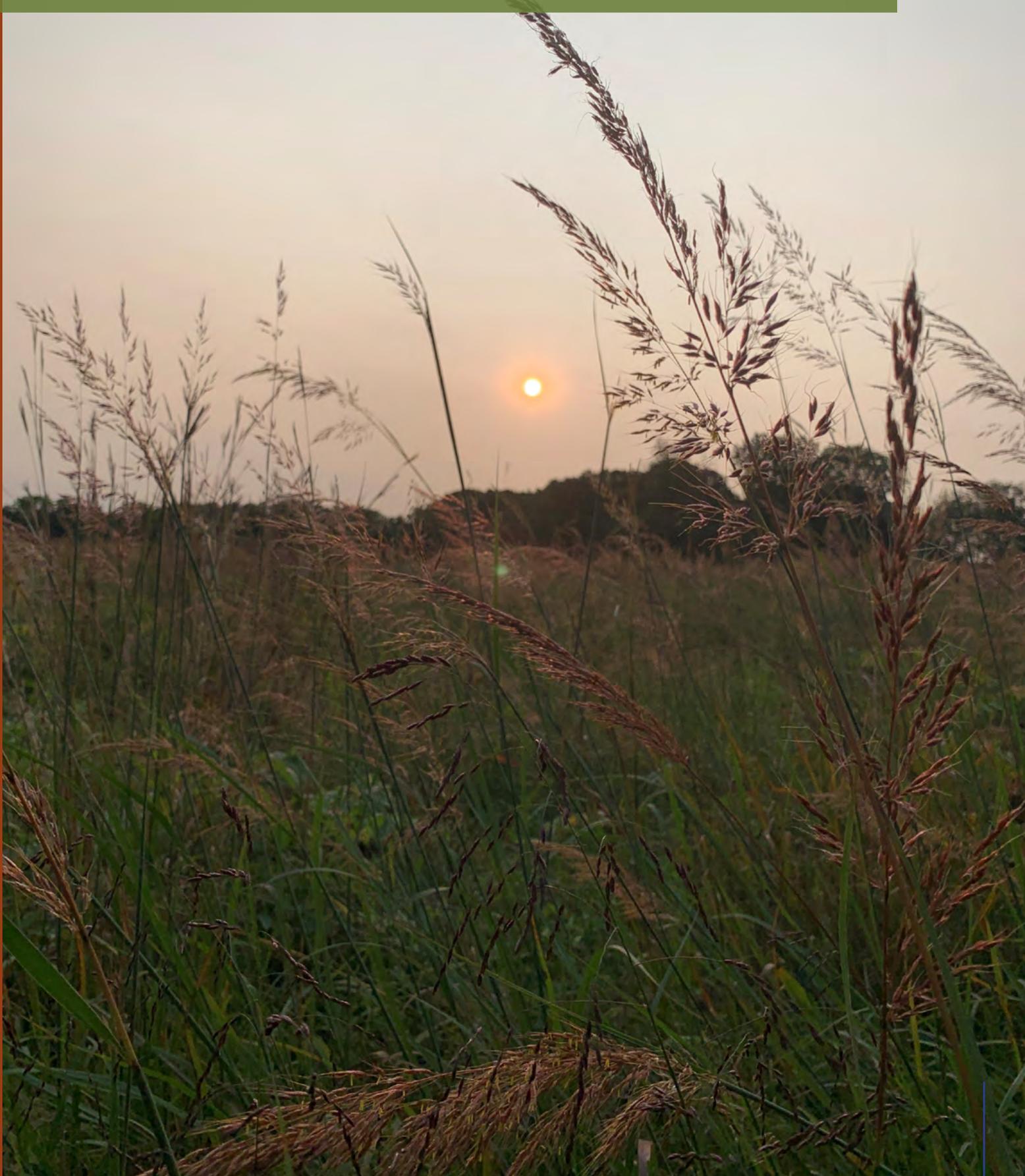


Guidelines *for* Growth & Sustainability

2023 COMPREHENSIVE PLAN



Adopting Resolution

JUNE 2023

The Steering Committee for this project was the Willistown Township Planning Commission. Assistance was provided by the Township's Environmental Sustainability Commission, Historic Commission, Land Conservation Authority Board, Open Space Review Board, Parks and Recreation Board, Board of Supervisors, municipal staff, and residents. Technical assistance was provided by Gaadt Perspectives, LLC, Pennoni Associates, Inc., and Yerkes Associates, Inc.

