipality feasibility study recommended development of the trail and choice of preferred route. Operating from 1900 to 1951, this former trolley line connected Quakertown in Bucks County with Norristown in Montgomery County to provide one portion of trolley service between Philadelphia and Allentown.

This study includes a proposed trail alignment following the former trolley line wherever possible, linking 17 municipalities in both counties. Within the Quakertown Area, the proposed trail location extends from the Richland border along Old Bethlehem Pike, through Quakertown along South Main Street, ending with a spur trail extending east along Mill Street. Richland has incorporated this link into the township's trail system map.

*Significant Natural Areas.* As mentioned in the chapter on Natural Resources in this document, the *Natural Areas Inventory of Bucks County, Pennsylvania* (1999) identifies significant natural areas in the county. The plan identifies eleven priority sites within the Quakertown Area (descriptions of the 11 sites are in Appendix E). It is recommended that municipalities consider these significant areas in their open space preservation efforts.

*Quakertown Swamp.* As discussed in the Natural Resources chapter of this document, the Quakertown Swamp is a vitally important wetlands located in the southern portion of the

Quakertown Area and extending into neighboring East Rockhill and West Rockhill townships. Identified as a Priority 1 site (highest priority for preservation) in the *Natural Areas Inventory of Bucks County, Pennsylvania* (1999), the 518-acre swamp is the largest inland wetland in Bucks County. Due to its ecological significance, the swamp is listed as an all-important wetland area by the U.S. Fish and Wildlife Service and has been designated an important bird area by the Audubon Society. Municipalities should continue to coordinate protection strategies with other agencies to preserve this important resource.



*Quakertown Swamp*

*Highlands Conservation Act.* All six of the Quakertown Area municipalities are within an area known as the Highlands. Extending from Pennsylvania's border with Maryland through New Jersey and New York to Connecticut's border with Massachusetts, the Highlands encompasses more than three million acres of primarily forested lands. It is estimated that this vast forest region provides drinking water for more than 11 million people. Described as a greenbelt near some of the country's largest metropolitan areas, the Highlands Region connects to the Appalachian Mountains and the 2,174-mile-long Appalachian National Scenic Trail.

The Highlands Conservation Act, passed into law in 2004, is the authorizing legislation allowing for the expenditure of funds that will be available to states for the preservation of Highlands areas. While the measure authorizes \$10 million a year over a 10-year period, funding must be appropriated yearly.

To date, no funding has been allocated for land preservation in Pennsylvania under this act. In addition to providing a mechanism for natural resource protection, this legislation may also provide the Quakertown Area municipalities with an additional tool for open space preservation.

## **Recommendations**

- Continue implementing the recommendations in municipal open space and park and recreation plans, including creating a trail/greenway network that will connect points of interest throughout each municipality and the region.
- Update the *Quakertown Linked Open Space Plan* to incorporate changes that have occurred since 1981.
- Continue to coordinate open space planning efforts (linkages) in the Quakertown Area with what is identified in the *Pennridge Areas Greenway Plan*.
- Continue planning and zoning policies that require preservation of environmental features.
- Provide a balance of active and passive recreation facilities to meet the needs of citizens of all ages and interests. Utilize feedback obtained from the resident survey to provide desired recreation facilities.
- Update municipal open space plans, as needed, to keep them current. Park and recreation plans should be revised to apply recent major parkland acquisitions toward the core recreation acreage.

- Continue to coordinate with the county regarding land and easement purchases through the Bucks County Open Space and Natural Areas programs.
- Encourage farmers within ASAs to enroll in the BCALPP.
- Mandatory dedication of recreation land
  - Milford should consider the feasibility of instituting within its subdivision and land development ordinance open space requirements and a corresponding fee in lieu option for residential developments.
  - Quakertown, Richlandtown, and Trumbauersville should assess their municipal open space plans and/or recreation plans to determine if they provide the necessary guidance according to the MPC for requiring a fee in lieu of dedication of recreation land. These municipalities should evaluate whether or not mandatory dedication/fees in lieu of dedication would be beneficial to enhance the recreational needs within their communities.
  - Municipalities with such provisions should periodically reassess the mandatory dedication/fee in lieu contribution (if currently established).
- Determine if all reference to mandatory dedication of recreation land should be removed from the zoning ordinance (e.g., site capacity calculations) and placed within the subdivision and land development ordinance.
- Consider the use of a transfer of development rights ordinance that will exchange development rights among property developers to preserve open space in designated areas.
- Consider designating locations for future public parks, playgrounds, and open space on an official map which provides a legal means for reserving such sites.
- Continue to promote the use of conservation easements that allow private property owners to place conservation easements on their properties to restrict all or a portion of the property from development.
- Obtain access easements along designated greenway/trail linkages network when possible, as part of the subdivision and land development review process.
- Coordinate with the public school district for use of school facilities for public recreation programs.
- Compile a listing of open space/park areas that allow public access.



## Chapter 8

# Historic and Cultural Resources

The historic sites, buildings, and villages in the Quakertown Area highlight the heritage of the region and contribute to its character. They provide a sense of continuity and place. The area's historic villages, homes, farmsteads, and taverns also produce economic benefits by attracting visitors, serving as community centers and places of business, and enhancing the value of neighboring properties.

This chapter of the comprehensive plan provides an overview of the region's historic resources and of the major methods of protecting them. Since many of the area's remaining historic structures are located within the small crossroads centers of settlement known as villages or hamlets, a portion of the section is devoted to planning and zoning techniques aimed at defining and preserving them.

Historic resources, as defined by the Pennsylvania Historical and Museum Commission (PHMC), consist of buildings, objects or sites eligible for listing or listed in the National Register of Historic Places, as well as those identified as historic by the community on the basis of age or local importance. The Pennsylvania Municipalities Planning Code requires local zoning ordinances to protect historic resources and allows special classifications and regulation for places of unique historic value. Act 167, the Historic District Act of 1961, affords a parallel track of protecting resources, by authorizing municipalities to enact stand-alone ordinances creating state-authorized historic districts, and to appoint a qualified review board to advise the governing body on the appropriateness of proposed construction and renovations within a historic district.

Local zoning ordinances emphasize use of property, while historic district ordinances authorized under Act 167 emphasize review and regulation of changes to the exterior of buildings. If a municipality has a zoning ordinance and a separate historic district ordinance, the zoning regulations remain unaffected. Zoning and subdivision ordinances are generally the best means of preserving dispersed resources that do not fit within a historic district.

The 1992 *Quakertown Area Comprehensive Plan* set as a goal the protection of historic resources and a high-quality environment. This comprehensive plan affirms those aims.

In the survey taken for the comprehensive plan, about half of the respondents viewed historic preservation efforts as good to excellent, while another third rated preservation in the region as fair to poor. But residents were more likely to have a favorable opinion of historic preservation at the regional level than at the municipal level, except in Quakertown, where the reverse was true.

New development often poses a potential threat to valued and unique historic assets. It is necessary to plan for historic resource protection and preservation.

## Current Status of Historic Preservation in the QAPC Municipalities

The nature and number of historic resources differ among the six QAPC member municipalities, as do the level and type of preservation methods. Few of the QAPC municipalities have established comprehensive programs of resource protection, although most have taken first steps by conducting historic inventories or implementing village zoning districts designed to preserve neighborhood character.

Quakertown, however, in 2006 amended its zoning ordinance to establish a historic overlay district encompassing most of the borough and to regulate the demolition of historically significant structures as a conditional use. The overlay district leaves the underlying zoning intact, while adding restrictions governing demolition applications.

Historic preservation practices and major identified resources by municipality are summarized in Tables 37 and 38. The locations of major historic resources are shown on Figure 13.

**Table 37. Historic Resources and Preservation Practices in QAPC Municipalities, 2006**

<b>Municipality</b>	<b>Activity Summary</b>
Haycock	VC-1 Village Center zoning district maintains neighborhood character and scale.
Milford	VC-1 and VC-2 Village Center zoning districts maintain neighborhood character and scale.
Quakertown	Historic inventory, 2005. Historic overlay district/control of demolition ordinance protects resources encompassing about 1/3 of the borough.
Richland	Historic survey, December 2002. Documentation of historic resources before demolition is required by ordinance.
Richlandtown	VC Village Center zoning district maintains neighborhood character and scale.
Trumbauersville	Village Expansion Overlay zoning district maintains neighborhood character and scale, including design guidelines for architectural suitability.

**Table 38. Identified Historic Resources by Municipality**

<b>Municipality</b>	<b>Resources</b>
Haycock	Villages of Applesbachville, Strawntown, and Thatcher
Milford	Villages of Brick Tavern, Finland, Geryville, Milford Square, Mumbauersville, Spinnerstown, and Steinsburg
Quakertown	Numerous structures identified in the historic resources inventory of the historic district overlay ordinance
Richland	Villages of California, Paletown, Rich Hill, and Shelly; numerous individual structures eligible for listing on the National Register of Historic Places; numerous individual structures of local significance
Richlandtown	Resources exist, but none formally identified
Trumbauersville	Determination of National Register historic district eligibility in process, 2006

Techniques for village preservation are outlined at the end of this chapter, and village planning policies are discussed in the chapter on future land use.

## **Historic Preservation Tools and Techniques**

### **Surveys**

The first step in protecting historic resources is to identify them. A comprehensive inventory or survey is the means of identifying and documenting the history of buildings, sites and districts eligible to be classified and protected as historic resources. The QAPC municipalities that have not conducted resource surveys should do so.

Quakertown, in connection with its historic district ordinance, has compiled a resource inventory. Richland has completed a historic survey that identifies potential historic districts, resources eligible for listing on the National Register, and those of local significance. Trumbauersville, in connection with the planned celebration of its centennial in 2008, has authorized a study to determine whether a historic district eligible for National Register listing exists in the borough.

While volunteer local historians may be able to locate potential cultural resources and assemble the data to document them, it is desirable to have such surveys done by a qualified preservation professional, when possible. Municipalities that have conducted surveys should update them periodically to reflect resource losses due to demolition, modification, or deterioration, additions, or other changes.

Once resources are identified, a variety of tools exist to protect them. Methods of historic resource protection include National Register designation and regulation by ordinance, whether through an Act 167 historic district, or through the zoning ordinance, or both. Ordinance provisions that aid in resource protection include historic district designation, use modifications, preservation incentives, exterior design guidelines for buildings that are built, rebuilt, or altered in historic areas, delay of demolition ordinances, and village preservation.

These methods work together to protect resources. They should generally be employed in concert. They are described in the sections that follow.

### **The National Register of Historic Places**

The National Register of Historic Places is the official list of the nation's cultural resources, providing recognition that buildings or districts have historic, architectural or archaeological significance. Properties with documented significance are nominated for listing through the PHMC.

Once listed, a designated resource, building, or district is protected from alterations to the extent that any federal or federally funded, assisted, or licensed project will be reviewed if the project might have an effect on it. The National Register places no restrictions on the actions of private landowners or developers, but has the effect of alerting landowners to the significance of a resource.

Listing may provide eligibility for certain funding opportunities or tax relief. Buildings that are listed on the National Register may still be altered beyond recognition or demolished.

## CRITERIA FOR LISTING ON THE NATIONAL REGISTER

The National Park 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, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- are associated with events that have made a significant contribution to the broad patterns of our history; or
- are associated with the lives of persons significant in our past; or
- 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
- have yielded or may be likely to yield, information important in prehistory or history.

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

### Historic Districts

Historic districts established under the Commonwealth's Act 167 enabling legislation designate a neighborhood or other area containing historic resources and protect by limiting the type of alterations that may be made to existing buildings, requiring review of proposed demolitions, and ensuring compatible design of new construction or reconstruction. (Historic districts may also be created and regulated within the municipal zoning ordinance.)

Districts created under Act 167, the Historic District Act, are not zoning districts. The Act 167 historic district review process is a procedure separate from zoning and a historic district ordinance is enacted as a stand-alone ordinance, although it should be cross-referenced in the zoning ordinance.

Areas proposed for a historic district must be surveyed and documented. If the historic district is being designated under the provisions of Act 167, supporting materials must be submitted to the PHMC for certification of the district. Act 167 also requires the appointment of a historical architectural review board (HARB), which reviews and advises the municipal governing body about any alterations within the district. The governing body then decides whether to approve or deny the proposal.

A historic district affords greater control over the exterior design choices of individuals wishing to modify their buildings or construct new buildings. Some residents, however, may feel that a historic district allows too much control over the decisions of property owners. Historic district guidelines can be geared to fit local objectives.

### **Use Modifications and Preservation Incentives**

Use modifications, sometimes described as adaptive re-use, and preservation incentives are approaches to protecting and encouraging use of historic structures that can be incorporated into the zoning ordinance. They are particularly useful and effective for historic buildings.

Use modifications extend additional use opportunities to buildings designated as historic resources. Typical uses are bed-and-breakfasts, antique shops, cultural facilities, or professional offices.

Granting use modifications as special exceptions or conditional uses allows better oversight of atypical uses. The use should be determined to be necessary to preserve the resource. No resource should be expanded beyond what is necessary to accommodate the use, and additional standards should be imposed to preserve the historic appearance and integrity of the building.

Preservation incentives selectively award bonuses for preserving historic structures and incorporating them into new development. One example is allowing a density bonus of one unit in a residential project if a preserved historic structure serves as the additional unit. Lot-averaging is a technique that allows a large lot for a historic building and smaller lots for new residential development. Incentives for preserving historic structures within nonresidential development might include bonus provisions for building coverage or impervious surface.

### **Design Guidelines**

Design guidelines are another method of preserving the appearance of historic buildings and neighborhoods. They help to ensure that structures keep their historic character if they are rebuilt, restored, or renovated. The guidelines serve a similar purpose for new construction.

They illustrate preferred design approaches to give builders and developers a sense of what the community is looking for. Guidelines may be attached to an Act 167 historic district ordinance, or may be incorporated into the zoning ordinance.

A design guideline usually consists of a one- or two-sentence statement that describes a preferential treatment of one aspect of the design of a building or site. For example, a guideline might address entryways: “Solid or residential-type doors with small areas of glass should be avoided. Openings containing double entry doors should be retained.” Another might address street character: “Entrances, porches, balconies, decks, and seating should be located along the street edge to promote pedestrian use of the street edge.”

Such guidelines, especially when illustrated, can help maintain the character of the community. Design guidelines are also useful when coordinated with the requirements of a historic district. Residents easily recognize what is encouraged and what is discouraged when making design choices, avoiding conflict with the HARB.

Design guidelines should not be copies from other places. They should be tailored to the needs, history, and architectural character of an individual municipality.

### **Control of Demolition**

When a historic structure is threatened with demolition, a control of demolition provision in the zoning ordinance or elsewhere may allow it to be preserved, or at least documented. This provision provides a waiting period—often 60 days—before a demolition permit is issued, so that means of saving the structure can be considered. If it cannot be saved, the delay could afford the opportunity for salvaging noteworthy elements and documenting the structure and its history.

As part of its historic district ordinance, Quakertown has enacted control of demolition provisions that make the demolition of historic structures a conditional use. Under the borough's ordinance, an applicant for demolition may be required to salvage significant features of the historic structure and donate them to the borough, or to relocate the structure elsewhere in the borough. Richland has inserted into its zoning ordinance a provision that historic resources that are to be demolished must be photographed and documented first.

### **Certified Local Governments**

Local governments that fulfill program standards administered by the PHMC are eligible for designation as Certified Local Governments. The designation makes municipalities eligible for grants for resource surveys, technical assistance, cultural and interpretative programs, and other preservation activities. The standards entail establishment of historic districts, effective enforcement of the historic district ordinance, and compliance with appointment, training, and reporting requirements.

### **Historic Marker Program**

Historic resources can be commemorated with a marker through the Historical Marker Program of the PHMC. Any individual or group may nominate a structure or site for such a marker. If the independent panel designated by the PHMC approves the marker, the nominator must submit a grant application for half of the cost of the marker, and designate a nonprofit organization to serve as a sponsor and cover the balance of the cost.

The PHMC staff helps nominators and sponsors with composing the text to be inscribed on the marker, finding a suitable location for it, and planning the dedication ceremony. The sponsor, however, is ultimately responsible for obtaining all necessary permissions to install and dedicate the marker. The PHMC owns and maintains the marker once it is installed.

### **Village Preservation**

In the Quakertown Area, historic resources in townships are concentrated in villages or hamlets: early, clustered concentrations of homes and shops, often at a crossroads, that pre-date the 20<sup>th</sup> century. Many of these settlements survive today in some form, although they may be altered in appearance and surrounded by new development.

Table 37 on historic resources and preservation practices, lists the townships that have enacted some form of village center zoning in an effort to protect their remaining village centers and to make new development consistent with existing structures. The two smallest boroughs in the Quakertown Area,

Richlandtown and Trumbauersville, resemble villages in layout and architectural character, and have also enacted village center and village expansion (overlay) zoning districts, respectively.

Narrative following the recommendations listed below includes a discussion on village planning and preservation to encourage the region's townships to update and strengthen their village center zoning. The chapter on future land use includes policies that address village preservation.

### **Historical Societies, Libraries, and Collections**

Complementing the area's historic sites and buildings are a variety of voluntary associations. The area is richly served by historical societies in Haycock, Richland, and Milford Townships, two in Quakertown Borough, and two specialized libraries: the Richland Library Company in Quakertown and the "Quakertown Room" of local archives within the Michener Branch of the Bucks County. The Richland Library Company is in the process of doubling the size of its facility and the Michener's Quakertown Room represents the area's first archive with professional library management and daily hours.

Several communities have helped local historical societies get grants to restore society-run buildings, archives, and meeting places. Being volunteer-led, however, the societies have minimal public hours for access to their collections and limited ability to inventory, organize, and interpret their archives.

Local municipalities and the school district should collaborate with these societies and libraries to consider joint grant efforts to:

- obtain archival preservation and library development grants for inventory creation, collection protection, and interpretative programs;
- identify fundraising and organizational development opportunities;
- provide history resources and internship opportunities to schools; and
- collaborate with businesses, churches, and institutions that have archival holdings.



*Richland Historical Society located in old 1-room school house*

Such holders of local artworks, tools, photographs, and ephemera could be encouraged to hold "open house" events as well as joint displays and exhibits.

### **Recommendations**

- Conduct or update historic resource survey.
- Review zoning ordinances for preservation regulations. Enact measures including historic districting, use modifications, control of demolition, design guidelines, as appropriate.
- Consider designation of Act 167 historic districts or zoning-based historic districts.
- Review village zoning regulations. Revise or enact, as appropriate.
- Support public education, volunteer preservation activities, cultural programs.
- Support efforts to secure grants-in-aid to preserve, catalog, and otherwise expand access to archives and other documentary resources.

## ***Village Planning and Preservation***

More than 100 identifiable villages still remain in Bucks County, but many have been lost or overshadowed by growth and development. Historic villages are a unique resource, and once lost they are irreplaceable.

The villages within the Quakertown Area represent an important part of the area's culture and heritage. The history of the area is manifested through these small settlements in many ways. Villages like Milford Square, Spinnerstown, and Applebachsville contain excellent examples of 18<sup>th</sup> and 19<sup>th</sup> century architecture. Villages along historic transportation routes, such as the village of Shelly along the railroad line, remain as evidence of early settlement patterns in Bucks County.

The character and quality of the Quakertown Area would be permanently diminished if small settlements were to disappear, becoming unidentifiable as new development and growth engulf the village image. While municipalities cannot prevent growth, they can alleviate the effects that development can have on villages through appropriate land use policies and regulations. Additionally, residents can work together to maintain or improve the positive aspects of their village.

## **Village Classification**

A village is generally viewed as a relatively small clustered settlement often dominated by older homes and structures. Frequently, the houses are closely spaced, evoking the image of the village as an identifiable place. Lots are typically small or narrow and structures have a pre-20th century origin. Although villages contain historic structures, the development pattern and village elements are the most significant characteristics.



Villages in Bucks County can be grouped into three basic categories:

hamlets, residential villages, and commercial villages. Hamlets are the smallest type of village, consisting of a few houses located near each other, and having no commercial uses or services. A residential village is the “classic” type of village: a settlement that is mostly residential but also contains community-related services such as a post office or church.

A commercial village is often the 20<sup>th</sup> century or “motorized” version of a previously residential village. It is a settlement that is largely (and originally) residential in use, but is characterized by commercial uses or service that draw on a broader region for support (e.g., gas stations, antique and furniture stores, restaurants, inns, and taverns.)



## Inventory and Analysis

The village analysis conducted for the 1992 comprehensive plan established many of the planning and zoning policies currently in effect throughout the QAPC area. Village zoning districts have been established for most of the villages and hamlets with the exception of California, Mumbauersville, Paletown, Rich Hill, Shelly, and Thatcher. Many of these historic settlements lack the area and concentration of older structures typically associated with a historic village. The decision on whether or not to provide village zoning districts resulted from the 1992 village planning analysis.

While this comprehensive plan update supports most of the village policies previously established, the following analysis seeks to continue this proactive planning by strengthening or enhancing the earlier village policies and village elements. The analysis aims to provide a better understanding of the context and characteristics necessary to formulate appropriate planning policies that will be discussed in the Future Land Use Section.

Future development next to a village may have a negative impact on the historic resources unless appropriate village planning techniques are applied. Additionally, there may be a need to add or delete certain permitted uses or revise the area and dimensional requirements for the respective village zoning districts.

Municipal officials in the Quakertown Area should determine if separate village planning studies and specific preservation techniques should be implemented in order to preserve and enhance the historic character of these resources. (For more discussion on this topic, see the Village Planning Elements section, below.) A historical village description from the Bucks County Planning Commission publication, *The Villages of Bucks County – A Guidebook*, is in Appendix F.

### The Villages of Milford Township

#### *Brick Tavern*

The residential village of Brick Tavern is situated at the intersection of Brick Tavern Road and Old Bethlehem Pike in the northeastern side of the township, near the Richland border. The mostly residential village takes its name from the locally fired red bricks used to build the Brick Tavern Inn, which is still in operation.

The village is in the VC-1 Village Center-1 zoning district. The purpose of the district is to protect local character and allow compatible infill development. While there are few vacant lots within the village, it is surrounded by rural residential, agricultural, and vacant land uses that may produce a negative impact on the village if developed insensitively.



*Finland Inn in Milford*

#### *Finland*

The residential village of Finland is situated in a scenic rural setting along the Unami Creek at Trumbauersville and Upper Ridge roads in southeastern Milford. The Finland Inn is at the center of the village, with a few homes located nearby.

Finland sits within the VC-1 zoning district. Within this village district are three sizable rural residential and vacant lots. There

is a considerable area of municipal land with conservation easements located in and adjacent to the village. Due to the lack of a concentration of structures and historic identity (with the exception of the Finland Inn), municipal officials may wish to consider the possibility of removing the VC-1 District designation.

### ***Geryville***

The residential village of Geryville is located in the northwestern corner of the township around the intersection of Kings High Road and Sleepy Hollow Road in northwestern Milford Township. Geryville's zoning is VC-1, consisting of largely residential frame and stone houses and a tavern. About 18 acres of vacant land are available for future development.

### ***Milford Square***

Milford Square is a commercial village situated at the intersection of Milford Square Pike and Allentown Road, just south of Route 663 in central Milford. It is a collection of Victorian homes, small shops, and a few larger commercial establishments. The preservation of Milford Square has been aided by Milford Township's efforts to channel new development to the corridor along Route 663.

Milford Square lies within the VC-2 Village Center-2 zoning district and is nearly built out. The purpose of the VC-2 District is to protect village character by allowing compatible infill development encompassing a range of residential and small-scale commercial land uses.

To the southwest, Milford Square is adjacent to the SRM Suburban Residential Medium District, the purpose of which is to provide for a variety of medium-intensity residential uses. The VC-2 and the SRM districts are within the designated Development Area that is intended to accommodate the majority of the future anticipated growth in the Quakertown Area.

### ***Mumbauersville***

Mumbauersville, once a center of the cigar-making industry, is a rural hamlet situated along Sleepy Hollow Road just east of the intersection of Fels Road in the northwestern part of the township. Other than a few homes, little is left of this village. It lies within the RA Rural Agriculture zoning district, a designated Reserve Area that allows for low-intensity land uses that do not require public services.

### ***Spinnerstown***

Spinnerstown is a well-preserved, commercial village at the intersection of Spinnerstown and Steinsburg roads in north-central Milford. The Spinnerstown Hotel houses a restaurant and tavern in the center of the village. The rebuilt Spinnerstown Creamery has been converted to apartments. Like Milford Square, Spinnerstown lies within the VC-2 District.

To the northwest and southeast of the village are two separate adjacent areas zoned SRM, which is part of the Development Area. In the SRM District to the southeast of the VC-2 District, a couple of single-family residential developments were constructed in a



*Spinnerstown Post Office in Milford*

village-style arrangement and layout. As part of these subdivisions, there are various open space areas that consist of municipal lands with conservation easements. The areas within the VC-2 and the SRM districts to the southeast of Spinnerstown are nearly built out, but the SRM District to the northwest of the VC-2 District contains several vacant or agricultural lands that may be suitable for future development.

### ***Steinsburg***

The residential village of Steinsburg sits near the intersection of Allentown and Rosedale roads in northeastern Milford. It is composed of older brick and stone homes, including a converted tavern. Steinsburg is zoned VC-1 and is completely built out, but it is surrounded by rural residential and agricultural land uses.

## **The Villages of Richland Township**

### ***California***

California grew up around the California Hotel, a three-story brick structure built in 1849, now a restaurant and tavern. The village, situated around the intersection of California and East Cherry roads in northern Richland, is commemorated by a historic marker. Frame and stone houses sit along East Cherry Road.

The village does not contain a formal village zoning district but instead lies within the RA Rural Agriculture zoning district. That zoning provides for low-intensity agricultural and residential uses. The RA district is a designated Reserve Area that allows for low-intensity land uses that do not require public utility services. The historic hotel and concentration of buildings in this area may warrant a village district designation.

### ***Paletown***

The hamlet of Paletown is situated near the intersection of East Paletown and Rocky Ridge roads in the southeastern part of the township. It is in the RA District.

Paletown took its name from the fences composed of white pickets, or “pales,” that enclosed many yards. Only a few dispersed houses remain from the original settlement and it is hardly recognizable as a historic settlement.

### ***Rich Hill***

The hamlet of Rich Hill spans three municipalities: Richland, East Rockhill and West Rockhill townships. The Richland portion of Rich Hill is situated in the southeastern edge of the township around the intersection of Rich Hill Road and Old Bethlehem Pike. It lies within the RA zoning district. Rich Hill is composed of a mix of historic homes and newer residential construction creating an ill defined core.

### ***Shelly***

Shelly straddles the rail tracks between Route 309 and East Cherry Road in southeastern Richland. There is a fire company and a few commercial establishments interspersed with older homes of frame construction. Shelly is in the RA zoning district.

If the restoration of the Quakertown rail line is approved, it may be possible to re-open the Shelly train station and redevelop the surrounding area. The creation of a village zoning district could help protect the existing village resources and provide future development opportunities.

## **The Villages of Haycock Township**

### ***Applebachsville***

Situated at the intersection of Applebachsville Road and Old Bethlehem Pike, Applesbachville is a great example of a largely intact, predominately residential crossroads village. It includes numerous homes, some shops, and a firehouse.

Applebachsville lies within the VC-1 zoning district. The purpose of the district is to protect village character and allow compatible infill development. There are various rural residential and vacant uses within the village zoning district that may allow for some infill development.



*Applebachsville village in Haycock*

### ***Strawtown***

The village of Strawtown is a dispersed collection of older homes surrounding a tavern at the intersection of Strawtown Road and Old Bethlehem Pike. Located within the VC-1 zoning district, Strawtown contains various rural residential and vacant land uses.

### ***Thatcher***

Thatcher is a rural hamlet situated on Thatcher Road at Covered Bridge Road, near the Tohickon Creek. It comprises a general store converted to residential use, plus a few other widely dispersed historic homes.

Thatcher is within the RP Resource Protection zoning district. The RP District is a reserve area that provides for a very limited level of development. The purpose of the district is to protect rural areas containing sensitive natural features.

## **National Register Eligible Resources**

The *Richland Historic Resources Survey Report* prepared in 2002 by the Heritage Conservancy, identified several potential historic districts that might be eligible for listing on the National Register of Historic Places. They are California, Rich Hill (extending into adjoining townships), and Shelly.

The report suggests that if there is community support, the township should consider completing historic district nomination forms for these areas. Additional research and fieldwork would be necessary to prepare eligibility forms and National Register nominations.

Based upon a brief site analysis recently conducted, it appears there is enough critical mass of historically significant buildings uninterrupted by newer construction in the villages of California

and Shelly to warrant a village zoning district designation. Given the potential eligibility of these resources for National Register listing, township officials may wish to conduct a more detailed village study to determine if a village zoning district designation is appropriate for California and Shelly.

While Rich Hill contains numerous historic structures, the core is not as well defined and the older structures are less concentrated and interrupted by newer structures that do not contribute to the historic nature of the village. Therefore, the current lack of a village zoning district is still appropriate.



*Marker commemorating the Village of California in Richland Township*

### **Village Planning Elements**

As part of the 1992 regional comprehensive plan, a complete village planning analysis was conducted for all of the villages and hamlets in the Quakertown Area. Numerous planning factors and considerations were examined at that time.

This comprehensive plan update reaffirms most of the conclusions and decisions of its predecessor plan. The following section highlights primary village planning elements and provides recommendations for action at the municipal level to further protect and enhance these historic settlements.

Key elements necessary for successful village preservation and enhancement include village entrances, village viewsheds, village district boundaries, and use and dimensional requirements. The decisions made concerning these factors will help to establish a community vision for each of the Quakertown Area's villages and hamlets.

The following text summarizes these key features. A detailed village study can identify specific preservation needs and appropriate regulations to incorporate into ordinance regulations.