COMPREHENSIVE PLAN STEERING COMMITTEE AND PLANNING TEAM

Willistown Township Planning Commission

Cathy Rubenstone, Chair
Warren Claytor, Vice Chair
Phillip Foret, Secretary
Denny Howell, II
Mary Ravenfeld
William Shoemaker
David Watt

Technical Assistance

Gaadt Perspectives, LLC
John M. Gaadt, AICP, Project Manager & Planner
Suzanne D. Gaadt, Publication Designer

Pennoni Associates, Inc.

Michael Schneider, P.E., Associate Vice President
Lyna Chau, Transportation Planner

Yerkes Associates, Inc.

Charles Jackson, Sewer/Water/Stormwater Planning, GIS services

Willistown Township Board of Supervisors

Molly Perrin, Chair
William Shoemaker, Vice Chair
Robert Lange

©Willistown Township 2023

Front cover image: Mary N. Hundt
Back cover image: Robert Lange
Inset image: Alex Djordjevic



Ray Dombroski



TABLE OF CONTENTS

1: INTRODUCTION

- 1.1: Purpose and Scope of the Comprehensive Plan
- 1.2: Planning in Willistown Township
- 1.3: Preparation of This Plan

2: SUMMARY OF GOALS AND POLICIES

- 2.1: Goal 1 - Protecting Community Values
- 2.2: Goal 2 - Guiding Future Growth
- 2.3: Goal 3 - Providing Community Facilities and Services

3: COMMUNITY BACKGROUND

- 3.1: Regional Context and Influences
- 3.2: Historic Development
- 3.3: Land Use Patterns
- 3.4: Demographic Profile
- 3.5: Demographic Implications for Planning

4: PROTECTING COMMUNITY VALUES: GOAL 1

- 4.1: General Policies for Preserving Environmentally Sensitive Lands and Natural Resources
 - 4.1.1: Water Resources – Surface Water, Ground Water
 - 4.1.2: Land Resources – Soils, Steep Slopes
 - 4.1.3: Biotic Resources – Woodlands, Pennsylvania Natural Heritage Program, Chester County Natural Areas Inventory, Local Vegetation of Importance, Upper Ridley/Crum Important Bird Area, Deer Management
- 4.2: General Policies for Preserving Areas of Significant Physical, Historic and Scenic Value
 - 4.2.1: Scenic, Historic, Recreational, and Cultural Resources
 - 4.2.2: Parks, Recreation, Preserves, and Trails
- 4.3: Protecting Neighborhoods and Housing Stock
- 4.4: Composite of Resources and Priorities for Protection

5: GUIDING FUTURE GROWTH: GOAL 2

- 5.1: Residential Development
- 5.2: Institutional Development
- 5.3: Commercial and Office Development
- 5.4: Industrial Development
- 5.5: Future Land Use

6: PROVIDING COMMUNITY FACILITIES AND SERVICES: GOAL 3

- 6.1: Fire Protection
- 6.2: Police Protection
- 6.3: Emergency Medical Assistance
- 6.4: Roads and General Circulation
- 6.5: Public Transportation
- 6.6: Municipal Services and Facilities
- 6.7: Water Supply
- 6.8: Sewage Disposal
- 6.9: Stormwater Management
- 6.10: Solid Waste Collection, Disposal, and Recycling
- 6.11: Education
- 6.12: Library Services
- 6.13: Parks and Recreation
- 6.14: Open Space Preservation, Landowner Assistance and Private Land Stewardship
- 6.15: Transmission Pipelines

7: IMPLEMENTING THE PLAN

- 7.1: Summary of Key Planning Issues
- 7.2: Guiding Principles
- 7.3: Recommendations for Policy Implementation

LIST OF MAPS

- Map 1: Existing Land Use
- Map 2: Water Resources
- Map 3: Land Resources
- Map 4: Biotic Resources
- Map 5: Scenic, Historic & Cultural Resources
- Map 6: Publicly Accessible Open Space & Trails
- Map 7: Composite of Historic, Scenic & Natural Resources
- Map 8: Protected and Developed Lands
- Map 9: Resources Targeted For Protection
- Map 10: Future Land Use
- Map 11: Community Facilities & Services
- Map 12: Circulation Plan
- Map 13: Park and Recreation Plan

LIST OF FIGURES

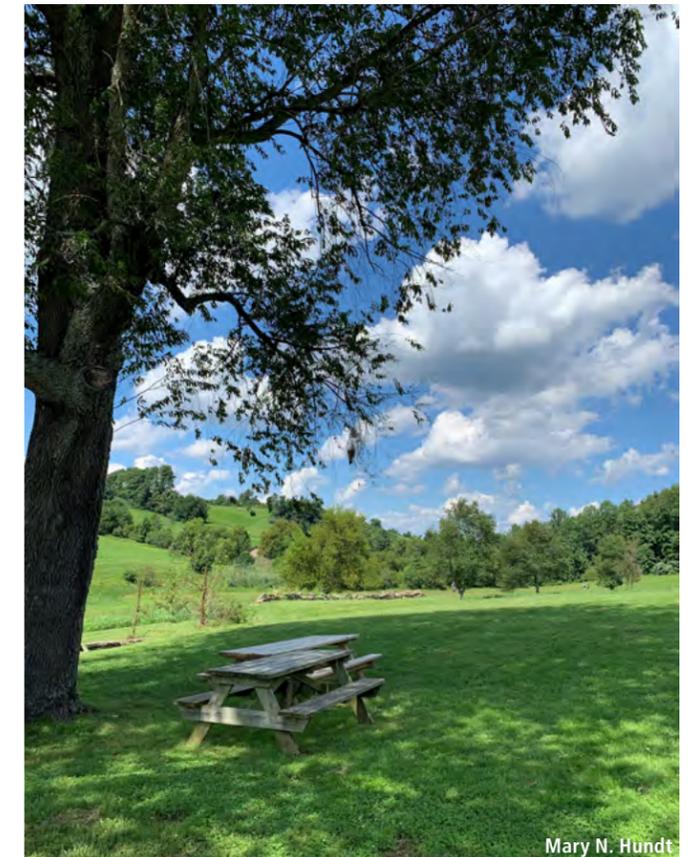
- 3-1: Willistown Township Population, 1950-2020
- 3-2: Willistown Township Population, by age group, 2019
- 6-1: Revenue Budget, 2022
- 6-2: Expense Budget, 2022