### **Village Entrance**

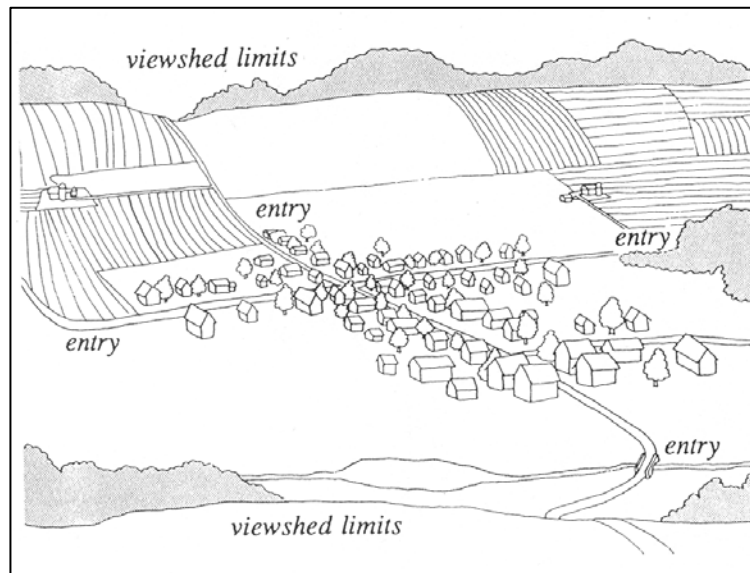
The entrance is the first image one sees when approaching a village; it will leave a lasting impression. It is important to identify these entrance features so the entrance does not become obscured by its surroundings. The village entrance is one means of identifying the limits of a village along its main thoroughfares.

The entrance to a village is a major element in strengthening the visual identity of the village. The entrance is the perceived edge of the village, a transition point that indicates the presence of a place that is different from its surroundings.

A change in land use character or in the nature of the landscape may be a signal to motorists that they are entering a village and need to reduce speed. Typically, villages have at least one of the following characteristics that can heighten the sense of entry to a village:

- abrupt change of land use, such as the change from open agricultural land to a tight cluster of buildings in a village;
- change of elevation, such as the crest of a hill or a dip in the road;
- mature trees lining the street;
- lot size and configuration usually small, narrow lots, often in a linear arrangement;
- architecture—buildings of a similar architectural period, located close to the road; and
- village entrance signs.

Based upon a field survey, it appears that the existing village district zoning boundaries are consistent with the perceived entrances to the villages. Various design and planning techniques can be used to enhance or establish an effective entrance, increasing motorists' and pedestrians' awareness that they are entering a small community. This can be achieved through amenities like landscaping, lighting, and pavement detailing. Traffic calming devices like speed humps, raised crosswalks, or textured pavement are also useful in marking the transition from open country to residential and commercial villages, slowing vehicles as they approach.



### **Village Viewshed**

The area immediately surrounding the village, known as the viewshed, is another important element to consider in preserving village identity. A viewshed begins at the transitional point where the built environment meets the surrounding landscape. Generally, the viewshed is determined by identifying those areas that can be seen from sites of significance in the village. The size of the viewshed varies with the specific topography, vegetation, and other structures or features of the village's surroundings.

Because the viewshed serves as a transition between the countryside and the village, it is important to minimize or discourage development that will have a negative impact on this area. Alternative types of residential development, such as clustering, that preserve the open space of the viewshed should be considered in this transitional area.

Integrating or separating new development within the viewshed can help protect the existing village character. To integrate development, zoning regulations (i.e., use and dimensional requirements) should ensure that new development is consistent with the original village character and function as an extension of the existing village.

If new development is not compatible with the existing architectural style or character of the existing village (e.g., conventional subdivision), a physical separation should be provided between the proposed development and the village so that there is adequate transitional area in the form of an open space or buffer yard. The intent is to protect the viewshed by providing required open space adjacent to the village.

The placement of new structures should be sensitive to both the village and the viewshed and located in the least obtrusive areas. Performance standard subdivisions or a cluster design are techniques that can be used to retain the visual transitional area.

Village viewsheds for the Quakertown Area's villages are not regulated by local ordinances. A village viewshed overlay district is a technique for regulating permitted uses and requiring a buffer yards for conventional development within the designated village viewshed. For instance, a village's viewshed can be identified by individual tax map parcel numbers and future development upon these parcels would have to comply with the established viewshed overlay district regulations.

### **Village District Boundary**

The perception of what constitutes a village varies. Typically, a village is viewed as a small, concentrated settlement that is dominated by older single-family homes, interspersed with nonresidential buildings such as businesses, churches, and post offices. The structures are usually spaced closely together, at crossroads, evoking the image of the village as an identifiable place.

But since villages are not incorporated, they do not have fixed edges. Thus, the most commonly used mechanism for delineating the limits of a village is establishing a village district boundary.

Generally, it appears that the present village zoning district boundaries are appropriately located for the Quakertown Area's villages. However, municipal officials may wish to consider the creation or elimination of certain village districts, as follows.

Based upon a recent site analysis, it appears that the villages of California and Shelly each encompass a significant critical mass of historically significant buildings that are uninterrupted by newer construction. The Land Use Plan element of the 1992 *Quakertown Area Comprehensive Plan* recommends village zoning districts for California and Shelly, but they were never implemented in Richland Township's zoning ordinance. Therefore, municipal officials should consider conducting a detailed village study to determine if these villages warrant the creation of a village zoning district and the appropriate location of such designation.

If the restoration of the Quakertown rail line is approved, it may be possible to reopen the Shelly train station and redevelop the surrounding area. The creation of a village zoning district or other district could help protect the existing village resources and provide future development and redevelopment opportunities related to the restoration of passenger rail service in the Greater Philadelphia region.

Conversely, Finland is situated in a VC-1 District in Milford but encompasses a very limited number of structures, including the Finland Inn. Consequently, municipal officials may wish to reconsider the designation of a formal village district in lieu of other preservation/enhancement techniques.

An evaluation of all villages and hamlets can be conducted to determine if a village/scenic viewshed overlay district is appropriate. These village preservation/enhancement techniques will afford these village resources and outlying areas greater protection from incompatible future development.

Currently, there is a Village Expansion Overlay District that applies to the majority of Trumbauersville Borough. In Milford Township, the Village Expansion Overlay District's applicability is referenced in Section 600 of the zoning ordinance, but the overlay district is not shown on the official municipal zoning map. Municipal officials should revise the zoning map to clearly identify the application of this overlay district.

### **Use and Dimensional Requirements**

Both of the village zoning districts permitted in the Quakertown Area permit a range of residential and nonresidential uses. Generally, the VC-1 District is more restrictive than the VC-2 District in terms of permitted nonresidential uses. Milford and Haycock townships make use of the VC-1 District, while Richland Township does not contain any village zoning districts. Milford Township alone makes use of the VC-2 District. Examples of uses permitted in the VC-2 that are not permitted in the VC-1 include life care facility, nursing home, funeral home, multiple commercial use, and repair shop.

If the mass, scale, or nature of proposed buildings and/or uses are incompatible with those of the existing building and uses in a village, the historic character and quality of a village may be undermined. Based upon a cursory review, it appears that the area and dimensional requirements for the VC-1 and VC-2 districts are appropriate for the village context; however, municipal officials may wish to eliminate certain uses or restrict the building area of those uses that may have a negative impact to the village character.

For instance, in Haycock and Milford townships, there is no size limit for a school or commercial school use. In Milford Township, the maximum capacity of a nursing home is 80 residents and the minimum lot size for a life care facility is five acres, but there is no building area limit. For these uses, nothing would prohibit a developer from constructing a sizable building that could overshadow the existing building character and context.

Such uses may be better served in other, more appropriate zoning districts in those townships. Conversely, adding new uses that encourage village-oriented development featuring compact, pedestrian-oriented, mixed-use communities could be examined and implemented where appropriate (i.e., specialty shopping center, village shop or village office.)



An evaluation of the new and proposed development activity in and around the villages may prompt municipal officials to revise certain use and dimensional requirements. Integrating these elements, along with the provision of public open space, can help to create a sense of community and provide an opportunity for social interaction among residents.

Public open space in villages often takes the form of a “town square” or village green, which enhances pedestrian activity, visual appeal, and public use of strategically located open space. The provision of landscaping, benches, outdoor art, and other amenities adds to the appeal of such public spaces.

Design guidelines can be used to help guide the design and layout of proposed development to be compatible with the prevailing village characteristics. As previously mentioned, the Village Expansion Overlay Districts in Trumbauersville Borough and Milford Township contain design guidelines recommended for any development in the overlay district.

These guidelines address a mix of residential uses, architectural considerations, detached garages in the rear of the lot with access from an alley (when possible), and stress the importance of pedestrian access, but the applicability of these design guidelines is limited to the overlay district. To provide a more proactive vision for developers, municipal officials may wish to establish design guidelines for all village zoning districts as shown on the next page.

Several other techniques can be used to preserve, protect, and enhance villages and hamlets, such as the placement of easements, a transfer of development rights program, a historic structure demolition permit ordinance, and a site analysis and resource conservation plan. Details of these techniques are addressed in the Future Land Use Section of the plan. Collectively, these techniques provide a multi-tiered approach to effective village planning.

## **Recommendations**

- Conduct a detailed village study for California and Shelly to evaluate the feasibility of establishing village zoning districts based upon existing conditions.
- Determine whether or not the VC-1 District for Finland should be changed to a more appropriate zoning district.
- In Milford Township, revise the official municipal zoning map in order to identify the application of the Village Expansion Overlay referenced in Section 600 of the zoning ordinance.
- Examine the possibility of adding new uses for the VC-1 and VC-2 districts that encourage village-oriented development featuring compact, pedestrian-oriented, mixed-use communities (i.e., specialty shopping center, village shop or village office.)
- Evaluate the need for additional preservation and/or enhancement techniques for all villages and hamlets, such as village viewshed overlay district, village entrance enhancement, and village design guidelines.

- Consider implementing other village planning techniques such as the placement of easements, a transfer of development rights program, a historic structure demolition control ordinance, and a site analysis and resource conservation plan.

### **Sample Village Design Guidelines**

Village design guidelines are intended to provide supplemental provisions in the subdivision and land development process while providing developers with a preferred vision for future development. The following are sample design guidelines that can assist municipal officials in reviewing and developing recommendations on conceptual site and architectural plans as part of the site review process for proposed development within or adjacent to the village.

- Along with the subdivision and land development plan, the applicant shall submit for review architectural drawings for each building and/or addition or renovation.
- Alignment or orientation of a proposed building should be related to the prevailing orientation of adjacent existing buildings.
- All new buildings shall be related harmoniously to the terrain (natural features) and to existing buildings and streets.
- The relationship between the width and height of the front elevations of adjacent buildings should be considered in the construction or alteration of a building.
- Single rectangular-shaped buildings with undifferentiated facades should be avoided. Massing should be broken up through the use of gables, indentations, variation of rooflines, and other design techniques.
- Individual nonresidential buildings should be designed to reflect the scale of the existing village.
- If more than one business is located in a building, the exterior of the building should be unified in design treatment (i.e., design of windows and door opening, use of materials, signs, and color).
- New construction or renovations should be of similar architectural style to the established village and compatible with that of existing or adjacent properties.
- Building additions should be designed to reflect the character of the existing building in terms of scale, materials, fenestration, and color whenever possible.
- Period light fixtures and streetscape amenities (e.g., benches, sidewalks) that are compatible with historic village architecture should be required.
- The organization of the building(s), streets, drives, parking areas, pedestrian walks, service areas, and other site components should have a functional, safe, and harmonious relationship and be compatible with existing site features and adjacent areas.
- Provide an interconnected (grid) street network that emulates a traditional neighborhood.

## Chapter 9

# Planning Compatibility

Section 301(a) of the Pennsylvania Municipalities Planning Code requires the following as elements of a comprehensive plan:

- (4.1) A statement of the interrelationships among the various plan components, which may include an estimate of the environmental, energy conservation, fiscal, economic, development, and social consequences on the municipality.
- (5.0) A statement indicating that the existing and proposed development of the municipality is compatible with the existing and proposed development and plans in contiguous portions of neighboring municipalities, or a statement indicating measures taken to provide buffers or other transitional devices between disparate uses, and a statement indicating that the existing and proposed development of the municipality is generally consistent with the objectives and plans of the county comprehensive plan.

This chapter provides a discussion regarding the interrelationships among various plan components. It also includes an analysis of the relationship between existing land uses; zoning and planning for future development in the Quakertown Area, and existing land uses, zoning, and planning for future development in neighboring communities. It compares land use and planning in the Quakertown Area to the county's objectives and plans for development.

It is important that municipal officials in the Quakertown Area be aware of development patterns in adjacent communities and have an understanding of the policies and objectives described in comprehensive plans of surrounding municipalities. Land use decisions in one township or borough can substantially affect conditions in surrounding areas and can frustrate the ability of neighboring municipalities to achieve their planning goals.

It is also valuable to review the county comprehensive plan not only to identify compatible and incompatible elements but also to employ or adopt county planning policies and techniques that could be useful to the Quakertown Area. Any regional trends or conditions that would affect Quakertown Area municipalities should be identified.

### **Relationship Among Plan Components**

Throughout the preparation of this update, continual efforts were made to ensure a high degree of coordination among the various plan components and a general consistency among the findings and recommendations provided in each section. Individual elements of the plan were produced with the recognition that they are interdependent on and interlocking with one another.

For example, population projections and land use data included in the sections involving demographics and existing uses were used in the residential development areas analysis and the nonresidential development areas inventory, which were in turn employed in the development of the

future land use plan and implementation strategies. The transportation section makes central the connection between transportation and land use and its recommendations involve providing pedestrian and bicycle facilities that can also be used for recreation and can complement park and open space areas.

Recommendations regarding community facilities and services like police and fire protection are influenced by current conditions, projected populations trends, and future land use planning. The provision of these facilities, in turn, shapes future land use planning.

This comprehensive plan update is intended to promote and protect the public health, safety, and welfare of the Quakertown Area. The stated objectives and policies are designed to achieve those general purposes. Various plan components provide background information and guidelines to assist in the achievement of stated objectives. This comprehensive plan update is also intended to provide the framework upon which more detailed or complementary studies can be prepared, reviewed, or revised when either individual municipalities or the Quakertown Area Planning Committee (QAPC) as a whole deems them appropriate.

## **Compatibility with Surrounding Municipalities**

The impacts of development are not limited to the township or borough in which such development takes place. Land use policies, zoning requirements, growth, or changes in land use patterns in one municipality can enhance or diminish the quality of life in another. Analyzing existing conditions, zoning, and land use planning of municipalities bordering the Quakertown Area, a general assessment of the compatibility between Quakertown Area municipalities and those bordering the Quakertown Area has been provided. Information for this assessment was developed from each municipality's zoning ordinance, its comprehensive plan (existing and future land use), and from land cover mapping for 2000 provided by the Delaware Valley Regional Planning Commission.

### **Lower Milford Township, Lehigh County**

Located to the northwest of the Quakertown Area, Lower Milford Township in Lehigh County abuts the northwestern border of Milford in Bucks County. In 2005, the township adopted the *Southwestern Lehigh County Comprehensive Plan*, a multi-municipal plan serving Alburtis, Emmaus, and Macungie boroughs and Lower Macungie, Lower Milford, and Upper Milford townships in Lehigh County. Characterized by agricultural lands and vast open spaces, Lower Milford is primarily a rural township. The comprehensive plan identifies the following categories along the border with Milford in Bucks County: rural, conservation, areas where agricultural preservation is recommended and areas of existing farmland preservation and county-owned land recommended to be preserved.

The township's zoning ordinance, *Zoning Ordinance 1997 Lower Milford Township, Lehigh County*, supports the recommended land use in the comprehensive plan. A vast majority of the border is zoned AR Agriculture-Rural District, which permits agricultural and low-density residential uses. Single-family detached dwellings, the only residential use permitted in this district, are allowed on a minimum lot area of 2 acres. A small area in the western portion of the township bordering Milford is zoned RR Rural Residential. As with the RA District, agricultural and low-density residential uses are permitted in this district. A minimum lot area of 1.5 acres is required for single-family detached uses.

In Milford, land uses and zoning along the municipal border with Lower Milford are primarily agricultural, large lot residential, and vacant located within either the RA Rural Agriculture or RD Rural Development districts. Land use conditions in Lower Milford, Lehigh County are compatible with the existing land uses and zoning found in this part of the Quakertown Area.

### **Upper Saucon Township, Lehigh County**

Only a very small portion of Upper Saucon touches the corner of Milford Township in the Quakertown Area. Upper Saucon Township's comprehensive plan, adopted in 1985, and zoning ordinance, adopted in 1986, including amendments up to 1999, both designate this section of the township as Rural Residential. The zoning ordinance permits agricultural and low-density residential uses on a minimum lot size of one acre. Compatible land uses and zoning, vacant land within the RA Rural Agriculture district, are found on adjacent portions of the Quakertown Area in Milford Township.

Not far from the Milford Township border, the Locust Valley Country Club in Upper Saucon Township has been the subject of a zoning change request that was denied by the township. The proposed rezoning would have allowed high-density residential development which could have resulted in a few hundred townhouses on the site. More recently, a development proposal under the current R-2 Suburban Residential zoning was submitted for the country club property. The current proposal would yield approximately 125 residential units. This development could have a slight impact on roadways connecting to the Turnpike interchange in Milford.

Further north in Upper Saucon Township, a 1,700-acre planned corporate and residential community, known as The Stabler Center, is currently under construction. Located close to where Interstate 78 meets routes 309 and 145, the planned development will include 5.5 million square feet of office space, 475,000 square feet of commercial space, and several residential communities. A number of companies, such as Olympus and Aldi Foods, have located their corporate headquarters in the development. The commercial component, The Promenade Shops at Saucon Valley, has been dubbed a "lifestyle center" consisting of stores, boutiques, and restaurants in an open, outdoor setting. Due to the size of this planned development and the potential employment and commercial draw it will have, impacts to the Quakertown Area, particularly on Route 309, are possible.

### **Marlborough Township, Montgomery County**

Marlborough Township in Montgomery County borders Milford Township and the Quakertown Area to the southwest. The township is a member of the Upper Perkiomen Valley Regional Planning Commission, and in 2001, Marlborough Township officials adopted the *Upper Perkiomen Valley Regional Comprehensive Plan*. In addition to Marlborough, this multi-municipal plan also serves Upper Hanover Township and the four boroughs of East Greenville, Green Lane, Pennsburg, and Red Hill.

Marlborough is primarily rural in character. According to the township's existing land use map (1999), the area bordering Milford Township is mostly agricultural, residential (single-family detached and country residences), and undeveloped parcels. One adjacent parcel, located on Haring Road (which becomes Carvers Hill Road in Milford), contains an existing industrial use. The *Upper Perkiomen Valley Regional Comprehensive Plan* identifies the portion of Marlborough near Milford

as a Rural Resource Area, where the preservation of open spaces, farmland, woodlands, and other natural and cultural resources is a priority.

Zoning in Marlborough near the Milford border is consistent with the future land use recommendations in the comprehensive plan. This entire area is zoned R-1 Residential District, which permits agricultural and open space uses in addition to low-density residential uses. Single-family detached dwellings are permitted on a minimum developable lot area of two acres. This district does permit cluster subdivisions; however, the density must stay the same as for conventional single-family subdivisions.

These conditions are compatible with the existing land uses and zoning found in this part of the Quakertown Area. Land uses along the border in Milford are generally vacant, rural residential, and single-family residential and are zoned either RA Rural Agriculture or RP Resource Protection. Any impacts from the existing industrial use in Marlborough could be addressed through municipal buffer requirements.

### **Upper Hanover Township, Montgomery County**

Bordering the western portion of the Quakertown Area, Upper Hanover Township in Montgomery County is adjacent to Milford. Like its neighbor Marlborough Township, Upper Hanover is part of the Upper Perkiomen Valley Regional Planning Committee. In 2001, Upper Hanover officials adopted the *Upper Perkiomen Valley Regional Comprehensive Plan*. With the exception of a small area between Quakertown Road and Geryville Pike, the future land use plan designation for this area bordering Milford is Rural Resource, where preservation of the area's natural and cultural resources is a priority. The area between Quakertown Road and Geryville Pike is identified as part of the Macoby Creek Growth Area. As described in the comprehensive plan, this growth area has been identified as a preferred area for new development due to its proximity to nearby boroughs, its good vehicular access to routes 663 and 29 and Geryville Pike, and its large developable tracts.

The township's existing land use plan indicates a variety of uses, such as residential, agricultural, industrial, mixed use, undeveloped land, and an area of public open space, located near the Milford border. According to the township's zoning map, adopted in September of 2005, there are two zoning districts designated along the Milford Township border: the R-1 Agricultural-Low Density Residential District along most of the border and the LIC-1 Light Industrial and Limited Commercial District between Route 663 and Quakertown Road.

*The Upper Hanover Township Zoning Ordinance of 1997* permits mostly agricultural and low-density residential uses in the R-1 district. Single-family detached dwellings are permitted on a minimum lot area of 80,000 square feet; open space/cluster developments are also permitted in this district. The LIC-1 district permits a variety of light industrial, office, and service uses on a minimum lot area of two acres, unless developed as part of a planned industrial/office park development, in which case the minimum required lot area is one acre, with an average of 1.5 acres.

With the exception of the LIC-1 district, these conditions are generally compatible with that found along the border in the Quakertown Area. While Upper Hanover's LIC-1 district is consistent with the designated growth area identified in their comprehensive plan, land directly north of Route 663 in Milford, zoned RA Rural Agricultural, has not been designated as a development area. Also,

further north, several parcels along the border that are zoned VC-1 in the village of Geryville may not be consistent with the LIC-1 district. Milford Township should coordinate with Upper Hanover to determine what planning techniques (such as landscape buffering) or improvements, if any, would be helpful in alleviating potential impacts from higher-intensity projects that may occur along this portion of Route 663 in Upper Hanover.

While not right along the border, a development of significant proportions has been proposed further west along Route 663 near the Borough of Pennsburg. The proposal, which consists of over 700 residential units, has been proposed on the former *Upper Perkiomen Golf Course*. The submission is still in the planning process and although it has not received approval from the township, it is likely that future development of the site will have impacts on the Quakertown Area, specifically for Milford along the Route 663 corridor.

### **Springfield Township, Bucks County**

Bordering Milford, Richland, and Haycock townships to the north, Springfield Township shares a longer border with the Quakertown Area than any other surrounding municipality. Existing land uses in Springfield along the municipal boundary are primarily agricultural, rural residential, and vacant (undeveloped and natural cover). Future land use, as designated in the *Springfield Township Comprehensive Plan, Bucks County, Pennsylvania* (May, 2003), includes a small Development Area north of Trolley Bridge Road, a Village Area around Zion Hill, two Rural Holding Areas along each side of a Development Area associated with Route 309, and the remaining area east of Mine Road shown as a Special Attention Area.

The township's zoning designations correspond with the comprehensive plan's recommended future land use areas. There are three rural, low-intensity use districts along the common border: Rural Residential (RR), Resource Protection (RP), and Agricultural District (AD). In each of these districts, single-family dwellings are permitted on minimum lot sizes ranging from one acre (on sites with 10 or more acres in the AD district) to three acres. Residential cluster options are provided with a permitted maximum density of 0.5 dwelling units per acre in both the RR and RP districts.

The remaining four districts along the Springfield border are Village Residential (VR), Village Commercial (VC), Development District (DD), and Highway Commercial (HC). The village residential and village commercial districts in the area of Zion Hill permit both residential and nonresidential uses consistent with the type, size, and scale of the existing village. West of the village area, a small area of DD zoning abuts the northern tip of Milford. The HC district is located along the Route 309 corridor in Springfield and is intended to accommodate highway commercial uses.

Overall, Springfield's land use and zoning are generally compatible with adjacent land use and zoning found in this portion of the Quakertown Area, which are primarily vacant and rural residential. Where Springfield's development districts (VR, VC, DD, and HC) are located adjacent to Milford's rural district, adequate buffer requirements will help to minimize impacts to low-density uses in Milford.

### **Nockamixon Township, Bucks County**

The boundary shared by Haycock and Nockamixon is formed by Haycock Creek and Lake Nockamixon. Nockamixon State Park is located along much of this border, south of Church Road. Agricultural and rural residential uses are located north of Church Road.

The future land use map in the *Nockamixon Township Comprehensive Plan Update 2005* designates the entire border as a Rural Conservation Area. The purpose of this area is to provide maximum protection of the township's most sensitive natural resources, agricultural areas, and the established rural residential community.

The township's zoning supports the recommended future land use with the RA Residential/Agriculture district to the north of Park Drive and the OSM Open Space Management district to the south of Park Drive. The purpose of the OSM district is to regulate areas that are publicly owned, such as state game lands and state parks. Coinciding with the location of Nockamixon State Park in the southwestern portion of the township, the OSM district permits primarily agricultural and recreational uses. The intent of the RA district is to provide for residential uses where agricultural activities now exist. Single-family detached dwellings are permitted on a minimum lot area of two acres. Single-family detached cluster subdivisions are also permitted in this district, which allows 30,000-square-foot lots provided 65 percent of the tract is preserved as open space.

State Game Lands and Nockamixon State Park are located along the Haycock Township side of the border. The zoning and land uses permitted in Nockamixon Township are consistent with those in the Quakertown Area.

### **Bedminster Township, Bucks County**

Located to the southeast of the Quakertown Area, Bedminster Township shares a border with Haycock. The municipal boundary extends through Nockamixon State Park, with the entire border in both townships preserved as park land. The land use plan in the *Bedminster Township Comprehensive Plan 1996* identifies this portion of Bedminster as State Park and shows an adjoining area as Park Buffer.

Most of Bedminster, including the municipal boundary area with Haycock, is zoned AP Agricultural Preservation District. The purpose of the AP District is to recognize and protect the area designated as a significant agricultural area with Class 1 through Class 3 agricultural soils. Lot sizes for single-family detached residences vary depending upon the acreage of preserved farmland soils existing on a site. For sites containing less than five acres of preserved farmland soils, the minimum lot size for a residential subdivision is 80,000 square feet. For sites containing five acres or more of preserved farmland soils, the smallest lot area permitted is 32,000 square feet, when at least 60 percent of protected farmland soils are preserved.

While not directly adjoining Haycock, a small area zoned VR-2 Village Residential District-2 is located nearby along Old Bethlehem Pike toward the area of Keelersville. Single-family detached dwellings are permitted on a minimum lot area of 20,000 square feet in this district.



These conditions are compatible with the existing land use and zoning found in the Quakertown Area. Because both sides of the common border are occupied by Nockamixon State Park, there is little chance that incompatible uses will be located along either side of the municipal boundary.

### **East Rockhill Township, Bucks County**

Bordering both Haycock and Richland townships, East Rockhill Township lies directly to the south of the Quakertown Area. The future land use plan in the *East Rockhill Comprehensive Plan Update*, which was adopted by the township in 2005, identifies much of this border as a Resource Protection area; a small area in the western corner of the township adjacent to Richland is identified as Village Commercial (in the area of Rich Hill).

With the exception of a small area in the western corner of the township zoned VC Village Commercial, the portion of East Rockhill Township bordering the Quakertown Area is zoned RP Resource Protection. This district provides for agricultural and low-density residential uses. Detached dwellings are permitted on a minimum lot area of 1.8 acres; cluster subdivisions, which allow a minimum lot area of 20,000 square feet, are permitted on sites with a minimum of 10 acres. This district is compatible with the zoning and existing land use on the Quakertown Area side of the municipal boundary. Land along the border in Haycock is open space, rural residential, and institutional (a camp owned by the Freedom Valley Girl Scouts) in the RP Resource Protection district. In Richland, adjacent land uses are primarily rural residential, single-family detached, vacant, and two parcels of protected open space (state game lands) in either the RA Rural Agriculture or RP Resource Protection districts.

The VC Village Commercial designation in the western corner of East Rockhill coincides with the village of Rich Hill, located on the border of East Rockhill, West Rockhill, and Richland townships. The intent of this district is to preserve the character of the villages through zoning standards appropriate for the size and scale of the existing village. Within the VC district, single-family detached dwellings are permitted on a minimum lot area of 10,000 square feet. This allows a greater intensity of use than Richland's RA district permits along the border.

In the Historic and Cultural Resources chapter of this document, we recognize that Rich Hill contains numerous historic structures, but the core is not well defined and is interrupted by newer structures that do not contribute to the historic nature of the village. Even though East Rockhill has designated a village district for Rich Hill, it is not fitting that a village district be provided in this portion of Richland Township. Any incompatibilities that may exist between East Rockhill and Richland in this area can be addressed through existing buffering requirements.

### **West Rockhill Township, Bucks County**

Bordering both Milford and Richland townships, West Rockhill Township lies directly to the southeast of the Quakertown Area. The future land use map in the *Comprehensive Plan, West Rockhill Township, Bucks County, Pennsylvania, U.S.A.*, which was adopted by the township in March 2005, designates the entire area along the Quakertown Area border as a Resource Protection Area.

According to the *West Rockhill Township Zoning Ordinance*, updated in November 2003, the RC Residential Conservation zoning designation for this area supports the future land use

recommendation. A minimum lot area of two acres is required for single-family detached dwellings. For sites of at least 20 acres, single-family cluster subdivisions are permitted, which allow residential lots on one acre. This is consistent with the zoning and existing land use found in the Quakertown Area, which are primarily rural residential, vacant, and agricultural in the RA Rural Agriculture districts of both Milford and Richland townships.

## **Bucks County Planning Policies**

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 county plan also identifies various planning tools that can be used to manage growth in a manner consistent with the sound planning practices centered on the development district concept.

It is up to local elected officials to select those planning tools that will best meet the present and future needs of their community. This comprehensive plan update is consistent with the county's growth management goals and objectives since the development district concept is an integral part of the plan.

Under this approach, higher-density residential and intensive nonresidential developments are channeled into areas where public services can be efficiently and economically provided, thereby preserving the region's significant natural, historic, and scenic resources. The designated Development Areas are not areas with significant or widespread environmental concerns.

In addition to the development district concept, other community planning policies that are included in the *Bucks County Comprehensive Plan* and promoted by the Bucks County Planning Commission have been incorporated into this and previous updates of the *Quakertown Area Comprehensive Plan*. These include village planning principles and policies for the protection of natural and historic resources.