LIST OF TABLES

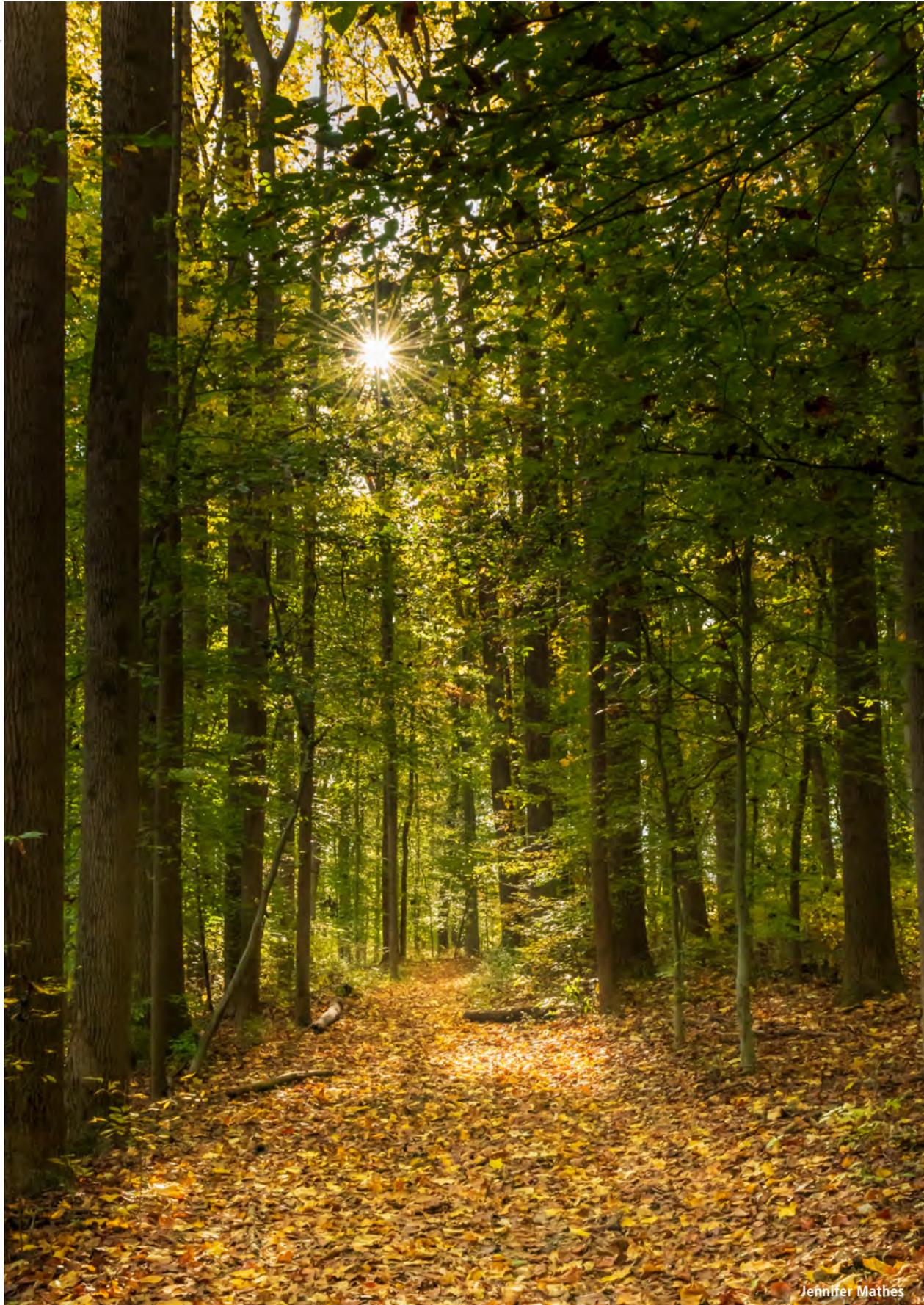
- 3-1: Summary of Land Uses in Willistown Township, 1980, 1995, 2008, 2020
- 3-2: Population Growth and Percentage Rate of Growth for Willistown Township
- 3-3: Rate of Growth in Chester County and Willistown Township
- 3-4: Population Growth and Rate of Growth for Chester County, Willistown and Neighboring Communities
- 3-5: Willistown Township Population Density
- 3-6: Willistown Township Population by Race
- 3-7: Willistown Township Population By Age Group
- 3-8: 2010 and 2020 population under 18, 18 and over
- 3-9: Median Age for Chester County and Willistown Township
- 3-10: Willistown Township Population By Gender
- 3-11: Educational Attainment in Willistown Township, 2020
- 3-12: Population Forecasts for Chester County, Willistown and Neighboring Communities
- 3-13: Average Household Size in Willistown Township
- 3-14: Willistown Township Population and Housing Unit Growth
- 3-15: Willistown Township Housing Stock by Mix of Dwelling Units
- 3-16: Willistown Township Rate of Home Ownership
- 3-17: Willistown Township Median Value of Owner-Occupied Units
- 3-18: Willistown Township Workforce Occupations
- 3-19: Willistown Township Workforce Commuting Options
- 3-20: Willistown Township Household Income
- 6-1: Design Guidelines for Roads
- 6-2: Township General Fund Revenues and Expenditures, 2014-2021
- 7-1: Goal 1 – Protect Community Values: Resource-Based Policies
- 7-2: Goal 2 – Guide Future Growth
- 7-3: Goal 3 – Provide Community Facilities and Services

APPENDICES

- Appendix 1: 2020 Comprehensive Plan Update Survey, Top Line Report by Planning Area Introduction & Summary
- Appendix 2: Historic Trees in Willistown Township
- Appendix 3: Visual Accents and Intrusions
- Appendix 4: Methodology and Recommended Network for Scenic Road Designation
- Appendix 5: Historic Resource Inventory
- Appendix 6: Park and Recreational Resources in Willistown Township
- Appendix 7: Park Facility and Programming Planning Guidance and Services
- Appendix 8: A Selection of Funding Programs Currently Available for Plan Implementation



Mary N. Hundt



Jennifer Mathes

Chapter 1

INTRODUCTION

1.1 | PURPOSE AND SCOPE OF THE COMPREHENSIVE PLAN

Guidelines for Growth is Willistown Township's comprehensive plan. The purpose of the plan is to provide a rational basis for municipal decision-making on matters related to Willistown's future, be it the protection of community values, guidance for future growth, or the provision of adequate community services. The plan describes goals and policies which together constitute a set of guidelines for municipal action and provides strategies by which the plan's policies can be implemented.

This is the 6th edition of the plan, and it reflects the evolving needs and interests of the community as it prepares for the next decade. At the same time the plan continues to respect the core tenants and long-held interests of Township residents and elected officials: to protect natural resources, preserve the Township's agricultural heritage, ensure the adequate provision of community services and infrastructure, and provide for sustainable growth in an equitable and socially-conscience manner.