The topics discussed in the Growth Management section of the *Bucks County Comprehensive Plan* (1993) under the objective of providing "appropriate, coordinated, and timely growth management" include intermunicipal planning to facilitate the coordination of growth management efforts in the county. As a longstanding example of multi-municipal cooperation, the Quakertown Area municipalities, through involvement with the QAPC and its efforts to manage growth, contribute to the achievement of the policies and objectives of the county comprehensive plan.

## Chapter 10

# Future Land Use and Growth Management Plan

One of the most important purposes of this comprehensive plan update is to provide a land use plan that prescribes an appropriate land use mix that adequately balances meeting community needs, protecting the natural environment, and designating suitable areas for potential growth. Providing a well-balanced mixture of agricultural, residential, commercial, recreational, institutional, and industrial uses in appropriate locations also enhances the vitality of the region. The plan should help to ensure that land use regulation within the Quakertown Area is based on sound planning and growth management principles.

In the resident survey conducted as part of the comprehensive planning process, growth management was identified as the most important issue facing the Quakertown Area when planning for its future. This section provides a community vision for future growth and development that attempts to address this concern; it serves as a collective statement by the Quakertown Area Planning Committee (QAPC) member municipalities concerning how they wish to accommodate and direct future development. Specific planning tools are discussed that promote the concentration of future development within appropriate areas of the region, while enhancing the preservation of its valuable natural, agricultural, open space and historic resources.

### **Important Influences on this Update**

Three major influences have played important roles in shaping the region's future land use plan: the development district concept, the provisions of the Pennsylvania Municipalities Planning Code (MPC) regarding intergovernmental cooperative planning, and past planning in the Quakertown Area as presented in previous plans and updates.

### **Development District Concept**

A planning tool used widely in Bucks County to guide growth is the development district concept. The fundamental objective of this concept is to concentrate future development in areas best equipped to handle growth while minimizing land use conflicts and costs to residents.

To accomplish this objective, the concept calls for concentration of growth into development areas designated by municipal officials for this purpose. While the development district concept allows municipal officials to plan for the timely expansion of development, infrastructure, and municipal services, it also enables them to preserve significant vacant, agricultural, and natural resource lands as open space. Within the six Quakertown Area municipalities, the development district includes areas with public facilities (water and sewer), as well as village areas, based on the intensity of existing land use patterns and the opportunities for infill development.

### **Article XI of the Municipalities Planning Code**

Enacted as part of Act 67 in 2000, Article XI of the MPC permits the use of intergovernmental cooperative agreements by local governments to develop and implement multimunicipal plans. Section 1103(a)(1) allows comprehensive plans to designate growth areas where projected

development can be accommodated, where commercial, industrial and institutional uses can be located, and where services for such development can be planned for or provided. Section 1103(a)(2) states that such plans may designate future growth areas. Section 1103(a)(3) permits plans to designate rural resource areas where rural resource uses are planned, where the permitted density of development is compatible with rural resource uses, and where infrastructure extensions and improvements will not be publicly financed unless the participating municipalities agree that such services are necessary or appropriate.

### **Prior Regional Planning in the Quakertown Area**

The 1992 comprehensive plan's provisions for higher-density housing were based on the development district concept,<sup>23</sup> and high-density housing was directed to areas called Residential Development Areas in that plan. It identified and described seven categories of planning areas. The delineation of those areas indicated both the pattern and relative intensity of various residential and nonresidential uses.

That comprehensive plan sought to balance projected growth with existing land use patterns, community goals, and environmental determinants. It was also intended to provide a planning tool for use in the establishment and review of zoning districts included in the area's model municipal zoning ordinance.

### **The Land Use Plan**

Except for a slight modification, this land use plan retains most of the planning areas delineated in previous comprehensive plans for the Quakertown Area and updates the location or boundaries of the planning areas in a manner consistent with the development district concept and the provisions of the MPC. Land within the boundaries of the six participating municipalities is divided among four primary planning areas: Resource Protection Areas, Reserve Areas, Development Areas, and Villages and Towns.

A fifth category included in previous plans, Areas of Existing Development, has been eliminated; those parcels previously identified in this category are now identified as either Development, Reserve, or Natural Resource Protection areas, depending on the parcel's existing zoning district. The primary reason for deleting Areas of Existing Development as a planning area is because there is no firm planning policy established for this category.

Through appropriate zoning, the types and intensities of land uses to be directed into these planning areas will aid in achieving the stated community development goals and objectives. These planning areas, which are described further below, are illustrated in Figure 14, Land Use Plan.

### **Resource Protection Areas**

Lands designated as Resource Protection Areas contain a high degree of sensitive environmental resources. These features include floodplains, floodplain soils, steep slopes, forests, wetlands and waterbodies. The intensities and types of uses permitted in these areas will insure that both the resources and the general scenic quality will not be significantly disturbed. Much of the land

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<sup>23</sup> See Appendix B for a summary of the development district concept.

surrounding protected park land, such as Nockamixon State Park, Lake Towhee, and the State Game Lands, is included within the Resource Protection Area designation.

Municipal zoning ordinances include natural resource protection standards designed to protect sensitive features while permitting reasonable and appropriate use of these areas. Incorporated into these ordinances are procedures to ensure a consistent site evaluation method of the variable conditions throughout these areas.

Neither Development Areas nor facilities which would service intensive development will be extended into Resource Protection Areas. Due to natural resource constraints and scenic quality, these areas are intended to remain rural in character to provide balance with existing and potential intensive development within the Development Areas.

The RP Resource Protection District is the zoning district associated with this planning area. Existing in all three Quakertown Area townships in locations almost identical to the delineated planning area, the purpose of the RP zoning district is to protect areas consisting largely of sensitive natural features. Intensities of permitted development are such as to ensure that these resources are permanently protected.

### **Recommendations – Resource Protection**

The zoning of several areas should be re-examined to ensure appropriateness and optimum protection of resources:

- *Quakertown Swamp/Game Lands, Richland* -- Within Richland Township, there is one area where existing zoning is inconsistent with the Natural Resource Protection Area land use designation. A swath of land roughly bounded by Paletown, Thatcher, Muskrat, and Rocky Ridge roads in the southeast portion of the township is zoned RA Rural Agriculture. This land, designated as Natural Resource Protection Area on the land use plan, contains State Game Lands and areas associated with the Quakertown Swamp, some of which have been preserved through the Heritage Conservancy.

RP zoning adjoins this area to the southeast and northeast. Richland Township officials should consider rezoning this RA area to the RP District to provide maximum protection for sensitive resources.

- *Haycock residential areas* -- Within Haycock, two separate areas currently zoned SC Select Commercial along Old Bethlehem Road, south of the village of Strawntown, are surrounded primarily by RP zoning and are within the Resource Protection planning area. A review of the land uses within these districts indicates that, of five parcels zoned SC in the area of Thatcher Road, only one parcel contains a nonresidential use (restaurant), while the remaining parcels are in residential use.

Likewise for the SC district across from Cobbler Road, where only two of the seven parcels in this district contain nonresidential uses (restaurant and private campground) with the remaining parcels in residential use. Since the SC district does not permit residential uses, the bulk of these parcels contain nonconforming uses.

- Haycock has two areas zoned VC-1 Village Center-1 located farther north along Old Bethlehem Road (villages of Applebachsville and Strawntown), and one area zoned PC Planned Commercial located around the intersection of Old Bethlehem Road and Route 563. Given that these districts currently provide for a range of nonresidential uses, Haycock Township officials may want to consider whether the SC District designation is warranted and whether the areas now zoned SC should be retained or possibly rezoned to RP.

### **Reserve Areas**

Land uses within the Reserve Areas are generally of low intensity. It is the intent of this comprehensive plan that the rural character of these areas be maintained for the foreseeable future.

Uses permitted in Reserve Areas will be of types and intensities that will not compete for services with uses directed into Development Areas. Therefore, public services will be concentrated into providing necessary infrastructure within Development Areas.

At a time when municipalities and the QAPC determine that Development Areas are approaching capacity and additional land is necessary to accommodate anticipated growth, Development Areas may be extended into Reserve Areas in appropriate locations that are determined through careful analysis.

In addition to the RP Resource Protection District, described in this chapter's section on Resource Protection Areas, the following districts were categorized as Reserve Area districts in the model Quakertown Area Zoning Ordinance: RA Rural Agriculture, RD Rural Development, FC Future Commercial, and VC-1 Village Center-1. The intent of these districts is to support the rural character of the area, to preserve large environmentally sensitive areas, to protect and enhance the character of rural villages, and, to protect the general scenic quality of the area. One or more of these reserve districts are located in each of the three townships.

Since the 1992 comprehensive plan update, FC zoning in various locations along Route 309 in Richland has been changed to PC. An analysis of the township's zoning map along with other Quakertown Area municipal zoning maps shows there is no FC zoning within the Quakertown Area. Based on this fact and the conclusion of the nonresidential development areas analysis that there is no need to provide additional areas for nonresidential zoning, municipal officials may want to consider eliminating the FC zoning category from their zoning regulations.

### **Development Areas**

These areas are intended to accommodate the bulk of future development and infrastructure expansion. They are designed and sized to contain projected future growth as discussed previously in the residential and nonresidential development area analyses, including infill and adaptive reuse opportunities.

Although Quakertown Borough will remain the primary regional center, that center has grown to include surrounding adjacent areas in Richland, as well as residential areas extending into Milford and Trumbauersville. Many public and semipublic services (such as the Quakertown Hospital, the Quakertown Community High School and school district administration headquarters) are located in

Quakertown Borough. Quakertown and its surrounding areas contain shopping and employment opportunities that serve the entire Quakertown Area.

Additionally, areas extending west along portions of Route 663 in Milford, including the nonresidential hub at the Pennsylvania Turnpike interchange, have been designated as Development Areas. New development directed into these Development Areas will both support and be supported by existing services and facilities. New or expanded services may be more economically and efficiently provided in concentrated, rather than dispersed or scattered, areas.

Development Areas are intended to provide residential districts that permit a variety of housing types at densities of one unit per acre or more. Various types of commercial, industrial and other nonresidential districts within Development Areas will allow diversity of land uses, which promotes a balanced community and provide employment, shopping and service opportunities.

Within the Quakertown Area, the model Quakertown Area Zoning Ordinance categorized the following zoning districts as Development Area districts: SRC Suburban Residential Conservation, SRL Suburban Residential Low, SRM Suburban Residential Medium, SRH Suburban Residential High, VC-2 Village Center, URL Urban Residential Low, PC Planned Commercial, CC Central Commercial, SC Select Commercial, and PI Planned Industrial. While four Quakertown Area municipalities—Haycock, Milford, Richland and Trumbauersville—utilize the model zoning ordinance, not every type of zoning district is located in each of these municipalities.

If Haycock officials do eliminate the SC zoning districts, as previously recommended in the discussion on Resource Protection Areas, there would be no SC districts anywhere in the Quakertown Area. Based on intensity of use and existing development patterns in the boroughs, all zoning districts within the boroughs have been categorized as Development Areas.

The Land Use Map further identifies two subcategories within Development Areas:

***Conservation Areas*** – This category includes several large areas where severe environmental limitations were identified on land within the delineated Development Area. These areas are consistent with the SRC zoning district within Richland Township, which to some degree contains tributaries of the Tohickon Creek and related floodplain. Such areas could accommodate some development on the least environmentally restricted portion of a development site.

***Restricted Areas*** – Land included in this category are former quarry sites that may have some development limitations, but are still developable. Also included in this category are lands that have been identified as permanently protected open space, such as state, county, and municipal parks and preserved open space, protected conservation lands and residential development open space. Areas of protected open space are not developable due to their permanent protection status.

For parcels that could be categorized as both Conservation and Restricted areas, only the Restricted Area is shown based on the fact that many of these parcels are preserved and are not developable. Within this category, the Land Use Map includes only those permanently protected areas that are located within the Development Areas. For a map identifying permanently

protected lands in the entire region, refer to Figure 12, Park, Recreation and Open Space, in Chapter 7 of this document.

While Haycock does not contain public facilities, several areas within the township have been identified as Development Areas. These areas are based on existing residential and nonresidential zoning districts within the township which have been generally categorized as Development Areas (SRH, PC, and PI districts). The following areas in Haycock have been redesignated from either Resource Protection or Reserve areas to Development Area:

- Area of PC along Route 563—Shown on the previous land use map as Resource Protection Area, Haycock’s PC district around the intersection of Route 563 and Old Bethlehem Road is now identified as a Development Area on the updated Land Use Plan. This PC district consists of five parcels, one of which contains a nonresidential use (tavern). Located along an arterial roadway in the southern portion of the township and bordering Nockamixon State Park, this area lends itself to small-scale commercial/service uses, such as a general store or small restaurant, which can be patronized by both nearby residents and visitors to the park.
- Areas of SRH and PI zoning along Thatcher Road—Previously within the Resource Protection and Reserve planning areas, the SRH and PI districts bordering Thatcher Road in the western portion of the township have been redesignated as Development Area. Bordering Richland to the west and having access to a collector roadway, this area of the township has been identified by township officials as the best location to accommodate future growth for residential and industrial uses.

## **Villages and Towns**

The Quakertown Area borough cores and villages are unique settlements. These older towns and villages are physical examples of the Quakertown Area’s historical and cultural heritage. It is important that the scale and character of such unique places be considered in various community planning matters if they are not to be lost to external pressure and internal changes. Although mapped as one category on the Land Use Map, Villages and Towns can be described as two separate categories.

### ***Towns***

Within the three Quakertown Area boroughs—Quakertown, Richlandtown, and Trumbauersville—areas delineated as Villages and Towns on the Land Use Map correspond to core historic areas identified within each borough. Borough lands outside of the identified historic areas have been mapped as Development Areas, based on existing patterns of development. The Towns delineations for Quakertown and Trumbauersville boroughs are based on the locations of the Quakertown Local Historic District and the potential Trumbauersville National Register Historic District, respectively.

Based on a quick assessment of the age of structures within Richlandtown, a preliminary delineation of the borough’s historic core has been determined. Parcels containing structures built before 1950 have been identified. The area delineated as Villages and Towns within the borough corresponds to a string of contiguous parcels, the vast majority of which contain structures built prior to 1950. Borough officials may want to analyze whether other contributing parcels should be included in this delineation.



Of the three boroughs, only Trumbauersville has adopted the model Quakertown Area Zoning Ordinance as its base ordinance. Trumbauersville's zoning districts, all of which are categorized as Development Area districts, include: CC Central Commercial, SRL Suburban Residential Low, and SRM Suburban Residential Medium. While the SRL and SRM districts primarily allow residential uses, the CC District provides for the continuation of the commercial core area which extends from the intersection of Main and Broad streets and has traditionally served as the business center in the borough.

Quakertown Borough's zoning ordinance provides for 12 different zoning districts all of which, given the historic patterns of development in this borough, can be described as Development Area districts. Residential districts in Quakertown include the LR Low Density Residential, MR Medium Density Residential, and HR High Density Residential districts.

Districts permitting primarily nonresidential uses in the borough include the HC Highway Commercial, OB Office/Business, H Hospital, and LI Light Industrial. Quakertown districts permitting a mix of both residential and nonresidential uses include the TC Town Center and NC Neighborhood Commercial districts, the locations of which correspond well with the existing mixed-use neighborhoods centered around Broad Street in two sections of town (in the vicinity of Broad and Front streets and Broad and Main streets).

Richlandtown's zoning ordinance provides three zoning districts: RS Residential Subdivision, HC Highway Commercial, and VC Village Center. The RS and HC districts are intended to accommodate residential and commercial uses, respectively. The VC District, centered around Main Street in the vicinity of Church and Union streets, has been established to accommodate higher density residential uses and retail and service uses geared to the needs of residential neighborhoods.

To establish planning consistency and uniform zoning categories regionwide, the QAPC should analyze how the zoning regulations adopted by Quakertown and Richlandtown boroughs could be integrated into the model Quakertown Area Zoning Ordinance. The model ordinance itself should be updated, as noted in the following section on land use tools and techniques.

While primarily developed, all of the boroughs have some remaining vacant land, presenting opportunities for infill development. Borough officials should strive to ensure that the historic context of the traditional town character is maintained and enhanced through use of appropriate tools, such as historic districting, demolition control ordinances, design standards to promote compatible infill development, and use modifications.

### ***Villages***

Each village in the Quakertown Area is unique in size, composition, and function. For planning purposes, they have been categorized based upon their composition and intended level of future growth. Preservation and enhancement are underlying principles for villages and hamlets in the Quakertown Area, regardless of classification. The three primary categories are as follows: Growth Villages, Limited Growth Villages, and Hamlets.

**Growth Villages** – These villages currently are zoned VC-2 Village Center-2 District, which is classified as a Development Area district. Villages with VC-2 zoning are intended to accommodate a

higher level of future growth due to their location adjacent to the SRM Suburban Residential Medium District. The SRM district is part of the Development Area that is intended for higher density/intensity development. Growth Villages are restricted to Spinnerstown and Milford Square.

The planning policy for these villages is to explore ways to preserve and enhance historic village character while accommodating future growth within and adjacent to the village. Permitted uses as well as area and dimensional regulations and other planning techniques should be examined to determine if they are still appropriate.

**Limited Growth Villages** – These villages are currently zoned VC-1 Village Center-1, which had been classified as a Reserve Area district in the 1992 comprehensive plan. In this plan update, the VC-1 District has been reclassified as a Development Area district, but villages within that district remain designated for limited growth.

The change is consistent with amendment of Article XI of the MPC in 2000 to allow comprehensive plans to designate growth areas and future growth areas to accommodate residential development at a density of 1 unit per acre or more. It also helps to ensure adequate ability to provide for projected future housing needs within the region, specifically in Haycock and Milford. (See the residential development areas analysis in Chapter 4.)

The area's Limited Growth Villages include Applebachsville, Strawntown, Brick Tavern, Steinsburg, Geryville, and Finland. They are intended to accommodate modest infill development at a less intensive level than villages within the VC-2 District.

If a decision is made to provide village zoning districts for California and/or Shelly, as discussed in the chapter on Historic and Cultural Resources, then those villages should also be classified as Limited Growth Villages. Otherwise, in terms of development policy, those historic settlements would be classified as Hamlets, as described below.

While those villages are not likely to experience significant growth, there is still concern with incompatible adjacent development that may overshadow or undermine their historic character. The planning policy for those villages is to examine any and all village planning techniques (e.g., scenic overlay district, design guidelines, sidewalks) deemed necessary to preserve and enhance the village's historic character.

### **Recommendations – Villages**

- *Finland, Milford Township* -- Milford officials may wish to consider the possibility of removing the VC-1 zoning district designation from this area. As discussed in the Historic and Cultural Resources chapter, the village of Finland has a minimal concentration of structures and historic identity (with the exception of the Finland Inn).

In place of the VC-1 District, it appears that Finland would be most appropriately rezoned to the RP District, due to its location along the Unami Creek corridor and the adjacent RP zoning designation. The RP District is a reserve area, rather than a development district.

- *California and Shelly, Richland Township* -- Richland officials should consider conducting village studies and creating VC-1 village zoning designations for California and Shelly because of their concentrations of historically significant buildings and potential eligibility for National Register listing. Any village designation should be preceded by a detailed study to identify the appropriate limits of the village zoning district boundaries.

**Hamlets** – Typically, these historic settlements are very limited in area and do not contain a separate village zoning district. Hamlets include Thatcher, Paletown, Rich Hill and Mumbauersville (and possibly California and Shelly).

Based upon site surveys, the only perceived settlement pattern of these hamlets are a few dwellings and structures, which may be what is remaining from a larger concentration of buildings that were destroyed over time. These very small settlements are particularly vulnerable to development of adjacent properties.

The prescribed planning policy for a hamlet is to evaluate the feasibility of providing an overlay district to preserve or enhance the area in and around the hamlets. Development that is proposed adjacent to a hamlet should be encouraged to contain village-style form and architecture. To enhance the rural historic character, additional preservation measures may be appropriate.

### **Land Use Tools and Techniques**

Identifying what the region and its municipalities should look like in the future, as well as how this can be accomplished is a key component of comprehensive planning. The six QAPC municipalities have various tools and techniques available to them to implement their community vision. The strategies recommended in this section are in addition to those already in use by Quakertown Area municipalities, which include site capacity calculations, natural resource protection standards, open space preservation, stormwater management ordinances, wellhead protection provisions, and more.

The zoning ordinance is one basic element of land use planning, which incorporates many of the regulatory tools and techniques that determine how land is used, what is built on it, and where. Most of the region's municipalities rely on performance zoning, which allows flexibility in housing type and overall development design, provided that certain basic dimensional and natural resource protection standards are observed.

Some zoning ordinance provisions may merit updating to reflect current planning practice and better serve changing community needs for growth management or redevelopment. One aspect of the zoning ordinance that should be periodically reviewed is regulation of land uses, residential and nonresidential. Certain uses may need to be added, eliminated, or revised.

The QAPC model ordinance, issued in 1994, should be evaluated and revised as necessary to reflect changes in the MPC, development in the region, state-of-the-art planning practice, and the recommendations of this updated plan. Specific residential and non-residential uses are discussed in the following sections.

### **Recommendations – Zoning and Other Land Use Regulation**

- Review and update municipal zoning ordinances, with particular attention to land uses, to reflect current needs and state-of-the-art planning practice.
- Review and update the QAPC model ordinance.

### **Residential Uses**

The zoning ordinances of the QAPC municipalities provide for a variety of housing types. Residents surveyed for the comprehensive plan rated housing affordability among the top three reasons for settling in their home municipality, yet nearly half of those respondents collectively rated housing affordability and variety as fair to poor.

While single-family detached housing predominates in the Quakertown Area, those ordinances based on the regional model encompass many other alternatives, including residential conversions, townhouses and other attached housing, land-sparing cluster development, and planned unit development of large-scale residential projects. The ordinances of Quakertown and Richlandtown also permit a mix of housing, but focus mainly on housing types most suitable to built-up communities at a village scale.

The nature of the housing stock varies at the municipal level. Most of the region's multifamily housing is concentrated in Richland and Quakertown. Natural resources sharply limit the residential carrying capacity in Haycock.

Given the concern about the availability of affordable housing expressed in the resident survey, Milford may want to encourage development proposals that incorporate multifamily housing in suitably zoned areas. A regional market study may be helpful in documenting the nature of local housing demand.

### **Senior Housing Opportunities**

As the massive baby boom generation begins to age, developers are scrambling to capture this large, affluent market. Local zoning ordinances should set standards for the newer types of residential and semi-institutional uses for older people, or existing standards may have to be fine-tuned.

Senior housing falls into four general categories: independent living (also known as active-adult or age-restricted housing), continuing care retirement communities, assisted living, and nursing homes. Continuing care retirement communities (CCRCs) package independent living with assisted living, nursing care, or both. CCRCs are sometimes called life care communities, but life care actually refers to the financial agreement involved in this type of housing arrangement, which is regulated by the state Insurance Department.

Age-restricted housing provides few or no support services to help residents carry out tasks of daily living, although it often includes a clubhouse and other recreation amenities. Assisted living, sometimes called personal care, is a long-term living situation for seniors who need more help than is available in an independent living community, but do not require the degree of medical and nursing care provided in a nursing home.

Generally, the bulk, density, open space and parking for age-restricted housing should be regulated similarly to general-occupancy housing of comparable type. Also, age-restricted housing should be located near roads, shops, services and health care, rather than in remote rural settings, as many of the occupants will be aging in place.

Other specialized senior housing uses that can be written into the zoning ordinance are accessory apartments and elder cottages built for occupancy by older family members. These options are especially suitable in rural or exurban areas with large homes and/or large lots.

Accessory apartments are apartments created within a single-family home. Elder cottages, sometimes known as “granny flats,” are detached units, often of modular construction, on the same lot as a principal home. They can be removed if they are no longer needed. The model regional ordinance provides for accessory apartments.

Richland Township has designated an overlay district to encompass age-restricted housing, and has provided for multiple types of age-restricted housing design. Richland has also rescinded ordinance provisions for a high-density age-restricted housing type when it appeared an oversupply would result.



*Arbors age-restricted housing development in Richland*

Milford and Quakertown have received proposals for age-restricted housing. Development standards for this use type should be enacted in communities that lack them, particularly where vacant land exists.

QAPC member municipalities should review their zoning ordinances to ensure that appropriate regulations exist for each type of specialized senior housing use, and that terminology is standardized. For example, communities often have enacted retirement community and nursing home uses but less frequently have set standards for assisted living, which can be a component of a retirement community. Current standards for elderly housing may be targeted at assisted housing or small mid-rise apartments, which were the prevalent forms of non-institutional senior housing in the past.

### **Recommendations – Residential Use**

- Consider conducting a regional housing market study to determine the nature and extent of local housing demand.
- Municipalities should monitor the supply of multifamily housing and encourage its retention and proper upkeep. Milford Township, in particular, should consider ways to encourage development of multifamily housing in suitably zoned areas.
- Review ordinances to ensure they provide for this use type and contain appropriate development standards.

- Review ordinances to ensure that all types of institutional and non-institutional senior housing are regulated appropriately and that terminology is standardized.

### **Mixed Use**

Traditional neighborhood development (TND) and transit-oriented development (TOD) are two forms of mixed-use development that may be appropriate in certain locales in the region. Provisions for such districts would have to be written into municipal zoning ordinances.

Authorized by the Pennsylvania Municipalities Planning Code, a TND zoning district attempts to establish a pedestrian-oriented, mixed-use development similar to that of older boroughs and villages. TNDs are compact, walkable communities combining housing with small-scale shops and businesses, community facilities, and central open space.

Seeking to re-create traditional small-town neighborhoods, TNDs are characterized by narrow streets in a grid pattern, short setbacks, and a pedestrian-friendly environment. They feature a mix of house types on smaller lots, porches, garages, and alleyways at the rear of houses, various types of commercial and civic buildings, and usable public space. The main differences between a TND and conventional suburban development are the physical neighborhood composition and the overall land use pattern.

In the Quakertown Area, TNDs would be most appropriate within the development districts of Milford and Richland, particularly in areas zoned for higher-density residential development along or near major road corridors. A TND may be implemented as an overlay district, leaving underlying zoning in place.

Mixed-use, traditional neighborhoods already exist in the region's three boroughs as a result of historical patterns of development. In Quakertown and Richlandtown, zoning ordinances should be reviewed to ensure they provide for continuation of the mixed-use environment that now exists. Housing uses, in particular, should be revised to allow apartments above commercial buildings in the village center or other central commercial district.

TOD is another form of mixed-use district, one that is centered on public transportation, usually a rail station or bus stop, within the neighborhood. TOD combines housing with nonresidential development, at higher densities, to promote use of public transit and reduce vehicular traffic, and to create a customer base for small businesses in the district.

TOD shares many characteristics with TND. It is compact, mixed-use, and people-friendly. It makes use of a grid street pattern and has public open space. It also includes prominent auto, pedestrian and bicycle connections.

Like a TND, a TOD can be implemented as an overlay district. If passenger service on the Quakertown rail line is revived, rail stations in Quakertown and in the village of Shelly in Richland would be potential locations for TODs.

### **Recommendations – Mixed Use**

- Determine whether appropriate locations exist for TND, particularly within development districts in Milford and Richland. If so, enact overlay or other zoning regulations to implement TND.



*Quakertown Train Station*

- Borough officials should review zoning ordinances to ensure that existing mixed use environments are preserved and encouraged, paying particular attention to housing above shops or otherwise situated in commercial districts.
- Determine whether appropriate locations exist for TOD, particularly near rail lines in Quakertown and Shelly in Richland. If so, enact overlay or other zoning regulations to implement TOD.

### **Redevelopment**

Within older neighborhoods, especially but not exclusively in boroughs, redevelopment, rather than growth, may be a defining issue. A number of planning devices promote commercial or residential redevelopment, or both.

Older neighborhoods in need of redevelopment tend to mix uses, because they were often established before the imposition of zoning to separate land uses. TND, in fact, is inspired by the form of older neighborhoods. Redevelopment in such areas may involve a degree of commercial and institutional redevelopment, as well.

Some useful techniques with redevelopment applications have been described in earlier chapters of this plan. Among them are the historic preservation and village planning techniques addressed at length in Chapter 8.

In redevelopment, historic preservation and village planning may need to be supplemented by infill development to occupy vacant parcels. Design guidelines are a tool to ensure that new, rebuilt, or expanded infill structures, whether residential or commercial, are compatible with their surroundings.

Conversion or adaptive reuse of vacant structures promotes redevelopment, discourages demolition of historic properties, and contributes to the tax base. Municipal zoning ordinances based on the regional model allow for residential conversions and bed-and-breakfast uses.

Buildings and neighborhood infrastructure should be maintained in good condition or rehabilitated, when necessary. Code enforcement and the use of available sources of community development funding are two means of supporting maintenance and rehabilitation activity.



*Downtown Quakertown*

The state-sponsored Main Street program pairs physical and streetscape improvements with marketing initiatives to revive struggling downtown business districts in smaller communities. Quakertown’s Main Street program, Quakertown Alive!, is renewing the borough’s central business district and spurring new private investment there. Its activities have included streetscape planning, façade improvements, business recruitment, tree planting, and special events.

Commercial redevelopment areas in the region’s suburban areas are likely to take the form of grayfields—abandoned shopping centers or strip malls—along highway corridors. In Richland, aging commercial centers along Route 309, like the Richland Shopping Center, have been upgraded, while new malls have been built. Occupancy patterns should be monitored, and vacant or shabby centers refurbished and marketed before blight gains a foothold.

Some of the contaminated, idle industrial sites known as brownfields exist in the region. The Krupp plant site in Quakertown has been cleaned up for use as a public library branch. The old Watson Johnson landfill, which encompasses a residential subdivision in Richland, is a Superfund site scheduled for remediation.

Any additional brownfield sites should be inventoried and their potential reuses evaluated. State funding assistance programs exist for remediation. Either residential or nonresidential reuse may be possible, depending on the nature of the contamination and the extent of clean-up.

### **Recommendations – Redevelopment**

- Evaluate potential sites for infill development. Review municipal ordinances to ensure that infill is compatible with existing development, using tools like design guidelines and adaptive reuse provisions.
- Promote building maintenance and improvement through code enforcement and use of community development funding.
- Monitor occupancy and maintenance of strip malls and other older commercial centers. Encourage marketing and reinvestment by the private sector.
- Inventory brownfields, identify potential for reuse, and seek funding for remediation.



## **Preservation of Natural Resources**

The regional model zoning ordinance encourages rural land with significant natural resources to be placed within a special resource conservation zoning district. The intent of such a district is to sharply curtail the allowed intensity of development, along with the provision of public services and infrastructure that support large-scale development.

In addition, a keystone of the performance zoning used regionally is site capacity calculations that limit the allowed intensity of development on a site in order to preserve natural resources and topography. The benefits of performance zoning can be supplemented by additional conservation design techniques designed to lessen the impacts of development on natural resources.

A full discussion of resource protection standards, the site analysis/resource conservation plan and other components of the low-impact, conservation design approach to development is in Chapter 3 on natural resources. As noted in that chapter, it is recommended that all Quakertown Area municipalities consider amending their subdivision and land development ordinances to incorporate the procedures and regulations in the model ordinance crafted as an outgrowth of the regional “Growing Greener” initiative, as Milford Township has done. Also encouraged is the review of ordinances to ensure that recommended resource protection ratios are used, and the enactment of riparian corridor protection.

Another way of preserving resources is the transfer of development rights (TDR). TDR shifts development away from sensitive natural areas or agricultural land and concentrates it in development areas.

TDR programs allow property owners in the “sending area,” where development is to be limited, to sell development rights for use in the “receiving area,” where a concentration of growth is desired. TDR programs in Pennsylvania must be voluntary, allowing sending area landowners the option to build or to sell the development rights. And TDR programs in the Commonwealth can only be used to transfer development rights within a single municipality or among municipalities with a joint zoning ordinance.

A TDR program is especially appropriate to channel development away from areas of unique resources that lie in the likely path of development, and toward areas more suitable for growth. Examples of suitable areas for a TDR program include the Quakertown Swamp environs in Richland and areas in Haycock’s RP Resource Protection District that lie adjacent to villages or other areas in the development district.

Productive farmland is also a natural resource. The region contains areas of active farms and high-quality soils, most notably in Milford and Richland townships, and to a lesser degree in Haycock. The MPC allows zoning ordinances to incorporate provisions to preserve agricultural land. Agricultural zoning recommendations and the Bucks County Agricultural Preservation Program are discussed in Chapter 3 on natural resources.

Milford has established an agricultural security district encompassing its farms, which is an essential element in entering farms into the Bucks County Agricultural Preservation program. This program purchases development rights to farms, allowing the farmland itself to remain in agricultural use in

perpetuity. Haycock has enrolled its farms in the agricultural security district in neighboring Springfield Township. It is recommended that Richland consider establishing its own agricultural security district.

### **Recommendations – Resource Preservation**

- Evaluate the potential for TDR programs. Recommended areas include the Quakertown Swamp environs in Richland and areas adjacent to the development district in Haycock.
- Maintain agricultural security districts, which allow farms to be preserved through the county program. It is recommended that Richland consider establishing its own agricultural security district.

### **Multi-municipal Planning and Zoning**

Multi-municipal, or joint, planning and zoning occur when municipalities agree to work together to develop a single planning document or zoning regulations for use in all the municipalities involved. The purpose of multi-municipal planning and zoning is to address regional concerns and development with impacts that spill over municipal borders.

The Quakertown Area comprehensive plan represents one aspect of multi-municipal planning, as authorized under the MPC. Expanded applications, such as a joint zoning ordinance, are possible and desirable.

For example, Pennsylvania courts have interpreted the MPC to require that all uses and housing types be provided for within a municipality. But with multi-municipal planning and zoning in place, all uses may be provided within the planning region, rather than at the municipal level.

This can focus development in places where public services are available, thus sparing farmland and other natural resources, or provide consistency in development that spans municipal borders. Other specialty planning areas strongly lending themselves to a multi-municipal approach include transportation, watersheds, water supply, sewage treatment, solid waste disposal, and corridor planning, which is discussed in the following section on nonresidential planning.

Shared regional services are also a natural outgrowth of multi-municipal planning initiatives. The region's fire companies, for example, meet periodically to do planning and discuss common concerns. Other agencies could do likewise, with the ultimate goal of consolidating service provision where possible.

### **Recommendations – Multi-municipal Planning**

- Consider expanding QAPC-sponsored planning activities. Potential initiatives include a joint zoning ordinance, and regional approaches to transportation, watershed and water supply, sewage facilities, solid waste disposal, corridor planning, and an official map.
- Evaluate potential for sharing and consolidating community services and facilities.

## Official Map

The official map is a tool that allows municipalities to designate and reserve locations for future public facilities, including roads, parks and open space, public schools, stormwater management areas, transit rights-of-way, and more. An official map may focus on one type of improvement or facility, like roads or parkland, but usually includes a variety of public facilities.

The official map must be adopted by the governing body by ordinance. It can be amended if necessary. The QAPC could prepare a composite map incorporating locations designated on the official maps of its member municipalities, but power to adopt and amend an official map rests at the municipal level.

## Nonresidential Planning

Planning tools can be applied not only to mixed use and residential development and redevelopment, but to issues of commercial and industrial planning as well. Nonresidential development—businesses, heavy and light industry and civic and cultural institutions—contribute to the tax base, furnish jobs, and diversify the community. Properly regulated, the adverse effects of most industrial operations can be minimized or contained.

The Quakertown Area model zoning ordinance includes performance standards to regulate potential industrial nuisance impacts. It also includes a wide range of nonresidential uses, including the types of larger-scale commercial and industrial uses that have become prevalent in recent years: office and industrial parks, big-box stores, multiple commercial use, and flex space, for example.

Many of these use and other regulations in the model ordinance remain current, although its overall review and update is recommended. In the meantime, communities that use the model ordinance may wish to review and update municipal ordinance standards for open space, design guidelines, and pedestrian access requirements for nonresidential uses to reflect a trend toward adding more open space, walkability, and community access to office parks. The boroughs that do not use the model ordinance may wish to review their ordinances to see if there is need to add such uses.



*Intersection of Routes 313/663/309*

Major road corridors in the region are being developed rapidly and warrant a comprehensive, intensive, and multi-municipal approach to planning, beginning with a traffic and design study. The current Arterial Overlay District is designed mainly to deal with access management, and falls short of addressing the many congestion, design, and safety issues that affect these highway corridors. The affected corridors are parts of Route 309, Route 663, Route 313, and Route 563.

Corridor planning for arterial roadways has a threefold focus: to maintain or improve economic vitality, to relieve traffic congestion, and to improve the appearance of the corridor. Because corridor planning affects business owners, drivers, and residents in general, it is usually guided by a committee representative of the interested parties.

The planning process entails collection of data on demographics, natural and built resources, existing regulations, and economic conditions. Alternative approaches are examined and a preferred approach is chosen.

The end product is an action plan for implementing the selected pattern of development or redevelopment. It will detail recommendations for ordinance amendments, landscaping, and physical improvements, and identify costs, a timetable, assignment of responsibilities, and monitoring procedures.

### **Recommendations – Nonresidential Planning**

- Pending an update of the model ordinance, review municipal ordinances for currency of standards for larger-scale office/commercial uses, particularly with regard to pedestrian access, open space, and design guidelines. Boroughs that do not use the model ordinance should ensure that municipal ordinances provide for office parks, R&D uses, and the like.
- Conduct corridor studies for the sections of roadway included in the Arterial Overlay District in Milford and Richland. They are:
  - Route 309 from the Richland/West Rockhill border to the Richland/Springfield border;
  - Route 663 from its terminus at Route 309 in Quakertown to Spinnerstown in Milford Township;
  - Route 313 from its terminus at Route 663 in Quakertown to Paletown Road.

## Chapter 11

# Municipal Finance Considerations

As the Quakertown Area continues to grow, the need for additional or expanded services and facilities will also increase. Demand will come not only from anticipated population growth but also from residents' perceived need for better public facilities, and from costs of maintaining existing facilities and systems.

At the same time, residents are concerned about the level of taxes. In the survey taken for this comprehensive plan, those who responded rated taxes as the second-greatest threat to the areawide quality of life, next to vehicular traffic.

As the general living standard rises, demand for improved governmental services rises. For example, an increase in recreational facilities and parkland may increase municipal expenses but such improvements substantially increase the quality of life for residents.

While the six Quakertown Area Planning Committee (QAPC) member municipalities vary in size and the nature and complexity of services and facilities they provide, the approach outlined in this chapter provides a general method for budget and capital projects planning. Specific, potential funding sources for capital projects – and other activities recommended in this comprehensive plan – are in Appendix G, Sources of Funding and Technical Assistance.

Financial policies and programs should be developed to effectively address growing demands on municipal budgets. Taxation and spending objectives should be developed. The appropriate mix of current expenses to capital expense should be a primary determination.

Generally, operating expenses are financed through current revenues. Short-term debt permits orderly expenditures even though revenues are received unevenly through the year. Short-term debt is often used to meet unexpected or temporary deficits of moderate amount or provide interim project financing to reduce interest costs and permit more flexibility in the timing and the amount of long-term financing. Short-term borrowing should generally be restricted to expected revenues within the fiscal year.

Long-term debt should be used to finance major, long-term capital improvements or, much less frequently, to raise large amounts of money quickly when emergencies or opportunities arise. A capital improvement is a new or expanded physical facility of relatively large size, relatively large cost, long-lived, and not of a recurring nature, like schools, parks, public libraries, or police and fire stations. Long-term debt, typically in the form of a bond issue, is also used by Bucks County and a number of its municipalities to preserve open space and farmland.

It is important to develop, adjust, amend and periodically reorder financial policies under which a municipality or the school district supplies current and future services. In the case of older, more urbanized municipalities, long-term debt becomes important when existing capital facilities must be replaced or residents feel a need for facilities. Long-term debt is also an important financial tool for areas experiencing fairly rapid growth pressures where there is a relatively sudden need for major

improvements. These facilities often require raising larger sums of money that are beyond the capability of current resources or because it seems more equitable to have future users pay for services as they are used.

Although the ability to borrow is an attractive tool for raising money in the present and sharing its repayment with posterity, debt is a tool that can be abused through poor planning or management. In order to provide needed services without experiencing financial crisis, the following are suggested procedures to be taken toward developing debt policy objectives and, subsequently, a comprehensive long-term debt policy:<sup>24</sup>

- determine physical facility requirement of the municipality
- evaluate local and regional economies
- evaluate present and potential revenue structure
- determine a balance between current income financing and debt financing.

With these matters resolved, municipal officials will be better able to decide what level of financing and method of financing would be appropriate to meet municipal needs and financial capabilities.

### **Determine Municipal Physical Facility Requirements**

In any municipality, various residents or groups will have differing views of facility needs and on the manner in which needs should be satisfied. The combination of all expressed needs and desires usually exceeds the ability or willingness to provide them. Obviously, elected officials must sort out from among conflicting views and choose those projects that will produce the greatest community good. It may be beneficial to establish a program whereby residents regularly review municipal services and aid in identifying changing needs.

Planning for capital facilities should not be given to individual facility development agencies that are often concerned only with facilities they provide. Local governments, through their planning commissions, managers or financial consultants, should develop a comprehensive plan of services and facilities. In developing this plan, the following steps could be taken:<sup>25</sup>

1. Develop a comprehensive inventory of local government services being performed by local government and other governments serving residents. Services provided by private and quasi-public agencies should be inventoried.
2. Identify the degree to which each government serving the area is involved in delivery of public services.
3. Identify governmental services, if any, that might reasonably be provided in addition to those currently being provided by government. Identify services that are obsolete or no longer needed. Duplication of services among agencies and organizations should be identified.

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<sup>24</sup> Moak, Lennox L., *Administration of Local Government Debt*, Municipal Finance Officers Association of the United States and Canada, Chicago, Illinois, 1970, p. 178.

<sup>25</sup> *Ibid.*, p.182.

4. Develop a comprehensive inventory of existing government physical facilities; the use to which they are put; and information as to ownership, location, condition, remaining useful life, repair and rehabilitation expenses required.
5. Prepare long-term operating programs for each function. Such programs should specify kinds and quantities of services to be delivered and the means by which they are to be delivered. From this, needed physical facilities should be identified.
6. Develop a comprehensive set of recommendations:
  - a. Existing facilities needing replacement or renewal in the foreseeable future.
  - b. Each additional facility that will be needed during the same period.
  - c. The level of government or agency that is responsible for the facilities.

### **Evaluate the Local and Regional Economies**

Revenues from local sources depend to a large degree upon capacity of the local economy to pay taxes and user charges. Since capital facilities financed by long-term debt will be paid for from user charges and increased tax revenues, municipalities should be confident that the local economy will be sound enough to count on revenue to be generated.

### **Evaluate the Present and Potential Revenue Structure**

Although municipalities depend to different degrees on various sources of revenue, the municipality should evaluate three basic sources of local revenue in developing a fiscal policy. These sources are taxes, service charges, and grants from other levels of government and organizations.

Service charges are fees paid by users of specific services. It is felt that payment for such facilities is more equitable through service charges because taxpayers would not be paying for services they do not use. This is particularly important for services used by many people who are not taxpayers in the municipality. If the intent is to make the service self-supporting, rates should be reviewed and adjusted regularly in light of the full cost of providing the service.

For the most part, grants or payments from other levels of government must usually be applied to an immediate capital project rather than being eligible for general income or subsidies for debt payment. Therefore, grants can play an important part in providing capital facilities but usually not in the long-term financing of capital facilities.

### **Determine a Balance between Current Income and Debt Financing**

Municipalities must determine if it is better to pay for capital facilities by borrowing money, by relying on accumulated money and grants, or by some combination of these two approaches. In family finance for example, “pay-as-you-acquire” implies that major purchases, such as an automobile, would be paid from a combination of current income and savings. The other approach, “pay-as-you-use,” implies financing over the useful life of the purchase.

Depending on a municipality's stage of development, its amount of outstanding debt and the particular type of capital facility, either of these approaches may be appropriate. The following are arguments for each.<sup>26</sup>

#### Arguments in Favor of "Pay-as-You-Acquire"

1. The municipality should realize fiscal realities immediately by providing an amount ranging from "down payment" to full financing from current revenues. This kind of action encourages responsible spending both as to projects undertaken and design and cost of projects.
2. The municipality enjoys much greater flexibility in periods of economic difficulty. That is, funds accumulated for capital improvements could be used immediately for operating expenditures and/or a reduction in taxes.
3. A substantial saving in interest is affected. Over a period of time, this saving can be used to finance additional facilities or to reduce tax rates.
4. Borrowing capacity, within both legal and economic limits, is balanced against a period of greater need.
5. Paid-up equity in public facilities is provided for the next generation.
6. If a portion of funds for the facility is to be borrowed, it may be possible to find more favorable interest terms with a large amount of money acquired as a "down-payment." Establishment of a capital improvement fund would pool money for such down-payments.

#### Arguments in Favor of "Pay-as-You-Use"

1. In an expanding economy, even without inflation, per capita income is on the increase. Therefore, payment of a reasonable annual charge for "rental" of a facility can be made easier over a period of years than through full payment at time of acquisition.
2. Capability of the municipality, especially a new or a well-worn one, to provide funds from current revenue for immediate construction is severely limited. Accordingly, it is desirable to proceed with building or acquisition of needed facilities. This can be done only through a "pay-as-you-use" policy.
3. Each generation of users of a facility should be obliged to make its own fair payment toward provision of the facilities it uses. That each generation must make these payments itself deters over-building because the annual debt service must be paid, whereas a generation not accustomed to such payments may find it easy to incur too much debt.

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<sup>26</sup> *Ibid.*, pps.193-194.



4. In many areas, mobility of population has increased to the point that annual turnover of families amounts to 20 percent or more each year. In such circumstances, use of “pay-as-you-use” is the only way in which costs can be fairly apportioned among mobile families.
5. In an economy which has throughout our history been marked by long-term inflation, it is reasonably clear that the dollars in which funds are repaid will be of a lesser value than those that are borrowed in the first place.

Having inventoried existing and desired facilities and services, studied needs of residents and the economy, evaluated present and potential revenue structures, explored advantages and disadvantages of “pay-as-you-acquire” vs. “pay-as-you-use” and investigated various kinds of debt that might be used, the municipality should be in a position to develop or modify its financial and debt policies. Actual policies must be consistent with law, existing financial structure, economic realities, and bond market considerations.

Policies should not impose an imbalance between funds available for operating expenses and those required to pay debt. In the end, recommended policies must be acceptable to residents of the municipality.

To ensure that municipal financial policies remain useful tools in providing for residents’ desired services, it is important that they be regularly reevaluated. Services that are provided should be periodically reviewed to determine if they should be expanded or phased out. Services provided by other public or private agencies should be monitored to avoid unnecessary duplication. Discussion and coordination with these other agencies should result in savings to the taxpayer.

Coordination among the Quakertown Area’s municipalities, Bucks County, and other levels of government can result in savings in providing certain needs. Such coordination could include the cooperative provision of services. Examples include fire and police protection, regional sewage treatment or water supply arrangements, the Quakertown Area School District, the public library system, and the type of multi-municipal planning embodied in this comprehensive plan update. There can also be savings on the joint purchase of regularly needed materials, for example, road maintenance supplies.

Additionally, higher rates of interest can be realized in cooperative investment programs by pooling investment funds among several municipalities. It is important that each municipality be well aware of its cash flow needs before entering a cooperative investment program.

Obviously, developing acceptable financial policies is no small task, but such policies can substantially affect the future welfare of the municipality. Failure to construct certain facilities in order to avoid long-term debt could adversely affect the municipality. For example, attractive industries or employers may bypass municipalities which haven’t invested in appropriate facilities. On the other hand, extensive debt programs can produce burdensome taxes and user charges that will result in the same effect or, possibly, drive away existing employers.

The initial development or periodic review of local financial and debt policies should be coordinated with other stated community development policies. A municipality’s capital improvements program

should aid in implementing all adopted goals for balanced municipal growth, housing, environmental protection and land use.

### **Fiscal Impacts of Land Uses**

A 1994 study by the Pennsylvania State College of Agricultural Sciences examined the fiscal impacts of residential, commercial, industrial, and open space land uses and found that, in general, each of these land uses pays its own way, when comparing municipal revenues generated to costs incurred in services.<sup>27</sup> This occurs despite the increased services provided by a growing municipality.

Thus, in terms of municipal budgeting and finance, alternative land uses do not have a significant impact. Maintaining a balanced budget is more a matter of keeping expenditures under control and taking advantage of other revenue streams than it is a matter of zoning more land for nonresidential land use.

But when school district budgets are added to the equation, alternative land uses do have a significant impact. While residential land use provides a majority of revenues, it does not pay its own way, as the costs of educating schoolchildren are very high. (The one exception to this rule is age-restricted or senior citizen housing; this form of housing generates no schoolchildren and generally pays for itself, although it may free up housing occupied by empty-nester households for re-occupancy by younger families with children.)

Communities with a significant residential tax base without growth in nonresidential land uses will begin to see higher tax bills, as the revenue generated by residential development will become stagnant and may not keep up with the rising costs of public education. Farmland and open space may actually Thus, to help stabilize tax rates, municipalities should ensure that their zoning ordinances encourage a variety of land uses.

Some of the tax burden can be shifted to new nonresidential development. Commercial and industrial land uses provide a significant subsidy to both school districts and residential taxpayers in that none of these uses generates schoolchildren. Consequently, they help moderate residents' taxes.

In boroughs or other more highly developed communities, redevelopment may present a more viable activity than new development. Redevelopment in general, and especially commercial and industrial redevelopment, creates new sources of tax revenue on vacant or idle property.

The redevelopment of brownfields, contaminated former industrial sites, fills a dual economic and environmental purpose. Brownfield reclamation not only creates new tax ratables, but also cleans up contaminated land to standards suitable for nonresidential or even residential use. The state has an active brownfield reclamation program that provides funding and technical assistance.

Preservation of farmland and open space is another effective way to stabilize property taxes. Farms contribute to the economy and generate virtually no service costs. Open space provides a public amenity that adds to the quality of community life. The initial cost of purchasing land or an easement may be quickly offset because open space produces no impact on the public school system, and

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<sup>27</sup> Kelsey, Timothy W. *Local Tax Bases and Change: The Fiscal Impacts of Alternative Land Uses*. (Extension Circular 143) College of Agricultural Sciences, Pennsylvania State University, 1994.

generates few, if any, costs in public services, particularly if left in a natural state or used for passive recreation.

From time to time, land owners petition for changes in municipal zoning. Zoning changes present a shift in land use policy and also a shift in fiscal situation. Municipalities can and should require that any applicant for a zoning change conduct a fiscal impact study to determine the impacts of a zoning change upon land use and the fiscal bottom line.

### **Recommendations – Municipal Finance**

- Continue or institute financial planning procedures that incorporate mid-to-long-range goal and objective setting and budget development.
- Continue or institute a capital program process.
- Promote balanced development, including redevelopment, farmland and open space preservation, and nonresidential development as appropriate, to stabilize and supplement the residential tax base.
- Require a fiscal impact study for proposed zoning changes.
- Encourage service sharing and cooperative purchase of materials and equipment.



## Chapter 12

### Implementation of Recommendations

This chapter summarizes the comprehensive plan's recommendations by section topic. Each plan topic includes the page numbers in which the discussion takes place in this plan. The entity or entities responsible for completing the task and suggested time frame for action are also provided.

Time frames are broken into short-term (1–2 year), medium-term (3–5 years), long-term (6–10 years), and ongoing. Ongoing efforts are those currently being undertaken and which should continue into the future.

While all of the recommendations summarized in this chapter are considered important for the future of the Quakertown Area, the Quakertown Area Planning Committee (QAPC) representatives who developed this document identified several overall major priority items after discussing each recommendation in detail. QAPC representatives consider the following four issues and recommendations as most critical for implementation:

- Water – conducting a comprehensive study of groundwater resources
- Transportation – conducting corridor studies and drafting an access management plan
- Natural resources – incorporating riparian corridor protection standards in municipal ordinances (Milford Township is now the only Quakertown Area municipality with such standards.)
- Open space – updating the *Quakertown Area Linked Open Space Plan*.

Based upon responses to the resident survey conducted in 2005, public opinion parallels the QAPC representatives' priority items. When asked to rate the most important issues in planning for the future of the Quakertown Area, area residents named traffic and road conditions, groundwater protection, open space/agricultural areas, and natural resource protection.



## Quakertown Area Comprehensive Plan Update Action Plan Summary Chart

### Natural Resources (Pages 17-35)

Recommended Actions	Entity Responsible	Partners	Time Frame	Potential Funding/Technical Assistance Sources <sup>1,2</sup>
1. Continue the planning and zoning policies requiring preservation of environmental resources that include floodplains, floodplain soils, watercourses, wetlands, lakes and ponds, wetlands margins, lake and pond shore areas, steep slopes and woodlands. Municipalities that do not currently have all of the recommended protection standards should consider adopting them into their zoning ordinances, if appropriate.	QAPC, governing bodies, planning commissions		Ongoing for mun. w/ standards: Short-term for mun. w/o standards	
2. Revise municipal ordinances to reference the new Natural Resource Conservation Service soil classification and to reflect its new soil classifications.	Governing bodies, planning commissions		Short-term	
3. Area municipalities that currently do not have riparian corridor protection standards should consider establishing and incorporating such standards (riparian buffer zones) into their zoning ordinances to protect the area's streams and watersheds. Milford is the only Quakertown Area municipality to have riparian corridor protection standards.	Governing bodies, planning commissions	Local environmental agencies	Short-term	<b>Growing Greener, PaDEP LUPTAP, DCED</b>
4. Investigate programs and funding for the planting of riparian buffers on an ongoing basis.	Governing bodies, planning commissions	Local environmental agencies	Ongoing	
5. Richland Township should continue to coordinate with the Heritage Conservancy to implement recommended protection measures for the Quakertown Swamp.	Governing bodies, planning commissions	Local environmental agencies	Ongoing	<b>Growing Greener, PaDEP</b>
6. Require delineation of existing wetland areas on development sites by a qualified professional.	Governing bodies, planning commissions		Ongoing	
7. As part of forestry use regulations, consider amending the zoning ordinance to prohibit the cutting of trees to reduce the requirement to protect forest resources in anticipation of a subdivision or land development.	Governing bodies, planning commissions		Short-term	
8. Consider enhancing existing woodland protection requirements with tree replacement and/or mature tree protection regulations.	Governing bodies, planning commissions		Short-term	
9. Revise plan submission requirements in municipal subdivision and land development ordinances to require that subdivision and land development plans show priority sites designated in the <i>Natural Areas Inventory of Bucks County, Pennsylvania</i> (where applicable.)	Governing bodies, planning commissions		Short-term	<b>LUPTAP, DCED</b>
10. Similar to Milford Township, all other area municipalities should consider amending their subdivision and land development ordinance to incorporate provisions that strongly recommend a Pre-Application Meeting, an Existing Resources and Site Analysis Plan, a Site Inspection, a Pre-Sketch Plan Conference, and Sketch Plan submission prior to any formal submission, as well as requiring the four-step design process and a resource impact conservation plan.	Governing bodies, planning commissions		Short-term	<b>LUPTAP, DCED</b>
11. Consider revising municipal subdivision and land development ordinances to require the use of low-impact grading techniques, as detailed in Chapter 3 Natural Resources: Policies and Protection Standards.	Governing bodies, planning commissions	Local environmental agencies	Short-term	<b>LUPTAP, DCED</b>

<sup>1</sup> Funding programs and administrative agencies of the funding programs are shown in bold; agencies not in bold are those that can provide assistance, whether as part of the funding program or independently.

<sup>2</sup> Refer to Appendix G for details on potential funding sources.

## Transportation (Pages 89-106)

Recommended Actions	Entity Responsible	Partners	Time Frame	Potential Funding/Technical Assistance Sources <sup>1,2</sup>
1. Continue to require the submission of a traffic impact analysis for proposals that would generate a significant amount of traffic and those that represent a change in land use planned for an area.	Governing bodies, planning commissions		Ongoing	
2. Coordinate with the TMA Bucks regarding future bus service routes and schedules and promote future bus service as a public transportation service option.	Governing bodies, planning commissions		Ongoing	
3. Coordinate land use planning to allow for necessary infrastructure associated with reactivation of the <i>Quakertown-Stony Creek</i> rail line.	Governing bodies, planning commissions		Ongoing	<b>LUPTAP, DCED, SEPTA, PennDOT, DVRPC</b>
4. Ensure that municipal projects incorporate the use of public transportation services.	Governing bodies, planning commissions		Ongoing	SEPTA, DVRPC, TMA Bucks
5. Prepare and adopt subdivision and land development regulations that require developers to incorporate transportation improvements and/or public transportation into land development projects by providing the following: <ul style="list-style-type: none"> <li>▪ Designing office complexes with bus pull-off areas and transit shelters to encourage public transit use.</li> <li>▪ Reducing the distance from the main road to the building entrance so employees will have a shorter walk from the street to the building.</li> <li>▪ Providing priority parking areas for carpoolers as an incentive to utilize carpools.</li> </ul>	Governing bodies, planning commissions		Short-term	<b>LUPTAP, DCED, CDBG, BCOBCD</b>
6. Consider transportation improvements from a context sensitive approach by considering scenic, aesthetic, historic, environmental, and other community values.	Governing bodies, planning commissions		Ongoing	
7. Periodically review, and update when necessary the existing highway classification of the region's roadways and develop improvement standards to address aesthetic and environmental qualities.	QAPC, governing bodies, planning commissions		Ongoing	<b>LUPTAP, DCED, CDBG, BCOBCD</b>
8. Ensure consistency between defined roadway terms and the categories used in the highway classification.	QAPC, governing bodies, planning commissions		Short-term	
9. Continue to require dedication of needed rights-of-way during the subdivision or land development process, so that sufficient land is provided for improvements which may become necessary in the future.	Governing bodies, planning commissions		Ongoing	
10. Consider the recommended transportation projects from the Quakertown Area Transportation Improvement Project, as well as other locally identified transportation projects, when subdivision or land development plans are submitted.	Governing bodies, planning commissions		Ongoing	

<sup>1</sup> Funding programs and administrative agencies of the funding programs are shown in bold; agencies not in bold are those that can provide assistance, whether as part of the funding program or independently.

<sup>2</sup> Refer to Appendix G for details on potential funding sources.



## Quakertown Area Comprehensive Plan Update Action Plan Summary Chart

### Transportation (Pages 89-106) (Continued)

Recommended Actions	Entity Responsible	Partners	Time Frame	Potential Funding/Technical Assistance Sources <sup>1,2</sup>
11. Coordinate with the Bucks County Planning Commission to develop a prioritized list of needed transportation improvements for consideration on the regional TIP.	Governing bodies		Ongoing	
12. Consider conducting municipal transportation studies in order to begin assessing traffic impact fees.	Governing bodies, planning commissions		Medium-term	<b>LUPTAP, DCED, CDBG, BCOCBD</b>
13. Develop an access management plan for the Quakertown Area.	QAPC		Short-term	PennDOT Growing Smarter Transportation Initiative
14. Develop a traffic calming plan for the Quakertown Area.	QAPC		Short-term	PennDOT Growing Smarter Transportation Initiative
15. Prepare and adopt subdivision and land development ordinance regulations consistent with a traffic calming plan to ensure the integration of traffic calming techniques in residential developments to discourage speeding and high-cut through traffic volumes on neighborhood streets.	Governing bodies, planning commissions	QAPC	Short-term	<b>LUPTAP, DCED, CDBG, BCOCBD HTS/SRS, SAFETEA-LU, PennDOT</b>
16. Prepare and adopt subdivision and land development ordinance regulations that require all development proposals make provisions for safe pedestrian and bicycle movement which will alleviate some need for additional automobile use, including preserving and creating rights-of way for bicycle and pedestrian use.	Governing bodies, planning commissions	QAPC	Short-term	<b>LUPTAP, DCED, CDBG, BCOCBD</b>
17. Review and revise, if necessary, municipal zoning ordinances to ensure they promote compact mixed-use development that is conducive to pedestrian and bicycle travel.	Governing bodies, planning commissions	QAPC	Short-term	<b>LUPTAP, DCED, CDBG, BCOCBD</b>

### Community Facilities (Community Services) (Pages 107-114)

1. Promote and expand mechanisms for communication and cooperation between QAPC municipalities and other government and nonprofit service providers, particularly when facility needs or changes in service levels might have an impact on land use planning at the municipal level or regional level.	QAPC, municipal managers, governing bodies, planning commissions	Service providers	Ongoing	<b>Shared Municipal Service Grants, DCED, Local Municipal Resources and Development Program</b>
2. Coordinate information sharing and planning among the various governmental entities that operate within each municipality to enhance the effectiveness of land use planning, to improve the delivery of services, and to plan for the future needs of service providers and the communities they serve.	Municipal managers, governing bodies, planning commissions	QAPC, local environmental agencies	Ongoing	<b>Shared Municipal Service Grants, DCED, Local Municipal Resources and Development Program</b>
3. Continue current efforts and explore new opportunities for sharing information, services, or resources among the QAPC municipalities and among service providers to reduce costs and duplication of effort and to promote greater efficiency in service delivery.	Municipal managers, governing bodies, planning commissions	QAPC, service providers	Ongoing	<b>Shared Municipal Services Grants, DCED, Community Revitalization Program Grants, Regional Police Assistance Grant Program, Local Municipal Resources and Development Program</b>

<sup>1</sup> Funding programs and administrative agencies of the funding programs are shown in bold; agencies not in bold are those that can provide assistance, whether as part of the funding program or independently.

<sup>2</sup> Refer to Appendix G for details on potential funding sources.

## Community Facilities (Water Supply and Quality) (Pages 114-118)

Recommended Actions	Entity Responsible	Partners	Time Frame	Potential Funding/Technical Assistance Sources <sup>1,2</sup>
4. Review or enact water resource impact study requirements for zoning changes, inclusions in development districts, and new high-intensity development situated outside existing or proposed public water service areas.	Governing bodies, planning commissions	Local environmental agencies, water suppliers	Short-term	<b>LUPTAP, DCED, CBDG, BCOCBD</b>
5. Consider undertaking a regional water resources planning program that includes a comprehensive study of groundwater resources.	QAPC, governing bodies, planning commissions	Local environmental agencies, water suppliers, Delaware River Basin Commission	Medium-term	<b>Source Water Protection Grant Program, Growing Greener, PaDEP WREN, League of Women Voters LUPTAP, DCED, BCPC</b>
6. Review ordinances that protect environmentally sensitive land, and strengthen them, if necessary.	QAPC, governing bodies, planning commissions	Local environmental agencies	Ongoing	<b>LUPTAP, DCED, CDBG, BCOCBD BCPC</b>
7. Review or enact wellhead protection ordinance.	QAPC, governing bodies, planning commissions	Local environmental agencies, water suppliers, Bucks County Health Department	Short-term	<b>Source Water Protection Grant Program, PaDEP WREN, League of Women Voters LUPTAP, DCED, CDBG, BCOCBD</b>
8. Incorporate riparian corridor protection standards to promote water quality. (See Recommended Action #3 under Natural Resources)	Governing bodies, planning commissions	Local environmental agencies	Short-term	<b>Growing Greener, PaDEP LUPTAP, DCED</b>

## Community Facilities (Stormwater Management) (Pages 118-121)

9. Act 167 (Pennsylvania Stormwater Management Act of 1978) <ul style="list-style-type: none"> <li>▪ Continue to enforce the recommendations of the <i>Tohickon Creek Watershed Act 167 Stormwater Management Plan</i> and the <i>Delaware River (North) Watershed Act 167 Stormwater Management Plan</i>.</li> <li>▪ Those municipalities with land area within the Perkiomen Creek watershed should also enact ordinances to implement and enforce stormwater BMPs in areas that lie within that watershed.</li> <li>▪ Encourage the preparation of a Perkiomen Act 167 Plan.</li> </ul>	Governing bodies		Ongoing	<b>Act 167 funding, PaDEP, LUPTAP, DCED, BCPC</b>
	Governing bodies		Short-term	<b>Act 167 funding, PaDEP LUPTAP, DCED, BCPC</b>
	Governing bodies		Short-term	<b>Act 167 funding, PaDEP LUPTAP, DCED, BCPC</b>
10. Continue to maintain compliance with NPDES program and file program reports. Because of the regional nature of stormwater management, QAPC municipalities not required to take part in the program should nevertheless review their ordinances to ensure they are implementing state-of-the-art stormwater BMPs.	Governing bodies		Ongoing	PaDEP, EPA
11. Identify flood-prone areas at the municipal level and determine if remediation is possible.	Governing bodies, municipal managers		Ongoing	<b>Growing Greener, PaDEP</b>

<sup>1</sup> Funding programs and administrative agencies of the funding programs are shown in bold; agencies not in bold are those that can provide assistance, whether as part of the funding program or independently.

<sup>2</sup> Refer to Appendix G for details on potential funding sources.

## Quakertown Area Comprehensive Plan Update Action Plan Summary Chart

### Community Facilities (Stormwater Management) (Pages 118-121) (Continued)

Recommended Actions	Entity Responsible	Partners	Time Frame	Potential Funding/Technical Assistance Sources <sup>1,2</sup>
12. Establish regular maintenance programs for stormwater management facilities.	Governing bodies	Municipal engineers	Short-term	<b>Growing Greener, PaDEP</b>
13. Evaluate alternative BMPs for maintaining and retrofitting existing substandard stormwater management facilities.	Governing bodies	Municipal engineers	Short-term	<b>Growing Greener, PaDEP PENNVEST</b>

### Community Facilities (Wastewater Facilities) (Pages 121-124)

14. Consider production of an updated, consolidated Act 537 Plan for the entire Quakertown Area, incorporating recent updates undertaken by Milford and Richland. The other four QAPC municipalities should also review and update sewage facilities plans at the municipal level.	Governing bodies, planning commissions	QAPC, municipal engineers sewerage agencies (Bucks County Water and Sewer Authority, Milford-Trumbauersville Area Sewer Authority, Quakertown Sewage Treatment Plant)	Short-term	<b>Act 537 Sewage Facilities Planning grants, PaDEP</b>
15. As part of the Planning Module for Land Development submission process, require detailed wastewater facilities alternatives for proposed extensions of sewer service outside delineated development areas. These analyses should include evaluations of community systems and the impact of such service extensions on capacity intended for development areas.	Governing bodies		Ongoing	<b>Act 537 Sewage Facilities Planning grants, PaDEP</b>
16. Conduct facilities studies in connection with any proposed expansion of sewer treatment or service capacity, so as to channel expanded service potential to delineated development districts.	Governing bodies, planning commissions	QAPC	Short-term	<b>Act 537 Sewage Facilities Planning grants, PaDEP</b>
17. Continue enforcing sewage facilities impact analysis provisions of the zoning ordinance.	Governing bodies		Ongoing	
18. Consider providing inspection and monitoring of nonmunicipal, industrial, and individual alternative wastewater facilities in addition to that provided by the PaDEP and the BCDH.	Governing bodies		Ongoing	
19. Identify concentrated areas of OLDS malfunctions and prepare or update feasibility studies for techniques and financing of remediation.	Governing bodies, municipal managers	Municipal engineers	Short-term	<b>Act 537 Sewage Facilities Planning grants, PaDEP, BCDH</b>
20. Evaluate area-wide wastewater management when development is proposed in the vicinity of on-site problem areas.	Governing bodies, Planning commissions	QAPC	Ongoing	
21. Adopt ordinances that address operation and maintenance requirements and design requirements of individual alternative systems (e.g., spray irrigation or stream discharge systems) supplemental to DEP and BCDH regulations.	Governing bodies, planning commissions	QAPC	Short-term	<b>LUPTAP, DCED, CDBG, BCOCBD</b>

<sup>1</sup> Funding programs and administrative agencies of the funding programs are shown in bold; agencies not in bold are those that can provide assistance, whether as part of the funding program or independently.

<sup>2</sup> Refer to Appendix G for details on potential funding sources.

## Community Facilities (Solid Waste Management) (Pages 124-126)

Recommended Actions	Entity Responsible	Partners	Time Frame	Potential Funding/Technical Assistance Sources <sup>1,2</sup>
22. Milford is now required to enact a mandatory curbside program for recyclables and yard waste.	Governing bodies, planning commissions	Local environmental agencies	Short-term	<b>Section 902 of Act 101 Grant, PaDEP Technical Assistance grants</b>
23. The QAPC municipalities required to recycle-Milford, Quakertown, and Richland-should institute a recycling education program for residents and commercial and industrial facilities and strengthen reporting procedures in order to increase their municipal performance grants.	Governing bodies	Local environmental agencies	Short-term	<b>Section 902 of Act 101 Grant, Section 904 of Act 101 Grant, PaDEP Technical Assistance grants</b>
24. The QAPC municipalities not required to recycle-Haycock, Richlandtown, and Trumbauersville-should strengthen public education and voluntary recycling programs, including the use of yard waste drop-off sites in their municipalities, when practicable.	Governing bodies	Local environmental agencies	Short-term	<b>Section 902 of Act 101 Grant, Section 904 of Act 101 Grant, PaDEP Technical Assistance grants</b>

## Parks, Recreation, and Open Space (Pages 127-145)

1. Continue implementing the recommendations in municipal open space and park and recreation plans, including creating a trail/greenway network that will connect points of interest throughout each municipality and the region.	QAPC, governing bodies, planning commissions	Local environmental/park and recreation agencies	Ongoing	<b>BCOSP, DCNR Grants, Kodak American Greenways Grants Program, Conservation Fund</b>
2. Update the <i>Quakertown Linked Open Space Plan</i> to incorporate changes that have occurred since 1981 and identify ways to provide needed linkages.	QAPC		Short-term	<b>LUPTAP, DCED, CDBG, BCOCBD Kodak American Greenways Grants Program, Conservation Fund</b>
3. Continue to coordinate open space planning efforts (regional linkages) in the Quakertown Area with what is identified in the <i>Pennridge Areas Greenway Plan</i> .	QAPC, governing bodies		Ongoing	<b>DCNR Grants</b>
4. Continue the planning and zoning policies that require preservation of environmental features.	QAPC, governing bodies		Ongoing	
5. Provide a balance of active and passive recreation facilities to meet the needs of citizens of all ages and interests. Utilize feedback obtained from the resident survey to provide desired recreation facilities.	Governing bodies, planning commissions, local environmental/park and recreation agencies	QAPC	Ongoing	NPS
6. Update municipal open space plans, if needed, to make them current. Park and Recreation plans should be revised to apply recent major parkland acquisitions toward the core recreation acreage standards.	QAPC, governing bodies, planning commissions, local environmental/park and recreation agencies		Short-term	<b>DCNR Grants, LUPTAP, DCED CDBG, BCOCBD</b>

<sup>1</sup> Funding programs and administrative agencies of the funding programs are shown in bold; agencies not in bold are those that can provide assistance, whether as part of the funding program or independently.

<sup>2</sup> Refer to Appendix G for details on potential funding sources.

## Quakertown Area Comprehensive Plan Update Action Plan Summary Chart

### Parks, Recreation, and Open Space (Pages 127-145) (Continued)

Recommended Actions	Entity Responsible	Partners	Time Frame	Potential Funding/Technical Assistance Sources <sup>1,2</sup>
7. Continue to coordinate with the county regarding land and easement purchases through the Bucks County Open Space and Natural Areas programs.	Governing bodies	BCOSP	Ongoing	BCOSP
8. Encourage farmers within the Agricultural Security Areas to enroll in the Bucks County Agricultural Land Preservation Program.	Governing bodies	BCAPP	Ongoing	BCAPP
9. Mandatory Dedication of Recreation Land	Governing body, planning commission		Short-term	
<ul style="list-style-type: none"> <li>▪ Milford should consider the feasibility of instituting open space requirements and a corresponding fee in lieu option for residential developments within the municipal subdivision and development ordinance.</li> <li>▪ Quakertown, Richlandtown, and Trumbauersville should assess their municipal open space plan and/or recreation plan to determine if it provides the necessary guidance by the PaMPC for requiring fee in lieu of recreation land. These municipalities should evaluate whether or not mandatory dedication/fees in lieu contribution would be beneficial to enhance the recreational needs within their communities.</li> <li>▪ Municipalities should periodically reassess the mandatory dedication/fee in lieu contribution (if currently established).</li> </ul>	Governing bodies, planning commissions	Local environ- mental/park and recreation agencies	Short-term	
10. Determine whether reference to mandatory dedication of recreation land should be removed from the zoning ordinance and relocated to the subdivision and land development ordinance.	Governing bodies, planning commissions		Short-term	
11. Consider the use of a Transfer of Development Rights Ordinance that will exchange development rights among property developers to preserve open space in designated areas.	Governing bodies, planning commissions		Medium-term	<b>LUPTAP, DCED</b>
12. Consider designating locations for future public parks, playgrounds, and open space on an official map which provides a legal means for reserving such sites.	Governing bodies, Planning commissions	QAPC, Local environ- mental/park and recreation agencies	Short-term	
13. Continue to promote the use of conservation easements that allow private property owners to place conservation easements on their properties restricting all or a portion of the property from development.	Governing bodies, planning commissions		Ongoing	BCOSP
14. Obtain access easements along the designated greenway/trail linkages network when possible as part of the subdivision and land development review process.	Governing bodies, planning commissions		Ongoing	
15. Coordinate with the public school district for use of school facilities for public recreation programs.	Governing bodies	School officials, local park and recreation agencies	Ongoing	

<sup>1</sup> Funding programs and administrative agencies of the funding programs are shown in bold; agencies not in bold are those that can provide assistance, whether as part of the funding program or independently.

<sup>2</sup> Refer to Appendix G for details on potential funding sources.

## Historic and Cultural Resources (Pages 147-164)

Recommended Actions	Entity Responsible	Partners	Time Frame	Potential Funding/Technical Assistance Sources <sup>1,2</sup>
1. Conduct or update historic resource survey.	Governing bodies, HARBS/Historical commissions		Short-term for mun. w/o survey; Ongoing for mun. w/ survey	PHMC
2. Review zoning ordinance for preservation regulations. Enact measures including historic districting, use modifications, delay of demolition, design guidelines, as appropriate.	Governing bodies, planning commissions, HARBS/Historical commissions		Short-term	PHMC
3. Consider designation of Act 167 (Historic District Act of 1961) historic district(s), where appropriate.	Governing bodies, planning commissions, HARBS/Historical commissions		Medium-term	PHMC
4. Review village zoning regulations and revise or enact, as appropriate.	QAPC, governing bodies, planning commissions, HARBS/Historical commissions		Ongoing for mun.w/ village zoning regs.; Short-term for mun. w/o village zoning regs.	<b>LUPTAP, DCED, CDBG, BCOCBD</b>
5. Support public education, volunteer preservation activities and cultural programs.	Governing bodies, planning commissions, HARBS/Historical commissions	QAPC, school district	Ongoing	
6. In Richland Township, conduct a detailed village study for California and Shelly to evaluate the feasibility of establishing village zoning districts based upon existing conditions.	Township governing body, planning commission		Short-term	PHMC
7. In Milford Township, determine whether or not the Village Center-1 District for Finland should be changed to a more appropriate zoning district.	Township governing body, planning commission		Short-term	
8. In Milford Township, revise the official municipal zoning map in order to identify the application of the Village Expansion Overlay referenced in Section 600 of the zoning ordinance.	Township governing body, planning commission		Short-term	
9. Examine the possibility of adding new uses for the VC-1 and VC-2 districts that encourage village-oriented development featuring compact, pedestrian-oriented, mixed-use communities (i.e., Specialty Shopping Center, Village Shop or Village Office).	QAPC, governing bodies, planning commissions		Short-term	<b>LUPTAP, DCED, CDBG, BCOCBD PHMC</b>

<sup>1</sup> Funding programs and administrative agencies of the funding programs are shown in bold; agencies not in bold are those that can provide assistance, whether as part of the funding program or independently.

<sup>2</sup> Refer to Appendix G for details on potential funding sources.

## Quakertown Area Comprehensive Plan Update Action Plan Summary Chart

### Historic and Cultural Resources (Pages 147-164) (Continued)

Recommended Actions	Entity Responsible	Partners	Time Frame	Potential Funding/Technical Assistance Sources <sup>1,2</sup>
10. Evaluate the need for additional preservation and/or enhancement techniques for all villages and hamlets, such as village viewshed overlay district, village entrance enhancement, and village design guidelines.	QAPC, governing bodies, planning commissions		Short-term	<b>LUPTAP, DCED, CDBG, BCOCBD</b> PHMC
11. Consider implementing other village planning techniques such as the placement of easements, a transfer of development rights (TDR) program, a historic structure demolition permit ordinance, and a site analysis and resource conservation plan.	Governing bodies, planning commissions, HARBS/Historical commissions		Short-term	<b>LUPTAP, DCED, CDBG, BCOCBD</b> PHMC

### Planning Compatibility (Pages 165-172)

1. Review or enact buffering requirements to address incompatibilities and possible impacts from adjacent land uses in other municipalities.	Governing bodies, planning commission		Ongoing for mun. w/ standards; Short-term for mun. w/o standards	<b>LUPTAP, DCED</b>
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### Future Land Use and Growth Management Plan (Pages 173-199)

#### The Land Use Plan—Resource Protection Areas

1. Richland Township officials may want to consider rezoning land between West Paletown and Thatcher roads and between Muskrat and Rocky Ridge roads in the southeast portion of the township from RA Rural Agricultural to RP Resource Protection district to provide maximum protection for existing sensitive resources.	Governing body, planning commission		Short-term	
2. Haycock Township officials may want to consider whether the SC Select Commercial district is warranted and whether the areas currently zoned SC should be retained or possibly rezoned to RP Resource Protection.	Governing body, planning commission		Short-term	

#### The Land Use Plan—Reserve Areas

3. Municipal officials may want to consider eliminating the FC Future Commercial zoning category from their zoning regulations.	Governing bodies, planning commission		Short-term	
4. In Haycock and Milford townships, revise the land use policy of the VC-1 district from Reserve Area to Development Area.	QAPC, governing bodies, planning commission		Short-term	

#### The Land Use Plan—Towns and Villages (See also Village Planning and Preservation recommendations)

5. Analyze how the zoning regulations adopted by Quakertown and Richlandtown boroughs could be integrated into the model Quakertown Area Zoning Ordinance, in order to establish planning consistency and uniform zoning categories on a region-wide basis.	QAPC		Short-term	<b>LUPTAP, DCED, CDBG, BCOCBD</b>
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<sup>1</sup> Funding programs and administrative agencies of the funding programs are shown in bold; agencies not in bold are those that can provide assistance, whether as part of the funding program or independently.

<sup>2</sup> Refer to Appendix G for details on potential funding sources.

## Future Land Use and Growth Management Plan (Pages 173-190) (Continued)

Recommended Actions	Entity Responsible	Partners	Time Frame	Potential Funding/Technical Assistance Sources <sup>1,2</sup>
6. Use appropriate tools, such as historic districting, demolition ordinances, design standards to promote compatible infill development, and use modifications, to ensure that the historic context of the traditional town character is maintained and enhanced.	Borough governing bodies, borough planning commissions, HARBS/ Historical commissions		Short-term	<b>LUPTAP, DCED, CDBG, BCOCBD PHMC</b>
<b>Land Use Tools and Techniques</b>				
7. Update model Quakertown Area Zoning Ordinance to incorporate recommendations of the comprehensive plan.	QAPC	Ongoing		<b>LUPTAP, DCED, CDBG, BCOCBD</b>
8. Periodically review land use regulations to determine if ordinance provisions merit updating to reflect current planning practice.	Governing bodies, planning commissions	Ongoing		<b>LUPTAP, DCED, CDBG, BCOCBD</b>
9. Review zoning ordinance regulations regarding senior housing opportunities to ensure that appropriate regulations exist for each of the uses (independent living, continuing care retirement communities, assisted living, and nursing homes), and that terminology is standardized.	Governing bodies, planning commissions	Short-term		
10. Review the Quakertown and Richlandtown zoning ordinances to ensure they provide for continuation of the mixed-use environment that now exists.	Borough governing bodies, planning commissions	Short-term		
11. Prepare an inventory of brownfield sites in the Quakertown Area and evaluate their potential for reuse.	QAPC, governing bodies, planning commissions	Medium-term		<b>Growing Greener, PaDEP LUPTAP, DCED</b>
12. Conduct corridor studies for the following sections of the roadway included in the arterial overlay district in Milford and Richland: <ul style="list-style-type: none"> <li>▪ Route 309 from the Richland/West Rockhill border to Richland/Springfield border.</li> <li>▪ Route 663 from its terminus at Route 309 in Quakertown to Spinnerstown in Milford Twp.</li> <li>▪ Route 313 from its terminus at Route 663 in Quakertown to Paletown Road.</li> </ul>	QAPC, governing bodies, planning commissions	Medium-term		<b>LUPTAP, DCED, CDBG, BCOCBD</b>

## Municipal Finance Considerations (Pages 191-198)

1. Develop debt policy objectives and a comprehensive long-term debt policy through the following procedures: <ul style="list-style-type: none"> <li>▪ Determine physical facility requirement of the municipality.</li> <li>▪ Evaluate local and regional economies.</li> <li>▪ Evaluate present and potential revenue structure.</li> <li>▪ Determine a balance between current income financing and debt financing.</li> </ul>	Governing bodies	Medium-term		
2. Ensure that zoning ordinances encourage a variety of land uses to help stabilize tax rates.	Governing bodies, planning commissions	Ongoing		
3. Amend the zoning ordinance to include a fiscal impact study requirement for proposed zoning changes, if one does not exist.	Governing bodies	Short-term		

<sup>1</sup> Funding programs and administrative agencies of the funding programs are shown in bold; agencies not in bold are those that can provide assistance, whether as part of the funding program or independently.

<sup>2</sup> Refer to Appendix G for details on potential funding sources.



## Quakertown Area Comprehensive Plan Update Action Plan Summary Chart

### List of Acronyms

BCAPP – Bucks County Agricultural Preservation Program  
BCDH – Bucks County Department of Health  
BCOCBD – Bucks County Office of Community and Business Development  
BCOSP – Bucks County Open Space Program  
BCPC – Bucks County Planning Commission  
BCPD – Bucks County Park Department  
TMA Bucks – Bucks County Transportation Management Association  
CDBG – Community Development Block Grant  
DVRPC – Delaware Valley Regional Planning Commission  
DCED – Department of Community and Economic Development  
DCNR – Department of Conservation and Natural Resources  
HTS/SRS – Hometown Streets & Safe Routes to School  
LUPTAP – Land Use Planning and Technical Assistance Program  
NLT – National Lands Trust  
NPS – National Park Service  
PADEP – Pennsylvania Department of Environmental Protection  
PennDOT – Pennsylvania Department of Transportation  
PENNVEST – Pennsylvania Infrastructure Investment Authority  
PHMC – Pennsylvania Historical and Museum Commission  
SAFETEA-LU – Safe, Accountable, Flexible, Efficient Transportation Equity Act  
SEPTA – Southeastern Pennsylvania Transportation Authority  
TIP – Transportation Improvement Program  
WREN – Water Resources Education Network

<sup>1</sup> Funding programs and administrative agencies of the funding programs are shown in bold; agencies not in bold are those that can provide assistance, whether as part of the funding program or independently.

<sup>2</sup> Refer to Appendix G for details on potential funding sources.



## Appendix A

### Quakertown Area Resident Survey - Responses

*Total surveys received = 2,435*

	# of Responses	%
<b>1 Please check the municipality in which you live:</b>		
Haycock Township	197	8.1%
Milford Township	668	27.4%
Richland Township	792	32.6%
Quakertown Borough	647	26.6%
Richlandtown Borough	74	3.0%
Trumbauersville Borough	57	2.3%
Total responses	2435	
<b>2 How long have you lived in the Quakertown Area?</b>		
Less than one year	44	1.8%
1 - 5 years	467	19.3%
6 - 10 years	300	12.4%
11 - 15 years	225	9.3%
More than 15 years	1385	57.2%
Total responses	2421	
No response	11	
<b>3 Do you own or rent?</b>		
Own	2254	95.8%
Rent	100	4.2%
Total responses	2354	
No response	83	
<b>4 What are the 3 main reasons you chose to live in the municipality in which you currently live?</b>		
Raised here from childhood	650	10.8%
Near family and friends	951	15.7%
Reasonably priced homes	841	13.9%
Convenient to work	760	12.6%
Reasonable taxes	228	3.8%
Attractive	790	13.1%
Good place to raise children	541	8.9%
Quality of school	329	5.4%
General quality of life	956	15.8%
Total responses	6046	
No response	23	

**5 Where are you and other members of your household employed?**

At home	258	7.1%
Within Quakertown Area	701	19.3%
Lehigh Valley	272	7.5%
Montgomery County	602	16.6%
Retired	767	21.1%
Unemployed	77	2.1%
Outside of QA, but within Bucks	636	17.5%
Philadelphia	116	3.2%
Other	204	5.6%
Total responses	3633	
No response	9	

**6 How many members of your household fit the following age categories?**

Preschool, 0-5 years	452	7.4%
Elementary school, 6-12 years old	493	8.1%
Middle/high school, 13-18 years old	439	7.2%
Young adult, 19-34 years old	995	16.4%
Adult 35-54 years old	1914	31.5%
Adult 55-74 years old	1362	22.4%
Adult 75+ years old	421	6.9%
Total responses	6076	
No response	32	

**7 How would you rate the following services that you receive?**

	Excellent		Good		Fair		Poor		No Opinion		Total Responses
Ambulance services	537	23.1%	702	30.2%	71	3.1%	9	0.4%	1003	43.2%	2322
Fire protection	822	35.0%	836	35.6%	50	2.1%	12	0.5%	626	26.7%	2346
Garbage collection	478	20.4%	1172	50.1%	389	16.6%	91	3.9%	209	8.9%	2339
Police	468	19.9%	1057	44.8%	388	16.5%	152	6.4%	292	12.4%	2357
Property code	164	7.2%	728	31.9%	510	22.3%	286	12.5%	597	26.1%	2285
Public schools	329	14.2%	1054	45.4%	337	14.5%	95	4.1%	506	21.8%	2321
Public transportation	36	1.6%	133	5.9%	219	9.7%	926	41.1%	941	41.7%	2255
Public water & sewer	223	9.8%	895	39.3%	399	17.5%	204	9.0%	554	24.4%	2275
Snow removal	429	18.1%	1196	50.5%	486	20.5%	139	5.9%	119	5.0%	2369
Stormwater management	127	5.5%	782	34.1%	546	23.8%	311	13.6%	528	23.0%	2294
Street lighting	182	8.0%	926	40.5%	414	18.1%	272	11.9%	491	21.5%	2285
Street maintenance	199	8.4%	915	38.8%	679	28.8%	448	19.0%	120	5.1%	2361
No response											11

**8 How would you rate the following characteristics in your community and in the entire Quakertown Area?**

	Excellent		Good		Fair		Poor		No Opinion		Total Responses
<b>A. Municipality in which I live.</b>											
Growth management	113	4.9%	629	27.5%	682	29.8%	677	29.6%	184	8.1%	2285
Historic preservation	183	7.9%	1009	43.7%	582	25.2%	169	7.3%	367	15.9%	2310
Housing variety/affordability	88	3.9%	882	38.8%	783	34.5%	314	13.8%	204	9.0%	2271
Job opportunities/economic dev.	34	1.4%	433	18.1%	768	32.0%	581	24.2%	581	24.2%	2397
Natural resource preservation	107	4.7%	685	30.0%	714	31.3%	402	17.6%	374	16.4%	2282
Open space/ag. preservation	117	5.2%	595	26.3%	650	28.8%	650	28.8%	247	10.9%	2259
Park and recreation facilities	499	21.6%	1073	46.4%	491	21.2%	155	6.7%	96	4.1%	2314
Sidewalks/trails	186	8.2%	909	39.9%	641	28.1%	285	12.5%	260	11.4%	2281
Taxes	30	1.3%	287	12.4%	846	36.7%	1065	46.2%	79	3.4%	2307
Traffic and road conditions	47	2.0%	468	20.1%	832	35.8%	955	41.1%	24	1.0%	2326
<b>B. Entire Quakertown Area</b>											
Growth management	36	1.7%	328	15.4%	611	28.7%	950	44.6%	206	9.7%	2131
Historic preservation	121	5.7%	942	44.2%	587	27.6%	148	7.0%	331	15.5%	2129
Housing variety/affordability	66	3.1%	752	35.8%	716	34.1%	311	14.8%	254	12.1%	2099
Job opportunities/economic dev.	30	1.4%	468	22.1%	749	35.3%	450	21.2%	424	20.0%	2121
Natural resource preservation	40	1.9%	510	24.1%	708	33.5%	449	21.2%	406	19.2%	2113
Open space/ag. preservation	47	2.2%	369	17.6%	642	30.7%	778	37.2%	258	12.3%	2094
Park and recreation facilities	326	18.2%	1087	60.6%	113	6.3%	113	6.3%	154	8.6%	1793
Sidewalks/trails	118	5.7%	864	41.4%	613	29.4%	193	9.3%	297	14.2%	2085
Taxes	17	0.8%	186	8.8%	660	31.2%	973	46.0%	279	13.2%	2115
Traffic and road conditions	19	0.9%	239	11.2%	715	33.6%	1098	51.5%	60	2.8%	2131
No response	21										

**9 Would you use train service if it were available?**

Yes	1441	60.1%
No	615	25.6%
No opinion	342	14.3%
Total responses	2398	
No response	37	

**10 Would you use bus service if it were improved?**

Yes	898	37.8%
No	964	40.6%
No opinion	515	21.7%
Total responses	2377	
No response	54	

**11 How important are each of the following when planning for the future of the Quakertown Area?**

	Very Important		Important		Somewhat Important		Not Important		No Opinion		Total Responses
Activities for seniors	566	23.8%	947	39.8%	535	22.5%	174	7.3%	157	6.6%	2379
Activities for youth	1047	44.2%	913	38.5%	265	11.2%	64	2.7%	80	3.4%	2369
Affordable housing	1054	44.3%	824	34.6%	307	12.9%	119	5.0%	76	3.2%	2380
Arts and culture	433	18.4%	949	40.3%	704	29.9%	162	6.9%	109	4.6%	2357
Community recreation facilities	657	27.9%	1121	47.6%	450	19.1%	58	2.5%	71	3.0%	2357
Daycare facilities	410	17.5%	869	37.0%	499	21.2%	294	12.5%	278	11.8%	2350
Employment opportunities	1106	46.9%	839	35.6%	238	10.1%	65	2.8%	109	4.6%	2357
Groundwater protection	1419	60.2%	724	30.7%	121	5.1%	18	0.8%	76	3.2%	2358
Growth management	1600	67.7%	575	24.3%	114	4.8%	11	0.5%	63	2.7%	2363
Historic resources	627	26.7%	1030	43.8%	550	23.4%	58	2.5%	85	3.6%	2350
Medical facilities	1409	59.2%	802	33.70%	131	5.5%	15	0.6%	23	1.0%	2380
Natural resource protection	1219	51.9%	825	35.1%	236	10.0%	15	0.6%	56	2.4%	2351
Open space/agricultural	1374	58.0%	693	29.2%	222	9.4%	24	1.0%	58	2.5%	2371
Public schools	1305	60.7%	713	33.2%	182	8.5%	70	3.3%	87	4.1%	2149
Public transportation	590	25.2%	808	34.4%	632	26.9%	229	9.8%	87	3.7%	2346
Traffic and road conditions	1463	61.6%	796	33.5%	94	4.0%	9	0.4%	12	0.5%	2374
Transportation system	850	37.4%	780	34.3%	384	16.9%	134	5.9%	124	5.5%	2272
Other, please specify	203										
No response	19										

**12 Do you believe the quality of life in your municipality is:**

Excellent	314	13.2%
Good	1690	70.9%
Fair	341	14.3%
Poor	39	1.6%
Total responses	2384	
No response	20	

**13 Do you believe the quality of life in your municipality is:**

Improving	432	18.5%
Declining	1002	43.0%
Remaining the same	899	38.5%
Total responses	2333	
No response	67	

**14 What 3 issues most threaten the current quality of life in the Quakertown Area?**

Crime	453	6.1%
Flooding	162	2.2%
Inadequate medical services	49	0.7%
Inadequacy of government services	76	1.0%
Lack of affordable housing	365	5.0%
Lack of job opportunities	448	6.1%
Loss of natural areas/open space	974	13.2%
Pollution	165	2.2%
Sprawl/uncontrolled growth	1436	19.5%
Taxes	1538	20.9%
Traffic	1563	21.2%
Other	148	2.0%
Total responses	7377	
No response	15	

**15 In your opinion, what top 3 qualities make a place a "good community"?**

Acceptable traffic vol./rd. conditions	1340	18.5%
Arts and culture	219	3.0%
Clean air and water	1041	14.3%
Convenient shopping	538	7.4%
Nearby neighbors	171	2.4%
Open space/natural resources	827	11.4%
Pedestrian access through community	223	3.1%
Privacy	389	5.4%
Quality schools	1234	17.0%
Recreational facilities	346	4.8%
Rural character	785	10.8%
Other	151	2.1%
Total responses	7264	
No response	15	

**16 Should your municipality acquire key open space areas, wildlife corridors, and trail linkages?**

Yes	1812	77.0%
No	197	8.4%
No opinion	344	14.6%
Total responses	2353	
No response	46	

**17 If you answered yes to Question 16, would you support additional public spending on open space?**

Yes	1383
No	402
No opinion	370

**18 Identify the recreational facilities and activities that you would like to see improved or added to your municipality's park system: (Check all that apply)**

Baseball/softball fields	218	3.1%
Bicycling	728	10.5%
Camping	177	2.6%
Community clubs/groups	416	6.0%
Concerts	662	9.5%
Horseback riding	208	3.0%
Library	232	3.3%
Nature center	673	9.7%
Picnic areas	526	7.6%
Playgrounds/tot lots	389	5.6%
Senior citizen programs	612	8.8%
Skate parks	159	2.3%
Soccer/football fields	172	2.5%
Swimming pool	223	3.2%
Tennis courts	158	2.3%
Walking trails	1185	17.1%
Other	208	3.0%
Total responses	6946	
No response	286	

**19 Are you satisfied with the following aspects of commercial development/retail services with in the Quakertown Area?**

	Yes		No	
Variety of commercial/retail services	1859	82.8%	386	17.2%
Total responses	2245			
No response	4			
Location of commercial/retail	1963	89.1%	240	10.9%
Total responses	2203			
No response	4			
Quantity of commercial/retail	1681	76.9%	504	23.1%
Total responses	2185			
No response	104			



## Quakertown Area Resident Survey - Haycock Township Responses

11/9/2005

	# of Responses	%
<b>1 Please check the municipality in which you live:</b>		
Haycock Township	197	
<b>2 How long have you lived in the Quakertown Area?</b>		
Less than one year	2	1.0%
1 - 5 years	33	16.9%
6 - 10 years	29	14.9%
11 - 15 years	18	9.2%
More than 15 years	113	58.0%
Total responses	195	
No response	2	
<b>3 Do you own or rent?</b>		
Own	187	98.4%
Rent	3	1.6%
Total responses	190	
No response	7	
<b>4 What are the 3 main reasons you chose to live in the municipality in which you currently live?</b>		
Raised here from childhood	35	7.0%
Near family and friends	64	12.8%
Reasonably priced homes	40	8.0%
Convenient to work	26	5.2%
Reasonable taxes	24	4.8%
Attractive	137	27.3%
Good place to raise children	46	9.2%
Quality of school	12	2.4%
General quality of life	118	23.2%
Total responses	502	
No response	23	





**11 How important are each of the following when planning for the future of the Quakertown Area?**

	Very Important		Important		Somewhat Important		Not Important		No Opinion		Total Responses
Activities for seniors	36	18.2%	83	41.9%	50	25.3%	15	7.6%	14	7.1%	198
Activities for youth	64	32.8%	72	36.9%	43	22.1%	9	4.6%	7	3.6%	195
Affordable housing	56	28.9%	67	34.5%	54	27.8%	9	4.6%	8	4.1%	194
Arts and Culture	34	17.4%	78	40.0%	60	30.8%	15	7.7%	8	4.1%	195
Community recreation facilities	35	17.8%	90	45.7%	57	28.9%	10	5.1%	5	2.5%	197
Daycare facilities	22	11.2%	69	35.2%	46	23.5%	31	15.8%	28	14.3%	196
Employment opportunities	69	35.6%	67	34.5%	33	17.0%	9	4.6%	16	8.3%	194
Groundwater protection	125	64.1%	56	28.7%	7	3.6%	3	1.5%	4	2.1%	195
Growth management	138	70.8%	44	22.6%	10	5.1%	1	0.5%	2	1.0%	195
Historic resources	63	32.3%	87	44.6%	34	17.4%	7	3.6%	4	2.1%	195
Medical facilities	103	53.8%	75	38.07%	11	5.6%	3	1.5%	2	1.0%	197
Natural resource protection	132	67.4%	49	25.0%	8	4.1%	4	2.0%	3	1.5%	196
Open space/agricultural	132	67.0%	49	24.9%	10	5.1%	4	2.0%	2	1.0%	197
Public schools	91	48.7%	67	35.8%	19	10.2%	8	4.3%	8	4.3%	187
Public transportation	31	16.1%	69	35.8%	55	28.5%	27	14.0%	11	5.7%	193
Traffic and road conditions	82	42.3%	88	45.4%	23	11.9%	0	0.0%	1	0.5%	194
Transportation system	57	30.5%	59	31.6%	34	18.2%	22	11.8%	15	8.0%	187
Other, please specify	236										
No response	0										

**12 Do you believe the quality of life in your municipality is:**

Excellent	71	36.4%
Good	113	58.0%
Fair	11	5.6%
Poor	0	0.0%
Total responses	195	
No response	1	

**13 Do you believe the quality of life in your municipality is:**

Improving	24	12.7%
Declining	58	30.7%
Remaining the same	107	56.6%
Total responses	189	
No response	7	

**14 What 3 issues most threaten the current quality of life in the Quakertown Area?**

Crime	34	5.7%
Flooding	11	1.8%
Inadequate medical services	3	0.5%
Inadequacy of government services	4	0.7%
Lack of affordable housing	17	2.8%
Lack of job opportunities	29	4.9%
Loss of natural areas/open space	101	16.9%
Pollution	18	3.0%
Sprawl/uncontrolled growth	137	22.9%
Taxes	130	21.7%
Traffic	98	16.4%
Other	16	2.7%
Total responses	598	
No response	1	

**15 In your opinion, what top 3 qualities make a place a "good community"?**

Acceptable traffic vol./rd. conditions	68	11.8%
Arts and culture	14	2.4%
Clean air and water	85	14.7%
Convenient shopping	23	4.0%
Nearby neighbors	3	0.5%
Open space/natural resources	103	17.8%
Pedestrian access through community	6	1.0%
Privacy	57	9.9%
Quality schools	87	15.1%
Recreational facilities	17	2.9%
Rural character	103	17.8%
Other	12	2.1%
Total responses	578	
No response	1	

**16 Should your municipality acquire key open space areas, wildlife corridors, and trail linkages?**

Yes	159	82.4%
No	21	10.9%
No Opinion	13	6.7%
Total responses	193	
No response	3	

**17 If you answered yes to Question 16, would you support additional public spending on open space?**

Yes	128
No	29
No Opinion	27

**18 Identify the recreational facilities and activities that you would like to see improved or added to your municipality's park system: (Check all that apply)**

Baseball/softball fields	11	2.4%
Bicycling	54	11.7%
Camping	18	3.9%
Community clubs/groups	20	4.4%
Concerts	38	8.3%
Horseback riding	27	5.9%
Library	16	3.5%
Nature center	55	12.0%
Picnic areas	18	3.9%
Playgrounds/tot lots	30	6.5%
Senior citizen programs	33	7.2%
Skate parks	9	2.0%
Soccer/football fields	7	1.5%
Swimming pool	6	1.3%
Tennis courts	12	2.6%
Walking trails	83	18.0%
Other	23	5.0%
Total responses	460	
No response	23	

**19 Are you satisfied with the following aspects of commercial development/retail services with in the Quakertown Area?**

	Yes		No	
Variety of commercial/retail services	148	84.6%	27	15.4%
Total responses	175			
No response	0			
Location of commercial/retail	152	85.9%	25	14.1%
Total responses	177			
No response	0			
Quantity of commercial/retail	145	77.5%	34	18.2%
Total responses	187			
No response	8			

## ***Quakertown Area Resident Survey - Milford Township Responses***

11/9/2005

*Total surveys received from municipality = 668*

	<b># of Responses</b>	<b>%</b>
<b>1 Please check the municipality in which you live:</b>		
Milford Township	667	
<b>2 How long have you lived in the Quakertown Area?</b>		
Less than one year	17	2.6%
1 - 5 years	106	16.0%
6 - 10 years	95	14.3%
11 - 15 years	58	8.7%
More than 15 years	388	58.4%
Total responses	664	
No response	3	
<b>3 Do you own or rent?</b>		
Own	634	97.5%
Rent	16	2.5%
Total responses	650	
No response	18	
<b>4 What are the 3 main reasons you chose to live in the municipality in which you currently live?</b>		
Raised here from childhood	164	9.6%
Near family and friends	232	13.5%
Reasonably priced homes	203	11.9%
Convenient to work	207	12.1%
Reasonable taxes	52	3.0%
Attractive	288	17.6%
Good place to raise children	176	10.3%
Quality of school	89	5.2%
General quality of life	302	16.8%
Total responses	1713	
No response	23	







**11 How important are each of the following when planning for the future of the Quakertown Area?**

	Very Important		Important		Somewhat Important		Not Important		No Opinion		Total Responses
Activities for seniors	143	21.9%	240	36.7%	164	25.1%	62	9.5%	45	6.88%	654
Activities for youth	263	40.2%	261	39.9%	79	12.1%	30	4.6%	22	3.36%	655
Affordable housing	270	41.2%	202	30.8%	107	16.3%	49	7.5%	27	4.12%	655
Arts and Culture	103	15.8%	271	41.6%	192	29.5%	57	8.8%	28	4.30%	651
Community recreation facilities	154	23.7%	314	48.4%	137	21.1%	23	3.5%	21	3.24%	649
Daycare facilities	96	14.8%	246	38.0%	153	23.6%	87	13.4%	66	10.19%	648
Employment opportunities	278	42.8%	229	35.2%	95	14.6%	23	3.5%	25	3.85%	650
Groundwater protection	399	61.3%	193	29.7%	36	5.5%	4	0.6%	19	2.92%	651
Growth management	475	73.4%	142	22.0%	20	3.1%	2	0.3%	8	1.24%	647
Historic resources	165	25.5%	281	43.5%	158	24.5%	24	3.7%	18	2.79%	646
Medical facilities	359	54.9%	244	37.3%	41	6.3%	6	0.9%	4	0.61%	654
Natural resource protection	409	57.3%	197	30.2%	71	10.9%	6	0.9%	5	0.77%	653
Open space/agricultural	374	62.3%	176	26.8%	58	8.8%	8	1.2%	6	0.91%	657
Public schools	338	56.4%	207	34.6%	62	10.4%	22	3.7%	22	3.67%	599
Public transportation	142	22.0%	217	33.6%	176	27.2%	88	13.6%	23	3.56%	646
Traffic and road conditions	401	61.2%	223	32.7%	33	5.0%	6	0.9%	1	0.15%	655
Transportation system	200	31.6%	214	35.2%	124	19.6%	48	7.6%	39	6.15%	634
Other, please specify	26										
No response	3										

**12 Do you believe the quality of life in your municipality is:**

Excellent	88	13.3%
Good	493	74.4%
Fair	76	11.5%
Poor	6	0.9%
Total responses	663	
No response	5	

**13 Do you believe the quality of life in your municipality is:**

Improving	95	14.6%
Declining	300	45.9%
Remaining the same	258	39.5%
Total responses	653	
No response	14	

**14 What 3 issues most threaten the current quality of life in the Quakertown Area?**

Crime	108	5.3%
Flooding	24	1.2%
Inadequate medical services	13	0.6%
Inadequacy of government services	15	0.7%
Lack of affordable housing	83	4.1%
Lack of job opportunities	95	4.7%
Loss of natural areas/open space	290	14.4%
Pollution	47	2.3%
Sprawl/uncontrolled growth	439	21.7%
Taxes	447	22.1%
Traffic	444	22.0%
Other	16	0.8%
Total responses	2021	
No response	4	

**15 In your opinion, what top 3 qualities make a place a "good community"?**

Acceptable traffic vol./rd. conditions	374	64.7%
Arts and culture	51	8.8%
Clean air and water	274	47.4%
Convenient shopping	115	19.9%
Nearby neighbors	32	5.5%
Open space/natural resources	271	46.9%
Pedestrian access through community	31	5.4%
Privacy	137	23.7%
Quality schools	328	56.7%
Recreational facilities	78	13.5%
Rural character	280	48.4%
Other	25	4.3%
Total responses	578	
No response	1	

**16 Should your municipality acquire key open space areas, wildlife corridors, and trail linkages?**

Yes	535	81.7%
No	62	9.5%
No Opinion	58	8.9%
Total responses	655	
No response	13	

**17 If you answered yes to Question 16, would you support additional public spending on open space?**

Yes	425
No	108
No Opinion	79

**18 Identify the recreational facilities and activities that you would like to see improved or added to your municipality's park system: (Check all that apply)**

Baseball/softball fields	71	36.2%
Bicycling	215	11.0%
Camping	51	2.6%
Community clubs/groups	80	4.1%
Concerts	185	9.4%
Horseback riding	70	3.6%
Library	82	4.2%
Nature center	186	9.5%
Picnic areas	136	6.9%
Playgrounds/tot lots	85	4.3%
Senior citizen programs	141	7.2%
Skate parks	58	3.0%
Soccer/football fields	62	3.2%
Swimming pool	90	4.6%
Tennis courts	60	3.1%
Walking trails	357	18.2%
Other	35	1.8%
Total responses	1964	
No response	96	

**19 Are you satisfied with the following aspects of commercial development/retail services with in the Quakertown Area?**

	Yes		No	
Variety of commercial/retail services	501	80.8%	119	19.2%
Total responses	620			
No response	0			
Location of commercial/retail	547	89.2%	66	10.8%
Total responses	613			
No response	0			
Quantity of commercial/retail	461	72.8%	138	21.8%
Total responses	633			
No response	34			

## ***Quakertown Area Resident Survey - Quakertown Borough Responses***

11/9/2005

*Total surveys received from municipality = 647*

	<b># of Responses</b>	<b>%</b>
<b>1 Please check the municipality in which you live:</b>		
Quakertown Borough	646	
<b>2 How long have you lived in the Quakertown Area?</b>		
Less than one year	11	1.7%
1 - 5 years	81	12.6%
6 - 10 years	53	8.2%
11 - 15 years	48	7.5%
More than 15 years	450	70.0%
Total responses	643	
No response	3	
<b>3 Do you own or rent?</b>		
Own	551	89.5%
Rent	65	10.6%
Total responses	616	
No response	32	
<b>4 What are the 3 main reasons you chose to live in the municipality in which you currently live?</b>		
Raised here from childhood	245	15.2%
Near family and friends	296	18.4%
Reasonably priced homes	177	11.0%
Convenient to work	235	14.6%
Reasonable taxes	61	3.8%
Attractive	102	6.3%
Good place to raise children	150	9.3%
Quality of school	242	15.0%
General quality of life	101	6.3%
Total responses	1609	
No response	23	





**11 How important are each of the following when planning for the future of the Quakertown Area?**

	Very Important		Important		Somewhat Important		Not Important		No Opinion		Total Responses
Activities for seniors	172	27.3% #	275	43.6%	124	19.7%	34	5.4%	26	4.1%	631
Activities for youth	301	47.6% #	249	39.4%	57	9.0%	11	1.7%	14	2.2%	632
Affordable housing	335	52.9% #	218	34.4%	45	7.1%	18	2.8%	17	2.7%	633
Arts and Culture	127	20.2% #	258	41.1%	178	28.3%	30	4.8%	35	5.6%	628
Community recreation facilities	202	32.1% #	302	47.9%	100	15.9%	9	1.4%	17	2.7%	630
Daycare facilities	362	57.6% #	250	33.6%	122	19.6%	66	10.6%	75	12.1%	621
Employment opportunities	325	51.8% #	224	35.7%	36	5.7%	17	2.7%	26	4.1%	628
Groundwater protection	108	17.4% #	211	40.3%	28	4.5%	3	0.5%	24	3.8%	628
Growth management	401	63.7% #	164	26.0%	39	6.2%	3	0.5%	23	3.7%	630
Historic resources	166	26.6% #	292	46.8%	131	21.0%	11	1.8%	24	3.8%	624
Medical facilities	393	62.1% #	197	31.1%	32	5.1%	2	0.3%	9	1.4%	633
Natural resource protection	281	45.4% #	255	41.2%	58	9.4%	2	0.3%	23	3.7%	619
Open space/agricultural	330	52.8% #	203	32.5%	61	9.8%	6	1.0%	25	4.0%	625
Public schools	347	61.5% #	210	37.2%	39	6.9%	15	2.7%	15	2.7%	564
Public transportation	207	33.4% #	224	36.1%	138	22.3%	36	5.8%	15	2.4%	620
Traffic and road conditions	405	64.4% #	203	36.4%	14	2.2%	2	0.3%	5	0.8%	629
Transportation system	260	42.8% #	221	32.3%	78	12.9%	21	3.5%	27	4.4%	607
Other, please specify	52										
No response	5										

**12 Do you believe the quality of life in your municipality is:**

Excellent	60	9.4%
Good	459	71.6%
Fair	106	16.5%
Poor	16	2.5%
Total responses	641	
No response	5	

**13 Do you believe the quality of life in your municipality is:**

Improving	119	19.2%
Declining	293	47.2%
Remaining the same	209	33.7%
Total responses	621	
No response	22	



**14 What 3 issues most threaten the current quality of life in the Quakertown Area?**

Crime	133	6.8%
Flooding	82	4.2%
Inadequate medical services	10	0.5%
Inadequacy of government services	26	1.3%
Lack of affordable housing	137	7.0%
Lack of job opportunities	145	7.5%
Loss of natural areas/open space	205	10.5%
Pollution	32	1.6%
Sprawl/uncontrolled growth	46	2.4%
Taxes	385	19.8%
Traffic	407	20.9%
Other	339	17.4%
Total responses	1947	
No response	5	

**15 In your opinion, what top 3 qualities make a place a "good community"?**

Acceptable traffic vol./rd. conditions	353	18.6%
Arts and culture	80	4.2%
Clean air and water	290	15.3%
Convenient shopping	167	8.8%
Nearby neighbors	70	3.7%
Open space/natural resources	147	7.7%
Pedestrian access through community	107	5.6%
Privacy	69	3.6%
Quality schools	334	17.6%
Recreational facilities	116	6.1%
Rural character	118	6.2%
Other	49	2.6%
Total responses	1900	
No response	4	

**16 Should your municipality acquire key open space areas, wildlife corridors, and trail linkages?**

Yes	444	70.8%
No	46	7.3%
No Opinion	137	21.9%
Total responses	627	
No response	20	

**17 If you answered yes to Question 16, would you support additional public spending on open space?**

Yes	339
No	100
No Opinion	112

**18 Identify the recreational facilities and activities that you would like to see improved or added to your municipality's park system: (Check all that apply)**

Baseball/softball fields	38	2.3%
Bicycling	163	10.0%
Camping	42	2.6%
Community clubs/groups	123	7.5%
Concerts	177	10.8%
Horseback riding	34	2.1%
Library	48	2.9%
Nature center	170	10.4%
Picnic areas	144	8.8%
Playgrounds/tot lots	70	4.3%
Senior citizen programs	189	11.6%
Skate parks	23	1.4%
Soccer/football fields	18	1.1%
Swimming pool	16	1.0%
Tennis courts	63	3.9%
Walking trails	287	17.5%
Other		
Total responses	1636	
No response	59	

**19 Are you satisfied with the following aspects of commercial development/retail services with in the Quakertown Area?**

	Yes		No	
Variety of commercial/retail services	497	78.1%	97	5.90%
Total responses	1636			
No response	59			
Location of commercial/retail	507	88.0%	69	11.90%
Total responses	576			
No response	0			
Quantity of commercial/retail	449	75.2%	124	20.80%
Total responses	597			
No response	24			

## ***Quakertown Area Resident Survey - Richlandtown Borough Responses***

11/9/2005

**Total surveys received from municipality = 74**

	<b># of Responses</b>	<b>%</b>
<b>1 Please check the municipality in which you live:</b>		
Richlandtown Borough	74	
<b>2 How long have you lived in the Quakertown Area?</b>		
Less than one year	3	4.1%
1 - 5 years	9	12.3%
6 - 10 years	8	11.0%
11 - 15 years	8	11.0%
More than 15 years	45	61.6%
Total responses	73	
No response	1	
<b>3 Do you own or rent?</b>		
Own	67	95.7%
Rent	3	4.3%
Total responses	70	
No response	4	
<b>4 What are the 3 main reasons you chose to live in the municipality in which you currently live?</b>		
Raised here from childhood	25	13.4%
Near family and friends	35	18.8%
Reasonably priced homes	35	18.8%
Convenient to work	24	12.9%
Reasonable taxes	12	6.5%
Attractive	18	9.7%
Good place to raise children	8	4.3%
Quality of school	6	3.2%
General quality of life	23	12.4%
Total responses	186	
No response	23	



**8 How would you rate the following characteristics in your community and in the entire Quakertown Area?**

	Excellent		Good		Fair		Poor		No Opinion		Total Responses
<b>A. Municipality in which I live.</b>											
Growth management	3	4.4%	30	43.5%	25	36.2%	8	11.6%	3	4.4%	69
Historic preservation	2	2.9%	31	44.9%	13	18.8%	7	10.1%	16	23.2%	69
Housing variety/affordability	0	0.0%	37	52.9%	24	34.3%	6	8.6%	3	4.3%	70
Job opportunities/economic dev.	0	0.0%	9	13.2%	21	30.9%	28	41.2%	10	14.7%	68
Natural resource preservation	0	0.0%	13	18.8%	26	37.7%	11	15.9%	19	27.5%	69
Open space/ag. preservation	2	2.9%	15	22.1%	19	27.9%	20	29.4%	12	17.7%	68
Park and recreation facilities	0	0.0%	21	30.9%	25	36.8%	16	23.5%	6	8.8%	68
Sidewalks/trails	1	1.5%	20	29.9%	25	37.3%	19	28.4%	2	3.0%	67
Taxes	0	0.0%	30	42.3%	28	39.4%	13	18.3%	0	0.0%	71
Traffic and road conditions	1	1.4%	14	20.0%	28	40.0%	25	35.7%	2	2.9%	70
<b>B. Entire Quakertown Area</b>											
Growth management	1	1.5%	10	14.7%	21	30.9%	33	48.5%	3	4.4%	68
Historic preservation	4	6.1%	33	50.0%	17	25.8%	3	4.6%	9	13.6%	66
Housing variety/affordability	1	1.5%	28	41.2%	25	36.8%	12	17.7%	2	2.9%	68
Job opportunities/economic dev.	0	0.0%	20	30.3%	20	30.3%	21	31.8%	5	7.6%	66
Natural resource preservation	0	0.0%	16	23.9%	23	34.3%	13	19.4%	15	22.4%	67
Open space/ag. preservation	0	0.0%	11	16.4%	16	23.9%	32	47.8%	8	11.9%	67
Park and recreation facilities	10	15.4%	39	60.0%	6	9.2%	6	9.2%	4	6.2%	65
Sidewalks/trails	5	7.6%	34	51.5%	20	30.3%	2	3.0%	5	7.6%	66
Taxes	0	0.0%	10	14.7%	27	39.7%	30	44.1%	1	1.5%	68
Traffic and road conditions	1	1.5%	11	15.9%	19	27.5%	31	44.9%	7	10.1%	69
No response	1										

**9 Would you use train service if it were available?**

Yes	37	51.4%
No	26	36.1%
No Opinion	9	12.5%
Total responses	72	
No response	2	

**10 Would you use bus service if it were improved?**

Yes	29	40.3%
No	30	41.7%
No opinion	13	18.1%
Total responses	72	
No response	2	

**11 How important are each of the following when planning for the future of the Quakertown Area?**

	Very Important		Important		Somewhat Important		Not Important		No Opinion		Total Responses
Activities for seniors	16	22.9%	29	41.4%	15	21.4%	6	8.6%	4	5.7%	70
Activities for youth	33	47.1%	28	40.0%	5	7.1%	2	2.9%	2	2.9%	70
Affordable housing	40	55.6%	24	33.3%	6	8.3%	2	2.8%	0	0.0%	72
Arts and Culture	8	11.6%	24	34.8%	32	46.4%	3	4.3%	2	2.9%	69
Community recreation facilities	13	18.8%	39	56.5%	14	20.3%	1	1.4%	2	2.9%	69
Daycare facilities	10	14.1%	33	46.5%	13	18.3%	8	11.3%	7	9.9%	71
Employment opportunities	33	46.5%	27	38.0%	6	8.5%	4	5.6%	1	1.4%	71
Groundwater protection	38	55.1%	27	39.1%	2	2.9%	0	0.0%	2	2.9%	69
Growth management	46	64.8%	22	31.0%	1	1.4%	0	0.0%	2	2.8%	71
Historic resources	11	15.5%	34	47.9%	22	31.0%	0	0.0%	4	5.6%	71
Medical facilities	42	58.3%	25	34.7%	4	5.6%	0	0.0%	1	1.4%	72
Natural resource protection	29	41.4%	32	45.7%	7	10.0%	0	0.0%	2	2.9%	70
Open space/agricultural	37	52.9%	25	35.7%	5	7.1%	0	0.0%	3	4.3%	70
Public schools	39	60.0%	22	33.8%	7	10.8%	0	0.0%	4	6.2%	65
Public transportation	14	19.7%	24	33.8%	20	28.2%	4	5.6%	3	4.2%	71
Traffic and road conditions	43	59.7%	28	38.9%	1	1.4%	0	0.0%	0	0.0%	72
Transportation system	26	36.1%	23	31.9%	16	22.2%	7	9.7%	6	8.3%	72
Other, please specify	4										
No response	1										

**12 Do you believe the quality of life in your municipality is:**

Excellent	7	9.6%
Good	53	72.6%
Fair	10	13.7%
Poor	3	4.1%
Total responses	73	
No response	1	

**13 Do you believe the quality of life in your municipality is:**

Improving	10	13.9%
Declining	27	37.5%
Remaining the same	35	48.6%
Total responses	72	
No response	2	

**14 What 3 issues most threaten the current quality of life in the Quakertown Area?**

Crime	19	8.6%
Flooding	4	1.8%
Inadequate medical services	1	0.5%
Inadequacy of government services	4	1.8%
Lack of affordable housing	15	6.8%
Lack of job opportunities	13	5.9%
Loss of natural areas/open space	27	12.2%
Pollution	4	1.8%
Sprawl/uncontrolled growth	4	1.8%
Taxes	43	19.4%
Traffic	42	18.9%
Other	46	20.7%
Total responses	222	
No response	2	

**15 In your opinion, what top 3 qualities make a place a "good community"?**

Acceptable traffic vol./rd. conditions	43	19.4%
Arts and culture	5	2.3%
Clean air and water	35	15.8%
Convenient shopping	21	9.5%
Nearby neighbors	5	2.3%
Open space/natural resources	24	10.8%
Pedestrian access through community	8	3.6%
Privacy	12	5.4%
Quality schools	34	15.3%
Recreational facilities	8	3.6%
Rural character	23	10.4%
Other	4	1.8%
Total responses	222	
No response	1	

**16 Should your municipality acquire key open space areas, wildlife corridors, and trail linkages?**

Yes	55	76.4%
No	7	9.7%
No Opinion	10	13.9%
Total responses	72	
No response	2	

**17 If you answered yes to Question 16, would you support additional public spending on open space?**

Yes	42
No	9
No Opinion	11

**18 Identify the recreational facilities and activities that you would like to see improved or added to your municipality's park system: (Check all that apply)**

Baseball/softball fields	11	4.4%
Bicycling	21	8.3%
Camping	4	1.6%
Community clubs/groups	20	7.9%
Concerts	20	7.9%
Horseback riding	4	1.6%
Library	2	0.8%
Nature center	20	7.9%
Picnic areas	26	10.3%
Playgrounds/tot lots	20	7.9%
Senior citizen programs	19	7.5%
Skate parks	9	3.6%
Soccer/football fields	9	3.6%
Swimming pool	9	3.6%
Tennis courts	9	3.6%
Walking trails	45	17.8%
Other	5	2.0%
Total responses	253	
No response	11	

**19 Are you satisfied with the following aspects of commercial development/retail services with in the Quakertown Area?**

	Yes		No	
Variety of commercial/retail services	55	80.9%	13	19.1%
Total responses	68			
No response	0			
Location of commercial/retail	61	91.0%	6	9.0%
Total responses	67			
No response	0			
Quantity of commercial/retail	49	69.0%	18	25.4%
Total responses	71			
No response	4			



## ***Quakertown Area Resident Survey - Richland Township Responses***

11/9/2005

*Total surveys received from municipality = 792*

	<b># of Responses</b>	<b>%</b>
<b>1 Please check the municipality in which you live:</b>		
Richland Township	791	
<b>2 How long have you lived in the Quakertown Area?</b>		
Less than one year	11	1.4%
1 - 5 years	229	29.0%
6 - 10 years	108	13.7%
11 - 15 years	87	11.0%
More than 15 years	354	44.9%
Total responses	789	
No response	2	
<b>3 Do you own or rent?</b>		
Own	759	98.4%
Rent	12	1.6%
Total responses	771	
No response	22	
<b>4 What are the 3 main reasons you chose to live in the municipality in which you currently live?</b>		
Raised here from childhood	171	8.9%
Near family and friends	311	16.3%
Reasonably priced homes	366	19.1%
Convenient to work	250	13.1%
Reasonable taxes	73	3.8%
Attractive	218	1.1%
Good place to raise children	148	7.7%
Quality of school	258	13.5%
General quality of life	117	6.1%
Total responses	1912	
No response	23	



**8 How would you rate the following characteristics in your community and in the entire Quakertown Area?**

	Excellent		Good		Fair		Poor		No Opinion		Total Responses
<b>A. Municipality in which I live.</b>											
Growth management	22	2.9%	171	22.8%	202	26.9%	301	40.1%	55	7.3%	751
Historic preservation	49	6.5%	309	41.1%	196	26.1%	71	9.4%	127	16.9%	752
Housing variety/affordability	33	4.5%	286	38.8%	258	35.0%	109	14.8%	52	7.1%	738
Job opportunities/economic dev.	16	2.1%	121	16.2%	248	33.2%	204	27.4%	157	21.1%	746
Natural resource preservation	25	3.4%	185	24.9%	241	32.4%	170	22.9%	122	16.4%	743
Open space/ag. preservation	27	3.7%	163	22.1%	217	29.4%	262	35.6%	68	9.2%	737
Park and recreation facilities	99	13.2%	298	39.6%	220	29.3%	89	11.8%	46	6.1%	752
Sidewalks/trails	59	7.9%	256	34.4%	220	29.6%	112	15.1%	97	13.0%	744
Taxes	10	1.3%	108	14.2%	266	34.9%	369	48.4%	9	1.2%	762
Traffic and road conditions	7	0.9%	71	9.4%	263	34.7%	396	52.2%	22	2.9%	759
<b>B. Entire Quakertown Area</b>											
Growth management	18	2.6%	143	20.7%	207	29.9%	261	37.7%	63	9.1%	692
Historic preservation	51	7.4%	328	47.3%	184	26.5%	41	5.9%	90	13.0%	694
Housing variety/affordability	20	2.9%	286	42.1%	214	31.5%	93	13.7%	67	9.9%	680
Job opportunities/economic dev.	12	1.8%	125	18.3%	242	35.4%	163	23.8%	142	20.8%	684
Natural resource preservation	25	2.4%	183	26.9%	229	33.7%	136	20.0%	116	17.1%	680
Open space/ag. preservation	18	2.7%	140	20.7%	220	32.6%	224	33.2%	73	10.8%	675
Park and recreation facilities	121	21.2%	356	62.4%	31	5.4%	31	5.4%	32	5.6%	571
Sidewalks/trails	6	0.9%	69	9.9%	236	33.9%	375	53.8%	11	1.6%	697
Taxes	5	0.7%	50	7.3%	228	33.2%	335	48.8%	69	10.0%	687
Traffic and road conditions	44	6.5%	295	43.8%	205	30.4%	63	9.4%	67	9.9%	674
No response	10										

**9 Would you use train service if it were available?**

Yes	498	63.9%
No	187	24.0%
No Opinion	95	12.2%
Total responses	780	
No response	13	

**10 Would you use bus service if it were improved?**

Yes	282	36.6%
No	327	42.5%
No opinion	161	20.9%
Total responses	770	
No response	22	

**11 How important are each of the following when planning for the future of the Quakertown Area?**

	Very Important		Important		Somewhat Important		Not Important		No Opinion		Total Responses
Activities for seniors	186	24.2%	293	38.2%	175	22.8%	53	6.9%	61	7.9%	768
Activities for youth	361	47.5%	277	36.5%	79	10.4%	12	1.6%	31	4.1%	760
Affordable housing	334	43.5%	289	37.6%	87	11.3%	39	5.1%	19	2.5%	768
Arts and Culture	151	20.0%	297	39.2%	224	29.6%	54	7.1%	31	4.1%	757
Community recreation facilities	240	31.8%	346	45.8%	135	17.9%	14	1.9%	20	2.6%	755
Daycare facilities	162	21.4%	251	33.2%	157	20.7%	98	12.9%	89	11.8%	757
Employment opportunities	372	49.1%	273	36.1%	62	8.2%	12	1.6%	38	5.0%	757
Groundwater protection	462	60.9%	223	29.4%	43	5.7%	8	1.1%	23	3.0%	759
Growth management	501	65.7%	191	25.0%	41	5.4%	5	0.7%	25	3.3%	763
Historic resources	210	27.7%	310	40.9%	190	25.1%	16	2.1%	32	4.2%	758
Medical facilities	474	61.8%	242	31.6%	42	5.5%	4	0.5%	5	0.7%	767
Natural resource protection	379	50.1%	266	35.2%	87	11.5%	3	0.4%	21	2.8%	756
Open space/agricultural	435	56.9%	222	29.0%	84	11.0%	6	0.8%	18	2.4%	765
Public schools	458	67.3%	190	27.9%	53	7.8%	25	3.7%	32	4.7%	681
Public transportation	285	39.8%	237	33.1%	124	17.3%	68	9.5%	33	4.6%	717
Traffic and road conditions	493	64.3%	250	32.6%	19	2.5%	1	0.1%	4	0.5%	767
Transportation system	176	23.2%	259	34.1%	232	30.6%	38	5.0%	24	3.2%	759
Other, please specify	87										
No response	10										

**12 Do you believe the quality of life in your municipality is:**

Excellent	76	10.1%
Good	530	70.1%
Fair	136	18.0%
Poor	14	1.9%
Total responses	756	
No response	7	

**13 Do you believe the quality of life in your municipality is:**

Improving	168	22.6%
Declining	306	41.2%
Remaining the same	268	36.1%
Total responses	742	
No response	21	

**14 What 3 issues most threaten the current quality of life in the Quakertown Area?**

Crime	152	6.3%
Flooding	39	1.6%
Inadequate medical services	22	0.9%
Inadequacy of government services	26	1.1%
Lack of affordable housing	109	4.5%
Lack of job opportunities	155	6.4%
Loss of natural areas/open space	326	13.5%
Pollution	58	2.4%
Sprawl/uncontrolled growth	62	2.6%
Taxes	505	20.9%
Traffic	529	21.8%
Other	439	18.1%
Total responses	2422	
No response	3	

**15 In your opinion, what top 3 qualities make a place a "good community"?**

Acceptable traffic vol./rd. conditions	463	19.3%
Arts and culture	65	2.7%
Clean air and water	335	14.0%
Convenient shopping	199	8.3%
Nearby neighbors	59	2.5%
Open space/natural resources	263	11.0%
Pedestrian access through community	62	2.6%
Privacy	104	4.3%
Quality schools	426	17.7%
Recreational facilities	58	2.4%
Rural character	243	10.1%
Other	124	5.2%
Total responses	2401	
No response	3	

**16 Should your municipality acquire key open space areas, wildlife corridors, and trail linkages?**

Yes	577	76.9%
No	59	7.9%
No Opinion	114	15.2%
Total responses	750	
No response	7	

**17 If you answered yes to Question 16, would you support additional public spending on open space?**

Yes	422
No	147
No Opinion	120

**18 Identify the recreational facilities and activities that you would like to see improved or added to your municipality's park system: (Check all that apply)**

Baseball/softball fields	84	3.4%
Bicycling	264	10.6%
Camping	60	2.4%
Community clubs/groups	159	6.4%
Concerts	226	9.1%
Horseback riding	67	2.7%
Library	76	3.1%
Nature center	224	9.0%
Picnic areas	193	7.8%
Playgrounds/tot lots	179	7.2%
Senior citizen programs	218	8.8%
Skate parks	47	1.9%
Soccer/football fields	69	2.8%
Swimming pool	94	3.8%
Tennis courts	56	2.3%
Walking trails	394	15.8%
Other	79	3.2%
Total responses	2489	
No response	92	

**19 Are you satisfied with the following aspects of commercial development/retail services with in the Quakertown Area?**

	Yes		No	
Variety of commercial/retail services	616	83.7%	120	16.3%
Total responses	736			
No response	0			
Location of commercial/retail	649	90.1%	71	9.9%
Total responses	720			
No response	0			
Quantity of commercial/retail	540	72.5%	176	23.6%
Total responses	745			
No response	29			

## ***Quakertown Area Resident Survey - Trumbauersville Borough Responses***

11/9/2005

*Total surveys received from municipality = 57*

	<b># of Responses</b>	<b>%</b>
<b>1 Please check the municipality in which you live:</b>		
Trumbauersville Borough	57	
<b>2 How long have you lived in the Quakertown Area?</b>		
Less than one year	0	0.0%
1 - 5 years	9	15.8%
6 - 10 years	35	61.4%
11 - 15 years	6	10.5%
More than 15 years	7	12.3%
Total responses	57	
No response	0	
<b>3 Do you own or rent?</b>		
Own	56	98.3%
Rent	1	1.8%
Total responses	57	
No response	0	
<b>4 What are the 3 main reasons you chose to live in the municipality in which you currently live?</b>		
Raised here from childhood	10	8.1%
Near family and friends	13	10.5%
Reasonably priced homes	20	16.1%
Convenient to work	18	14.5%
Reasonable taxes	6	4.8%
Attractive	13	10.5%
Good place to raise children	13	10.5%
Quality of school	4	3.2%
General quality of life	27	21.8%
Total responses	124	
No response	23	





**8 How would you rate the following characteristics in your community and in the entire Quakertown Area?**

	Excellent		Good		Fair		Poor		No Opinion		Total Responses
<b>A. Municipality in which I live.</b>											
Growth management	3	5.3%	13	22.8%	18	31.6%	14	24.6%	9	15.8%	57
Historic preservation	2	3.6%	15	26.8%	17	30.4%	8	14.3%	14	25.0%	56
Housing variety/affordability	2	3.6%	23	41.1%	15	26.8%	7	12.5%	9	16.1%	56
Job opportunities/economic dev.	1	1.8%	12	21.8%	16	29.1%	16	29.1%	10	18.2%	55
Natural resource preservation	2	3.5%	13	22.8%	20	35.1%	8	14.0%	14	24.6%	57
Open space/ag. preservation	2	3.5%	13	22.8%	11	19.3%	22	38.6%	9	15.8%	57
Park and recreation facilities	6	10.5%	32	56.1%	11	19.3%	4	7.0%	4	7.0%	57
Sidewalks/trails	2	3.5%	13	22.8%	22	38.6%	19	33.3%	1	1.8%	57
Taxes	1	1.8%	10	17.5%	24	42.1%	17	29.8%	5	8.8%	57
Traffic and road conditions	11	19.3%	32	56.1%	6	10.5%	5	8.8%	3	5.3%	57
<b>B. Entire Quakertown Area</b>											
Growth management	0	0.0%	4	7.0%	14	24.6%	25	43.9%	14	24.6%	57
Historic preservation	2	3.5%	22	38.6%	17	29.8%	5	8.8%	11	19.3%	57
Housing variety/affordability	2	3.5%	16	28.1%	20	35.1%	5	8.8%	14	24.6%	57
Job opportunities/economic dev.	0	0.0%	15	26.3%	16	28.1%	11	19.3%	15	26.3%	57
Natural resource preservation	0	0.0%	9	15.8%	14	24.6%	15	26.3%	19	33.3%	57
Open space/ag. preservation	0	0.0%	11	19.3%	11	19.3%	24	42.1%	11	19.3%	57
Park and recreation facilities	7	13.7%	26	51.0%	4	7.8%	4	7.8%	10	19.6%	51
Sidewalks/trails	1	1.8%	4	7.0%	14	24.6%	32	56.1%	6	10.5%	57
Taxes	1	1.8%	2	3.5%	18	31.6%	21	36.8%	15	26.3%	57
Traffic and road conditions	4	7.3%	24	43.6%	7	12.7%	7	12.7%	13	23.6%	55
No response	0										

**9 Would you use train service if it were available?**

Yes	28	49.1%
No	13	22.8%
No Opinion	16	28.1%
Total responses	57	
No response	0	

**10 Would you use bus service if it were improved?**

Yes	23	41.1%
No	13	23.2%
No opinion	20	35.7%
Total responses	56	
No response	1	

**11 How important are each of the following when planning for the future of the Quakertown Area?**

	Very Important		Important		Somewhat Important		Not Important		No Opinion		Total Responses
Activities for seniors	13	23.2%	27	48.2%	7	12.5%	4	7.1%	7	12.5%	56
Activities for youth	25	43.9%	26	45.6%	2	3.5%	0	0.0%	4	7.0%	57
Affordable housing	19	32.8%	24	41.4%	8	13.8%	2	3.4%	5	8.6%	58
Arts and Culture	10	17.5%	21	36.8%	18	31.6%	3	5.3%	5	8.8%	57
Community recreation facilities	13	22.8%	30	52.6%	7	12.3%	1	1.8%	6	10.5%	57
Daycare facilities	12	21.1%	20	35.1%	8	14.0%	4	7.0%	13	22.8%	57
Employment opportunities	29	50.9%	19	33.3%	6	10.5%	0	0.0%	3	5.3%	57
Groundwater protection	33	58.9%	14	25.0%	5	8.9%	0	0.0%	4	7.1%	56
Growth management	39	68.4%	12	21.1%	3	5.3%	0	0.0%	3	5.3%	57
Historic resources	12	21.4%	26	46.4%	15	26.8%	0	0.0%	3	5.4%	56
Medical facilities	35	61.4%	19	33.3%	1	1.8%	0	0.0%	2	3.5%	57
Natural resource protection	24	42.1%	26	45.6%	5	8.8%	0	0.0%	2	3.5%	57
Open space/agricultural	31	54.4%	18	31.6%	4	7.0%	0	0.0%	4	7.0%	57
Public schools	32	60.4%	17	32.1%	2	3.8%	0	0.0%	6	11.3%	53
Public transportation	20	35.1%	15	26.3%	11	19.3%	3	5.3%	8	14.0%	57
Traffic and road conditions	39	68.4%	13	22.8%	4	7.0%	0	0.0%	1	1.8%	57
Transportation system	22	40.0%	17	30.9%	8	14.6%	1	1.8%	7	12.7%	55
Other, please specify	8										
No response	0										

**12 Do you believe the quality of life in your municipality is:**

Excellent	12	21.4%
Good	42	75.0%
Fair	2	3.6%
Poor	0	0.0%
Total responses	56	
No response	1	

**13 Do you believe the quality of life in your municipality is:**

Improving	16	28.6%
Declining	18	32.1%
Remaining the same	22	39.3%
Total responses	56	
No response	1	

**14 What 3 issues most threaten the current quality of life in the Quakertown Area?**

Crime	7	4.2%
Flooding	2	1.2%
Inadequate medical services	0	0.0%
Inadequacy of government services	1	0.6%
Lack of affordable housing	4	2.4%
Lack of job opportunities	11	6.6%
Loss of natural areas/open space	25	15.0%
Pollution	6	3.6%
Sprawl/uncontrolled growth	4	2.4%
Taxes	28	16.8%
Traffic	43	25.8%
Other	36	21.6%
Total responses	167	
No response	0	

**15 In your opinion, what top 3 qualities make a place a "good community"?**

Acceptable traffic vol./rd. conditions	39	23.4%
Arts and culture	4	2.4%
Clean air and water	22	13.2%
Convenient shopping	13	7.8%
Nearby neighbors	2	1.2%
Open space/natural resources	19	11.4%
Pedestrian access through community	9	5.4%
Privacy	10	6.0%
Quality schools	25	15.0%
Recreational facilities	3	1.8%
Rural character	18	10.8%
Other	124	74.3%
Total responses	167	
No response	0	

**16 Should your municipality acquire key open space areas, wildlife corridors, and trail linkages?**

Yes	42	75.0%
No	2	3.6%
No Opinion	12	21.4%
Total responses	56	
No response	1	

**17 If you answered yes to Question 16, would you support additional public spending on open space?**

Yes	27
No	9
No Opinion	21

**18 Identify the recreational facilities and activities that you would like to see improved or added to your municipality's park system: (Check all that apply)**

Baseball/softball fields	3	2.1%
Bicycling	11	7.6%
Camping	2	1.4%
Community clubs/groups	14	9.7%
Concerts	16	11.1%
Horseback riding	6	4.2%
Library	8	5.6%
Nature center	18	12.5%
Picnic areas	9	6.3%
Playgrounds/tot lots	5	3.5%
Senior citizen programs	12	8.3%
Skate parks	2	1.4%
Soccer/football fields	5	3.5%
Swimming pool	6	4.2%
Tennis courts	5	3.5%
Walking trails	3	2.1%
Other	19	13.2%
Total responses	144	
No response	5	

**19 Are you satisfied with the following aspects of commercial development/retail services with in the Quakertown Area?**

	Yes		No	
Variety of commercial/retail services	42	75.0%	10	17.9%
Total responses	56			
No response	1			
Location of commercial/retail	47	87.0%	3	5.6%
Total responses	54			
No response	4			
Quantity of commercial/retail	37	66.1%	14	25.0%
Total responses	56			
No response	5			

## Appendix B

### Summary of the Development Area Concept

The following narrative outlines the *Development Area concept* and describes how the basic underlying planning philosophy and land use pattern were derived. The appropriate amount and location of various types and intensities of land uses were considered. The physical limitations of the land also played a major part in determining appropriate development patterns. The *Development Area concept* promotes land use patterns that permit efficient provision of public, semipublic, and private services and facilities.

The *Development Area concept* employs a practical and realistic view of the planning process. It recognizes that it is impossible to develop an ultimate plan for non-urban areas. Non-urban areas are those with large amounts of undeveloped or underdeveloped land where a full range of public services does not exist throughout the entire municipality.

The advantage of the *Development Area concept* is that it establishes a basis upon which the anticipated growth for a specific time period may be directed into areas where a full range of coordinated services, both public and private, can be reasonably provided. Such services and facilities would include sewer and water services, municipal buildings and senior citizen centers, police and fire protection, safe roads with adequate capacities, the potential for public transportation, libraries and schools, and parks and recreational facilities.

The combination of these services and facilities, needed to sustain residential, industrial, commercial and other developed activities, is termed infrastructure. These services will be provided in a more efficient and cost-effective manner in concentrated Development Areas.

The cost savings will help control the price of housing. The *Development Area concept* also aims to decrease travel time and expense necessary to travel from residential areas to shopping areas, employment areas and most municipal facilities. In addition to out-of-pocket savings being realized by Quakertown Area residents, savings can be expected in the school tax burden either by reducing the necessity for more extensive school busing or by eliminating the need for more schools in scattered locations.

In delineating the appropriate Development Areas, a substantial amount of information was collected that identified areas of existing development and services. Areas with a high degree of environmental limitations (floodplains, steep slopes, wetlands, severe soil limitations, woodlands, etc.) were located.

While the location of public facilities plays an important factor in designating development areas, the intensity of existing development, regardless of public or private facilities, was also considered. Development Areas within the Quakertown Area, based on intensity of development, include the VC-1 District.

After consulting various sources of reliable information, anticipated growth was projected for the foreseeable future. The anticipated growth is a set of projections, not predictions.

Obviously, the growth anticipated will be affected by changing economic, social, environmental, and legal conditions. Growth projections have been and must continue to be reviewed and revised regularly so that they may remain useful tools.

With this information collected, Development Areas were located and sized to accommodate the anticipated growth to maximize efficient use of existing services and facilities and to direct intensive development away from Resource Protection Areas, areas with substantial amounts of significant environmental limitations. Particularly significant in the Quakertown Area are large areas of wetlands, flood plains and soils with severe limitations for developed uses and on-site septic systems. Remaining areas, termed Reserve Areas, are those into which Development Areas can be extended after existing Development Areas approach capacity and the need arises to accommodate more intensive uses.

In summary, when isolated developments are scattered over a wide area, the ability to provide facilities and services is a most difficult problem. The location and timing of new development are among the most critical aspects of developing a growth policy.

The *Development Area concept* phases and guides development to promote the most efficient use of existing service facilities before beginning construction of extended or duplicate facilities. Development Areas should expand outward from areas of existing development and services and be expanded only when the existing Development Areas approach full capacity.

## Appendix C

### Natural Resources Definitions

**Floodplain**—Areas adjoining streams, ponds, or lakes subject to a 100-year-recurrence-interval flood; or areas identified by the presence of floodplain soils.

**Floodplain (Alluvial) Soils**—Areas subject to periodic flooding or listed in the *Soil Survey of Bucks and Philadelphia Counties, Pennsylvania*, U.S. Department of Agriculture, Soil Conservation Service, (currently known as the U.S. Natural Resources Conservation Service), 2002, including all updates and revisions, as being “on the flood plain” or subject to “flooding.” The following soil types are floodplain soils: Bowmansville-Knavers silt loam, Fluvaquents, Hatboro silt loam, Holly silt loam, Nanticoke-Hatboro silt loam, Rowland silt loam.

**Lake**—A permanent body of water, naturally occurring or man-made, covering an area of two or more acres.

**Lake Shore Areas**—The landside edge of lakes from established shoreline to an upland boundary.

**Pond**—A permanent body of water, naturally occurring or manmade, covering an area of up to two acres.

**Pond Shore Areas**—The landside edge of ponds from established shoreline to an upland boundary.

**Steep Slopes**—Areas where the average slope exceeds 8 percent, which, because of this slope, are subject to high rates of stormwater runoff and therefore, erosion, and flooding.

**Watercourse**—Any channel of conveyance or surface water having defined bed and banks, whether natural or artificial, with perennial or intermittent flow.

**Wetlands**—Those areas that are inundated and saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs and similar areas.

**Wetland Margins**—The transitional area between the wetland boundary and the upland environment measured from the outer limit of the wetland vegetation to an upland boundary.

**Woodlands**—Areas composed of one-quarter acre or more of wooded land where the largest trees measure at least 6 inches dbh (diameter at breast height) or four and one-half feet above the ground. Woodlands are also a grove of trees forming one canopy where 10 or more trees measure at least 10 inches dbh. The woodland shall be measured from the dripline of the outer trees.





## Appendix D

### Land Use Classifications

**Single-Family Residential**—Consists of properties with single-family detached or attached one-or two-unit dwellings on lots smaller than five acres. This category also includes mobile home parks.

**Multifamily Residential**—Includes properties with three or more attached dwelling units. This category includes medium- to long-term housing accommodations, such as retirement complexes.

**Rural Residential**—The same as “Single-Family Residential” except dwellings are on lots that are five acres or larger, but do not qualify as “Agricultural.”

**Agricultural**—Land 20 acres or larger, with at least one-third of the parcel exhibiting agricultural or farm-related characteristics such as stables, orchards, and active or fallow fields. This category may also include residential dwelling units and farm-related structures on the same lot.

**Mining and Manufacturing**—Includes heavy manufacturing industries and printing and advertising industries, as well as building and landscaping material extraction.

**Government and Institutional**—Includes all federal, state, county, and municipal buildings and facilities, except those that are park and recreation related. All private, parochial and public schools are included as well as, churches, cemeteries, emergency service facilities, nursing homes, and fraternal organizations.

**Commercial**—Includes, but is not limited to, wholesale and retail trade establishments, finance, insurance, real estate, and hotels.

**Parks, Recreation, and Protected Open Space**—Includes municipal, county and state parks, state game lands, golf courses, campgrounds, and deed-restricted or open space easements associated with residential developments.

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

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

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



## Appendix E

# Significant Natural Areas in the Quakertown Area as identified in the Natural Areas Inventory of Bucks County

### **Priority 1 sites in the Quakertown Area**

#### **Cooks Creek**

Springfield Township, Durham Township

Cooks Creek (also known as Durham Creek) originates in the Triassic diabase and quartzite hills of western Springfield Township and flows in a northeasterly direction through Brunswick Formation shales into a limestone valley at Springtown. From there it flows through the Cambrian limestones of Springfield and Durham Townships to its confluence with the Delaware River below Riegelsville. The main stem of Cooks Creek is approximately 15 miles in length; the tributaries total an additional 37 miles.

The creek has been designated as Exceptional Value stream by the Pennsylvania Department of Environmental Protection. It supports a native brown trout population.

Headwater of the main channel of Cooks Creek is on the lower slopes of the Lookout (see below). Most of the land along the creek is agricultural, although extensive sedge meadows are present in several locations. Industry borders the creek near its mouth in the vicinity of Durham Furnace, the site of an early iron forge.

Cooks Creek is an outstanding aquatic resource. Protection efforts should extend from the mouth to the headwaters.

#### **Haycock Mountain (State Game Lands 157) and Nockamixon State Park**

Haycock Township, Bedminster Township, Nockamixon Township

Nockamixon State Park and State Game Lands 157 together make up the largest expanse of protected open space in the county, totaling more than 7,000 acres. Less than a mile separates this site from the Dimple Creek/Lake Towhee Park site. (See below.) Haycock Mountain, with its massive diabase outcrops, rises to a maximum elevation of just over 960 feet, 560 feet above the surface of Lake Nockamixon.

The site contains varied habitats, including forests, old fields, boulder fields, rocky streams, forested wetlands, and a six-mile-long lake created by a dam on the Tohickon Creek. Three rare plant species occur in the area and 47 species of birds, including five rare breeders, make their home on Haycock Mountain. In addition, locally rare plant species including Allegheny vine (*Adlumia fungosa*) and butternut (*Juglans cinerea*) are present. Black bears that have wandered into the area from farther north have been spotted in the vicinity several times in the past few years.

Opportunities should be sought to acquire landholdings and properties that jut into the area of protected lands or would aid in preserving a corridor between this area and Lake Towhee Park. (See the section on Top Rock Trail Road meadow, below.)

### **Quakertown Swamp**

East Rockhill Township, Richland Township, West Rockhill Township

Quakertown Swamp is the largest inland wetland in Bucks County. It contains diverse natural communities ranging from open water to shrub swamp, cattail marsh, tussock sedge marsh, and swamp forests, and includes a total of approximately 400 acres. The swamp is entirely within the Quakertown diabase sheet.

The Audubon Society has designated the swamp as an Important Bird Area. It is known to provide habitat for 91 bird species, including 14 rare breeders. The swamp also harbors the only known Great Blue Heron rookery in the county, which had 48 nests in 1999, making it the largest in eastern Pennsylvania.

The swamp is known to provide habitat for a variety of reptiles and amphibians, although a complete survey has not been done. Beavers are active in the swamp at several locations.

Several parcels of the swamp are part of State Game Lands 139, but most of the area is in private ownership. The Heritage Conservancy has conducted a survey of properties in the watershed. Continuing efforts to protect the swamp should focus on core areas along Bog Run and the headwaters.

A pipeline right-of-way that closely parallels Bog Run has brought a severe infestation of common reed (*Phragmites australis*) into the swamp. Action to control this invasive weed is needed. Other weed problems exist along the railroad track where Japanese plumegrass (*Miscanthus sinensis*) has spread over several acres in many parts of the wetland and where purple loosestrife (*Lythrum salicaria*) is established.

### **Ridge Valley Creek**

West Rockhill Township

Ridge Valley Creek flows for approximately four miles through West Rockhill Township to the border with Montgomery County south of Finland. It is a tributary of the Unami Creek, which it joins at Sumneytown.

Ridge Valley Creek flows through the diabase belt of upper Bucks and Montgomery counties. In Bucks County it follows a course within the Quakertown diabase sheet, dropping from 490 feet above mean sea level at the headwaters to just under 400 feet at the county line.

Three dams in this stretch have created small lakes each two to three acres in extent. Smaller ponds have been built on some of the headwaters streams. Traces of an early mill pond and mill race can be seen in one area of successional forest in the upper reaches of the watershed.

Where the gradient is greater the stream has eroded away the loose sediments to reveal a jumble of huge diabase boulders. This is especially evident in the section just below Allentown Road.

In the section west of Ridge Valley Road, the creek flows through a broad flat valley where sediment accumulation has occurred, forming extensive areas of swampy floodplain forest and marsh. Headwaters areas in the vicinity of Forest Road and Mountain View Road contain sphagnous shrub swamps, an unusual feature in the diabase region.

Although State Game Lands 196 forms a core area of protected land within the watershed in Bucks County, the remainder of the land is privately owned. Downstream in Montgomery County, Marlborough Township has acquired the former Camp Skymount property and the Natural Lands Trust has the Fulshaw-Craeg Preserve. The Montgomery County portion of the Ridge Valley Creek corridor is included in the Unami Hills study area, for which protection strategies are being developed.

This continuous forested expanse, part of the diabase zone of upper Bucks and Montgomery counties provides habitat for birds such as Barred Owls and Pileated Woodpeckers, which require large unbroken expanses of forest. Further fragmentation would threaten the integrity of the area and its ability to support a diversity of wildlife.

### **Priority 2 sites in the Quakertown Area**

#### **Cressman Hill and contiguous forested areas**

##### Springfield Township

This site consists of approximately 300 forested acres of slopes and flat uplands on diabase. It is continuous with additional forested land composing the Dimple Creek watershed, which extends into Haycock Township and includes Lake Towhee County Park. To the north, Cressman Hill is part of the Cooks Creek watershed.

The forest is continuous, except for utility rights-of-way and several roads that bisect it. It is typical boulder-strewn diabase forest, ranging from moist to wet.

Dominant canopy species are tulip tree (*Liriodendron tulipifera*), red maple (*Acer rubrum*), red oak (*Quercus rubra*) white oak (*Q. alba*), swamp white oak (*Q. bicolor*), and shagbark hickory (*Carya ovata*). The herbaceous flora is rich and diverse.

#### **Dimple (Kimbles) Creek/Lake Towhee Park**

##### Haycock Township

Dimple Creek flows through diabase geology from the south side of Cressman Hill on the Haycock-Springfield border for 4.25 miles until it joins the Tohickon Creek near the bridge on Covered Bridge Road east of Quakertown. Like other diabase streams, Dimple Creek shows alternating zones of erosion, where a boulder strewn valley has been created, and flat areas of accumulation that are usually characterized by shrub-swamp or open marsh habitats. A portion of the upper watershed is included in State Game Lands 157, north of East Saw Mill Road.

Lake Towhee Park is known to have a diverse bird fauna, with 69 species including seven rare breeders and two special-concern species. Moist meadows along Dimple Creek at Old Bethlehem Pike and West Thatcher Road contain several rare plants, one of which, pineland pimpernel, also grows along the muddy creek banks in Lake Towhee Park. The meadow at the mouth of Dimple

Creek, which contains populations of three state-listed endangered plant species, is particularly notable (see the separate description below).

### **Dimple (Kimbles) Creek – meadow at the mouth**

Haycock Township

This site, a meadow located where Dimple Creek flows into the Tohickon Creek, was formerly a sheep pasture. It has not been grazed for the past 3–4 years and as a result is becoming overgrown with reed canary grass (*Phalaris arundinacea*). The meadow contains an excellent population of slender blue iris and two other rare plants. It is also excellent habitat for reptiles and amphibians. This site is part of the Dimple Creek corridor described above.

### **Rock Hill**

East Rockhill Township, Richland Township

This site is part of the Haycock diabase sheet. Rock Hill rises to a height of 850 feet above sea level, 250 to 300 feet above the surrounding landscape. It includes extensive forested slopes and abundant evidence of several eras of quarrying from residue from early cutting of paving blocks from surface boulders to a large abandoned quarry pit on the southern end.

The hill is identified as an outstanding scenic geologic feature of Pennsylvania (Geyer and Bolles, 1979). Rock Hill is an integral part of the continuous forested band that stretches across upper Bucks and Montgomery counties and should be protected from deforestation or fragmentation.

### **Top Rock Trail Road meadow**

Haycock Township

This site is a moist meadow on diabase geology at the southeast end of Haycock Mountain (see above). The property, which is privately owned, adjoins State Game Lands 157 and Nockamixon State Park. The meadow contains the largest population of prairie phlox in the county and probably the state, plus one additional state-listed endangered plant. Annual mowing is required to maintain the open conditions that allow these rare species to flourish.

### **Priority 3 sites in the Quakertown Area**

#### **Hazelbach Creek corridor**

Milford Township

The Hazelbach Creek corridor is typical of diabase streams, with extensive wooded, shrubby, and herbaceous wetlands forming a mosaic of habitats, which include amphibian and reptile habitat.

#### **Morgan Run**

Richland Township

Morgan Run is a low gradient stream that flows through the Brunswick formation of the Quakertown Basin to its junction with the Tohickon Creek south of Quakertown. The creek has a slough-like character, it is broad and shallow and is bordered, and in places obscured, by bands of emergent vegetation. Patches of buttonbush swamp adjoin the creek corridor at irregular intervals; elsewhere the adjacent land is low, flat floodplain forest.

### **Tohickon Creek in the vicinity of West Thatcher Road**

Richland Township

This site is a stretch of floodplain forest along the Tohickon Creek in the vicinity of West Thatcher Road east of Quakertown and just downstream from the Quakertown sewage treatment plant. Shellbark hickory is abundant in the floodplain forest and the creek bed has an abundant and diverse emergent aquatic flora, perhaps reflecting high nutrient availability.

### **Unami Creek in the vicinity of Allentown Road, including Milford Township Park**

Milford Township

This stretch of the Unami Creek includes forested floodplain and other scoured areas along the creek. Wooded slopes occur below Allentown Road. The geology is a combination of diabase and hornfels. A 1997 survey of fish documented high native fish diversity (15 species) in this section of the Unami Creek (Criswell, 1998).

### **Priority 4 sites in the Quakertown Area**

#### **Beaver Run Woods**

Richland Township

This site contains low, seasonally wet woods, with at least one vernal pond along Beaver Run, a tributary of the Tohickon Creek. Shellbark hickory is a dominant species.

#### **Route 309 Woods**

Richland Township

This site is located on the west side of Route 309 behind an auto dealership and an adjacent utility station. It consists of wet woods at the edge of the Quakertown basin. Diabase outcrops occur along the slope that borders the site to the north. Diverse herbaceous flora is present.





## Appendix F

### Village Descriptions

#### Haycock Township

**Applebachsville**—From 1735 to 1837, the land where the village of Applebachsville is presently located was known as the Stoke’s Tract or Stokes Meadow. After owning the land for over 100 years, the Stokes Family sold the 377-acre tract to George Dutch, “an eccentric New York sea captain.”<sup>28</sup> The captain built a large mansion on the tract in the hopes that a life of clean country living would reform his son’s drunken habits. Apparently, the captain’s plan was unsuccessful, because his son sold the land in 1847 to Paul and Henry Applebach, only five years after receiving the land from his father.

The Applebachs, descendants of the Applebach family of Westphalia, Germany, soon laid out building lots on either side of Old Bethlehem Road. The tract grew into a town of 30 houses and, with stagecoaches passing through the town every day, Applebachsville became known as the “Metropolis of Haycock.”<sup>29</sup>

A church known as the German Evangelical Lutheran and Reformed and Mennonite Church was built in 1855. The church articles stated that certain visiting Christian ministers could preach or hold funeral services at the church “except Methodist preachers, to whom no permission under any circumstances shall be granted.”<sup>30</sup>

Today, Applebachsville is not much bigger than it was in the 1850s. A fire company, two churches, and approximately 30 houses are found there. The village is shady, pleasant, and quiet. The houses are attractive and well maintained and there are many large, old trees throughout the town. While the road through the village is moderately well traveled, the traffic does little to detract from the pleasant atmosphere of the village.

**Strawntown**—Strawntown is an old village which existed even before the days of the stage coach routes. The village is named after the Strawn family, who were at one time numerous in Haycock Township.

In an 1832 edition of *Gordon’s Gazetteer of Pennsylvania*, the village is described as having 14 houses, a store, and a tavern. The tavern was in existence prior to the days of stage coaches, although the exact year it was built is unknown. Once the stage coach routes from Philadelphia to Bethlehem were established, the tavern in Strawntown became a regular stopping point. Although the original tavern was quite small, several additions were built throughout the years.

The village of Strawntown is rather difficult to identify as one travels along Old Bethlehem Road; even the tavern is easy to overlook because there is no sign in front (although there are some neon

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<sup>28</sup> *Place Names in Bucks County*, p.8.

<sup>29</sup> *Ibid.*, p.8.

<sup>30</sup> *Ibid.*, p.8.

signs in the windows). The houses on either side of the tavern are spread out along the road, making it hard to determine where the village begins and ends. The village is situated along an attractive stretch of Old Bethlehem Road and benefits from the presence of many large shade trees.

**Thatcher**—Although Thatcher is an old settlement, the name of the village did not appear on maps until 1891 when it was shown in *Noll's Atlas of Bucks County*. The village was named after a prominent resident, Samuel B. Thatcher, who held many important positions in the county during the latter part of the 19<sup>th</sup> century. He served as director of the Quakertown National Bank, among other positions. A post office was established in Thatcher in 1889, but has long since been discontinued.

Thatcher is a tiny hamlet today. The village is situated in a pleasant and quiet location surrounded by open fields and woods.

One of Bucks County's 12 remaining covered bridges crosses Tohickon Creek just down the road from the village. Known as Sheard's Mill Bridge, it is 130 feet long and was built in 1873.

The principal landmark in Thatcher is a large wooden building that was formerly the Thatcher General Store. The building has a porch across the entire front, making it easy to imagine how the country store might have looked when it was in operation. It has since been converted into a private home.

## **Milford Township**

**Brick Tavern**—This village takes its name from the Brick Tavern, an old inn that is still in operation. The tavern was built in 1818 out of bricks fired on the site. The bricks were formed from local red clay, common in that area of the county. This clay was also used to make redware pottery.

The tavern became a popular stopping point for travelers on the road between Philadelphia and Allentown. When the stage was replaced by a trolley at the end of the 19<sup>th</sup> century, the Brick Tavern provided a place for trolley passengers to leave their horses. Because the tavern had a large weight scale and holding pen, the area was also a center for cattle sales. In addition, the tavern contained the village post office and general store. Other businesses in the community included a farm implement shop, a shoemaker, a butcher shop, and a blacksmith shop. When the trolley line closed, the village was no longer the center of activity it once had been.

Today, the village consists of a few residences and the tavern. There is little evidence of the many enterprises that once conducted business in the area. The village of Brick Tavern is principally surrounded by open farmland and rolling hills.

**Finland**—The name of Finland is relatively recent and may have first been used when a post office was established in 1886. Early in the 20<sup>th</sup> century, this area was known as “the Poconos of Philadelphia” and “the Fineland.” Thus, the village name probably started out as Fineland and this was later contracted to Finland.

During this time, Finland served as a summer resort for Philadelphia and Wilmington residents, many of whom built cottages along the banks of Unami Creek. Several church camps were also

established in the area and were frequented by residents of less distant communities such as Lansdale, Quakertown, and Allentown.

Cigar making was an important industry in Finland, as in many other Milford Township villages. At the end of the 19<sup>th</sup> century, Finland boasted the Schuler Cornet Band, an all-male band, with the exception of the conductor who was a female member of the local Pfaff family. Apparently, this family was quite large, as it made up most of the band members, as well as supplying many workers to the village cigar factory.<sup>31</sup>

Finland is located in a beautiful wooded and rocky setting. The Unami Creek and winding narrow roads enhance this picturesque place. The Finland Suomi Inn, an interesting stone and frame structure, is found at the village center. The Finland Mennonite Church and a few attractive stone and frame houses are also located in the village.

**Geryville**—Geryville was originally known as Aurora, and this name was in use on maps as late as 1850. The village name became Gery when a post office was established in 1865. This name was later changed to Geryville when Jesse Gery was appointed postmaster in 1871.

The village tavern obtained a license in 1796 and, three years later, became the headquarters for the Fries Rebellion. The Geryville Publick House is still in operation and the building has been maintained in excellent condition.

Geryville was once the home of many commercial enterprises. In 1850, a tannery and pottery carried on a thriving business in Geryville. According to *Hershey's Gazetteer of Bucks County*, the village consisted of a hotel, store, several shops, and a dozen houses in 1871.

Milford was once a major producer of whip-stock. Conrad Miller, a resident of Geryville, was among the finest craftsman of this local product.

A three-story cigar factory was built in 1897. The factory was in operation until shortly before World War II, when one of the business partners left and invested his money in a cigar factory in Spinnerstown. The building remained standing until it was demolished in 1976.<sup>32</sup>

Today, Geryville is a small, quiet village consisting of about a dozen stone and frame houses and the tavern. A moderate amount of traffic passes through the village and some new residential development is found in the vicinity of Geryville. The area has retained a pleasant rural atmosphere.

**Milford Square**—Prior to 1850, this village was known as Heistville in honor of the Heist family of upper Bucks. The early settlers of Milford Square were principally German Mennonites.

An important contribution of this settlement to the surrounding community was the German language newspapers and periodicals published there between 1850 and 1881. The *Patriot and Reformer*, a newspaper established by John G. Stauffer in 1867, attained the widest circulation of the German newspapers. Stauffer was both editor and owner of the publication, and his much-discussed

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<sup>31</sup> Rodger Baldwin, *Wandering through Milford Township*, 1984, pps. 54–67.

<sup>32</sup> *Ibid.*, pps. 67–71.

editorials contributed to the success and influence of the newspaper. In 1881, Stauffer moved his publication office from Milford Square to Quakertown and, soon afterwards, the paper became the *Quakertown Free Press*.

By the late 1800s, Milford Square was an industrious community containing cigar and coach factories, stores, shops, a hotel, and a population of about 150 people. Whip-stock making was an important home industry in Milford Square. There were also numerous mills along the Unami Creek and Licking Creek.

Milford Square has retained an old-fashioned village character, and it is easy to imagine how this community might have looked in the 19th century. The old cigar factory is now occupied by Center Line Manufacturing (makers of 3-D name plates for car dealers) and Trumbore's motorcycle sales. Other commercial enterprises in Milford Square include a gas station and a variety of small businesses. The residences are principally older frame houses. Modern intrusions into Milford Square have been kept to a minimum, since most of the new development has taken place outside of the village center. Numerous trees and rural surroundings also add to the charm of Milford Square.

**Mumbauersville**—This small village was founded by the Mumbauer family who were among the early settlers of Milford Township. Many members of the Mumbauer family lived and worked in this area. Mumbauersville was once home to a successful cigar making industry. Today, the village is comprised of a saw mill, farm, and a few residences located on scenic winding road, surrounded by woods and fields.

**Spinnerstown**—The name of this village comes from the Spinner family, who owned both the village tavern and store in 1850. Other enterprises found in Spinnerstown at that time included a cigar manufacturer, a tannery, a plow manufacturer, and a saw mill. The Spinnerstown Creamery, which produced butter and cheese for the local dairymen, was established in the 1880s. Although the original building was burned down, the creamery was rebuilt and has since been converted to apartments.

Among the village's historic landmarks are the Spinner House and St. John's Evangelical Lutheran Church (located about a half mile west of Spinnerstown). The Spinner House, built by Edwin Spinner in the 1800s, is unusual because it is possibly the only remaining house in Pennsylvania with both Baroque and Pennsylvania Dutch fraktur art on its walls and ceilings.<sup>33</sup> St. John's Evangelical Lutheran Church is the oldest Lutheran Church in Bucks County. One of the church's first pastors is believed to have been the Rev. Dr. Henry M. Muhlenberg, the founder of the Lutheran Church in the United States. The records of this church go back as far as 1734, although when the first church building was constructed is unknown.

A picturesque village, Spinnerstown seems to have changed little since the 1800s. A general store converted into a delicatessen and the Spinnerstown Hotel remain in operation at the center of the community. The residences are older frame houses and have been well maintained through the years. The farms, open fields, and woods surrounding Spinnerstown help to define the village boundary while proving a scenic view for residents and visitors of Spinnerstown.

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<sup>33</sup> *Ibid.*, pps.88–91.

**Steinsburg**—Steinsburg was once a thriving community with numerous small businesses. An 1860s map of the area shows two tanneries, a saddler and harness maker, a boot and shoemaker, and a butcher. The cattle used by these businesses were driven through the streets of Steinsburg and most of the village residents built fences to protect their front yards from the cattle.

A coach maker, carpenter, blacksmith, miller, general store, and creamery were also in operation during the mid-1800s. The Steinsburg Hotel opened in the 1700s when it was known as the White Swan or the Swain Tavern. This handsome stone building is now used as a private residence. One unusual enterprise found in Steinsburg was Erdman's Bottling Works, which made soft drinks from 1929 until the early 1960s.<sup>34</sup>

Today, Steinsburg is a quiet, residential community with little evidence of the many businesses that once operated in the area. The majority of the houses are older buildings, constructed of brick or stone. The village edges are well defined and most of the surrounding countryside consists of farms and woodlands.

## **Richland Township**

**California**—Frederick Wolf, a wealthy German, built a large three-story brick hotel in this village in 1849. Because this was the same year as the California gold rush, Wolf called his new inn the California Hotel. The sign that hung in front of the hotel pictured a man carrying a sack of gold on his back. Although the hotel was built in 1849, the earliest the name California is shown on a map is 1876. At one time, California also contained a grist and saw mill.

The California Hotel remains at the center of this small village. The large hotel has great potential for restoration to its original condition. Unfortunately, the sign showing the prospector no longer hangs in front of the hotel. Most of the remaining development in and around California is residential and agricultural. A meat packing plant is also located a short distance east of California on Cherry Road. The roads through the village are fairly quiet and there are several handsome frame and stone houses in the area.

**Paletown**—According to a former resident of Paletown, pale or picket fences enclosed many of the village yards around the time of the Civil War. These fences were similar in design and all were painted white. The distinctive appearance created by the pale fences is allegedly the source of the village's name.

Today, Paletown is a small village consisting of older farm houses, barns, and a few newer homes. Some of the houses and barns are rather rundown and in need of repairs. The old picket fences of the 1860s no longer enclose the yards of Paletown. The village is situated in a pleasant and quiet location and is principally surrounded by farmland.

**Rich Hill**—Rich Hill is located on the border of East Rockhill, West Rockhill, and Richland townships. Rich Hill grew up along the Old Bethlehem Pike and was bypassed when the new Route 309 was built. The village was once known as Bunker Hill; however, the name was changed to Rich

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<sup>34</sup> *Ibid.*, pps. 107–114.

Hill when a post office was established in 1883. The new name was probably derived from the name of the township.

Rich Hill has remained a small, residential village consisting of a few houses at the crossroads of Rich Hill Road and the Old Bethlehem Pike. The stone houses found at the intersection are quite large and, for the most part, have been well maintained over the years. Large shade trees also enhance the setting of this picturesque community.

**Shelly**—This village was once known as Shelly Station because it grew up around a station on the Bethlehem branch of the Reading Railroad. The railroad station was apparently named after the Shellys, a prominent family in Richland and Milford townships. Eventually, the word “station” was dropped from the name.

Today, Shelly appears to be located on both sides of Route 309, but the traffic has divided the settlement into two separate communities. The main part of the village is located near the railroad tracks, east of Route 309. This part of Shelly is a large, well-defined village. There are many attractive older frame houses which give Shelly a quaint, old-fashioned atmosphere. Although the village is very close to Route 309, it is well-screened from this busy highway by trees and other vegetation. In addition to residential uses, Shelly contains a Mennonite church, a large fire company, and a small industry adjacent to the railroad tracks.

## Appendix G

### Sources of Funding and Assistance

Finding the proper funding and assistance can be a critical part of the implementation process. This appendix provides an overview of some of the programs available to help municipalities carry out many of the recommendations listed in this plan. Each program is detailed as to what kind of help it provides and a contact for additional information.

This list is not intended as a comprehensive inventory, but rather as a selected overview of potential programs and sources of technical assistance. It should be used as a starting point for research, inquiry, and program applications.

#### **Community Development Block Grant (CDBG)**

This federal program provides grant assistance and technical assistance to aid communities in their community and economic development efforts. There are two components: the entitlement program which provides annual funding to 27 third-class cities, 127 boroughs and townships, and 54 counties, and a competitive program which is available to all nonfederal entitlement municipalities in Pennsylvania. Bucks County is a participant in the CDBG entitlement program, so Quakertown Area municipalities may apply for CDBG funds through the county.

*Eligibility*—Municipal governments and nonprofit corporations.

*Eligible Uses*—Housing rehabilitation, public services, community facilities, infrastructure improvements, historic preservation, development, and planning.

*Contact information*—Bucks County Office of Community and Business Development at (215) 345-3840

#### **Communities of Opportunity Program**

This program provides state-funded grants for community revitalization and economic development activities that occur on a local level. Specifically, the program assists communities in becoming competitive for business retention, expansion, and attraction. It also funds projects that assist with community revitalization for housing and low-income housing.

*Eligibility*—Local governments, redevelopment authorities, housing authorities, and nonprofits on a case-by-case basis.

*Eligible Uses*—Community revitalization and economic development and/or the development or rehabilitation of housing.

*Contact information*--Aldona Kartorie at (717) 720-7409 or e-mail akartorie@state.pa.us

## **Community Revitalization Program**

This program provides grant funds to support local initiatives that promote the stability of communities. The program also assists communities in achieving and maintaining social and economic diversity to ensure a productive tax base and a good quality of life.

*Eligibility*—Local governments, municipal and redevelopment authorities and agencies, industrial development agencies, and nonprofit corporations incorporated under the laws of the Commonwealth.

*Eligible Uses*—Construction or rehabilitation of infrastructure; building rehabilitation; acquisition and demolition of structures; revitalization or construction of community facilities; purchase or upgrade of machinery and equipment; planning of community assets; public safety; crime prevention; recreation; training; and acquisition of land, buildings, and rights-of-way.

*Contact information*--Customer Service Center at (800) 379-7448 or e-mail [ra-dcedcs@state.pa.us](mailto:ra-dcedcs@state.pa.us)

## **Department of Conservation and Natural Resources (DCNR) Grants**

The Community Conservation Partnerships Program provides state and federal grant dollars to help fund a variety of programs.

- Community Grant Program – Grants to develop various planning tools including recreation, park and open space plans, greenway plans, feasibility studies, and master site plans. Also provides funding for the purchase and development of land for park, recreation and conservation purposes and for the rehabilitation of existing park and recreation facilities.
- Rails-to-Trails Grant Program – Funding for feasibility studies, development of master plans, and special purpose studies on a particular issue or structure that impacts the conversion of a rail to a trail.
- Pennsylvania Recreational Trails Program – Funding to develop and maintain recreational trails and trail related facilities for motorized and nonmotorized recreational trail use.

*Contact information*—Fran Rubert at (215) 560-1183 or e-mail [frubert@state.pa.us](mailto:frubert@state.pa.us)

## **Kodak American Greenways Grants Program**

The Kodak American Greenways Awards Program, a partnership project of the Eastman Kodak Company, the Conservation Fund, and the National Geographic Society, provides small grants to stimulate the planning and design of greenways in communities throughout the country. In general, grants can be used to cover expenses needed to complete a greenway project including planning, technical assistance, legal, and other costs.

*Contact information*--<http://www.conservationfund.org>



## **Land Use Planning and Technical Assistance Program (LUPTAP)**

This program provides grant funds for the preparation of community comprehensive plans and the ordinances to implement them. It promotes cooperation between municipalities in making sound land use decisions that follow or adhere to the Governor's Executive Order on Land Use.

*Eligibility*—Priority is given to any county government acting on behalf of its municipalities, any group of two or more municipalities, or a body authorized to act on behalf of two or more municipalities.

*Eligible uses*—Preparing and updating of comprehensive community development plans, policies, and implementing mechanisms such as zoning ordinances or subdivision regulations; functional plans such as downtown revitalization, water resource plans, and land development regulations.

*Contact information*—Pennsylvania Department of Community and Economic Development (DCED) at (888) 223-6837

## **Local Government Capital Projects Loan Program**

This program provides low-interest loans for the equipment and facility needs for small local governments.

*Eligibility*—Local governments with populations of 12,000 or less.

*Eligible uses*—Rolling stock and data processing equipment purchases or the purchase, construction, renovation, or rehabilitation of municipal facilities.

*Contact information*—DCED at (888) 223-6837

## **Pennsylvania Department of Environmental Protection**

- Growing Greener – Funding to reimburse municipalities for costs associated with the preparation, administration, enforcement, and implementation of ordinance and regulations as required by the Stormwater Management Act.

This program also provides funding to preserve natural areas and open spaces; improve state parks; and enhance local recreational needs, which could include recreational facilities and trail projects.

*Contact information*—[www.dep.state.pa.us](http://www.dep.state.pa.us)

## **Pennsylvania Historical and Museum Commission**

- Certified Local Government Grant (CLG) Program – Provides funding for cultural resource surveys, national register nominations, technical and planning assistance, educational and interpretive programs, staffing and training, and pooling CLG grants and third-party administration.

- Keystone Historic Preservation Grant Program – Funding for preservation, restoration, and rehabilitation.
- Pennsylvania History and Museum Grant Program – Funding under this program is designated to support a wide variety of museum, history, archives and historic preservation projects, as well as nonprofit organizations and local governments. There are 10 types of grants.

*Contact information--*[www.phmc.state.pa.us](http://www.phmc.state.pa.us)

### **Pennsylvania Infrastructure Investment Authority (PENNVEST)**

This program provides low-interest loans for the design, engineering and construction of publicly and privately owned drinking water distribution and treatment facilities, stormwater conveyance and wastewater treatment and collection systems.

*Eligibility*—Communities or private firms needing clean drinking water distribution and treatment facilities and/or safe sewage and stormwater conveyance and treatment facilities.

*Eligible uses*—Design, engineering and construction of publicly and privately owned drinking water distribution and treatment facilities, stormwater conveyance, and wastewater treatment systems.

*Contact information*—[www.pennvest.state.pa.us](http://www.pennvest.state.pa.us)

### **Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA-LU)**

This program provides funding to develop and maintain trails for recreational purposes that include pedestrian, equestrian, bicycling and non-motorized snow activities as well as off-road motorized vehicle activities.

*Contact information:* <http://www.fhwa.dot.gov/safetealu/>

### **Safe Routes to School and Home Town Streets**

These programs, administered through the Pennsylvania Department of Transportation, provide federal funds for projects that enhance the quality of community life. The Safe Routes to Schools program promotes safe walking and biking to school. The Home Town Streets program promotes downtown reinvestment.

The programs reimburse eligible expenditures and have a 20 percent matching fund requirement. The matching funds may come from a variety of federal, state, local or private sources.

*Eligibility*—Federal or state agencies, local governments, school districts and nonprofit organizations.

*Eligible uses (Safe Routes to School)*—Sidewalks, crosswalks, bike trails, traffic calming improvements, pedestrian education.

*Eligible uses (Home Town Streets)*—Streetscape improvements, lighting, street furniture, bus shelters, traffic calming, kiosks, signage and others.

*Contact information*—[www.dot.state.pa.us](http://www.dot.state.pa.us)

### **Shared Municipal Services**

This program provides funds that promote cooperation among municipalities. The program also encourages more efficient and effective delivery of municipal services on a cooperative basis.

*Eligibility*—Two or more local governments or Councils of Governments (COGs).

*Eligible uses*—Combined police records administration, shared personnel activities, joint ownership of equipment, shared data processing operations, joint sign making, and COG start-up funding.

*Contact information*—DCED at (888) 223-6837

### **Water Resources Education Network (WREN)**

Administered through the League of Women Voters of Pennsylvania, this program provides grants for water resources education projects.

*Contact information*—[www.pa.lwv.org/wren](http://www.pa.lwv.org/wren)

## **Historic Preservation**

### **Federal Rehabilitation Investment Tax Credit Program**

The Federal Rehabilitation Investment Tax Credit Program enables a property owner to recover 20 percent of rehabilitation costs in the form of a tax credit. Administered by the Pennsylvania Bureau for Historic Preservation in partnership with the National Park Service, the federal tax credit program is one of the most successful and cost-effective programs that encourages private investment in rehabilitating historic properties such as office buildings, rental housing, hotels, and retail stores. In order to qualify for the program, the building must be listed on the National Register of Historic Places, the work must meet the Secretary of Interior's Standards for Rehabilitation, the building must be placed into an income-producing use, and a good portion of money must be spent by the owner on the building's rehabilitation.

A 10 percent federal tax credit is available for rehabilitation of nonresidential income-producing buildings built before 1936 that are not listed on the register. Certification through the National Park Service is not required. However, before undertaking any rehabilitation work with potential tax credits in mind, contacting the Bureau of Historic Preservation is recommended so that federal guidelines and requirements are carefully followed.

The Bureau also offers Keystone Grants for the rehabilitation of historic buildings under the stewardship of 501(c)(3) organizations or public agencies. Grants range from \$20,000 to \$100,000 with a match from the applicant.

Contact information--Scott Doyle at (717) 783-6012  
E-mail: midoyle@state.pa.us  
Website: www.phmc.state.pa.us

## **Local Economic Development Assistance**

### **Center for Entrepreneurial Assistance**

The Center for Entrepreneurial Assistance (CEA) is the lead agency in Pennsylvania government for small business development. The mission of the CEA is to enhance the entrepreneurial vitality of the Commonwealth and build an environment, which encourages the creation, expansion and retention of successful small, woman-owned, and minority-owned businesses.

The CEA oversees the Small Business Resource Center, Minority Business Advocate, and the Women's Business Advocate. Experienced consultants are available to help potential business owners with business-related issues or direct them to qualified service providers.

*The CEA can be contacted at:*

Department of Community and Economic Development  
Commonwealth Keystone Building  
400 North Street, 4th Floor  
Harrisburg, PA 17120-0225  
Phone: (800) 280-3801 or (717) 783-5700.

Website: [www.inventpa.com](http://www.inventpa.com)

E-mail: ra-dcedcea@state.pa.us