The Pennsylvania Municipalities Planning Code (Act 247 of 1968, as amended) gives municipalities in the Commonwealth the responsibility and authority to plan for their own future. According to the Code, a comprehensive plan shall include but need not be limited to the following related basic elements:

1. A statement of objectives of the municipality concerning its future development;
2. A plan for land use, which may include the amount, intensity, and character of land use proposed for residence, industry, business, agriculture, major traffic and transit facilities, public grounds, flood plains and other areas of special hazards and similar uses;
3. A plan to meet the housing needs of 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;

4. A plan for movement of people and goods, which may include expressways, highways, local street systems, parking facilities, mass transit routes, terminals, airfields, port facilities and other similar facilities or uses;
5. A plan for community facilities and utilities, which may include public and private education, recreation, municipal buildings, fire and police stations, libraries, hospitals, water supply and distribution, sewage and waste treatment, solid waste management, storm drainage, flood plain management, utility corridors and associated facilities, and other similar facilities or uses;
6. 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;
7. A discussion of short- and long-range plan implementation strategies, which may include implications for capital improvements programming, new or updated development regulations, and identification of public funds potentially available;
8. A statement indicating the relationship of existing and proposed development of the municipality to the existing and proposed development and plans in contiguous municipalities, to the objectives and plans for development in the county of which it is a part (indicating that the existing and proposed development of the municipality is generally consistent with the objectives and plans of the county comprehensive plan), and to regional trends.
9. A plan for the protection of natural and historic resources to the extent not preempted by federal or state law.

The Code states that during the preparation of the comprehensive plan, the planning agency shall make careful surveys and studies of existing conditions and prospects for future growth in the municipality. Once adopted by the governing body

of a municipality, a comprehensive plan can be implemented through ordinances and other methods.

Of additional importance to Willistown is Article I of the Pennsylvania Constitution, which was amended on May 18, 1971 by the addition of Section 27, Natural Resources and the Public Estate. This Article states that:

The people have a right to clear air, pure water, and to the preservation of the natural, scenic, historic and aesthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all people.

As with prior planning efforts, Willistown continues to recognize its responsibility to protect Pennsylvania's public natural resources for future generations.

1.2 PLANNING IN WILLISTOWN TOWNSHIP

Willistown Township's original comprehensive plan, *Guidelines For Growth*, was completed in 1961 and adopted in 1962. In 1968, the plan underwent its first revision to reflect changes that had occurred during the seven intervening years.

Guidelines For Growth was amended again, beginning in 1979 and ending with adoption by the Township Supervisors in 1980. That update process was driven by significant changes in Willistown Township and in the immediate vicinity, including the relocation of US Route 202, the installation of a public sewer system in the northeastern section of the Township, the extension of the water system into the northwestern section of the Township, the consolidation of the Township's public school system into the Great Valley School District, and the construction of townhouse developments within the Township.

In 1993, the Township prepared an Open Space, Recreation, and Environmental Resources Plan. That plan included an extensive inventory of Willistown Township's natural, scenic, biotic, and water resources. It also contained a plan for recreation, based on a detailed analysis of needs.

Guidelines for Growth was again updated in 1997 and represented the third update to the Township's

comprehensive plan. Philosophically that plan retained its basic focus, however changes were made to reflect changing demographics, traffic congestion, natural resource protection strategies, and open space and recreation planning. Demographic changes—such as longer life expectancies, a movement away from the nuclear family, delayed marriage, and women working outside the home—indicated the need for more housing choices. Development in neighboring municipalities increased traffic and congestion in Willistown Township. Recognition of serious threats to the natural environment prompted the development of new regulatory techniques to help minimize damage.

In 2001, Willistown and Tredyffrin Townships completed work on the Paoli Community Master Plan, a joint municipal planning effort for the Paoli Community supportive of a multi-modal transportation center and growth management needs of the surrounding neighborhoods.

Recognition of agricultural uses and purposes prompted the Board of Supervisors to amend the comprehensive plan again in 2002. This amendment attests to the significant role played by agriculture in the Township, recognizing agriculture as a leading industry and significant land use.

In 2004 a Parks and Recreation Survey was conducted to gain community input for planning and programming purposes.

The Township published the Okehocking Preserve Management Plan, with funding assistance provided by the Pennsylvania Department of Conservation and Natural Resources, in 2006; the intent of this plan is to assist with the management and improvement of the Township's first nature preserve.

A second Parks and Recreation Survey was conducted in 2009 to gain additional community input for park planning and programming. This effort was incorporated into the 2011 *Guidelines for Growth Plan*.

The 2011 edition of *Guidelines for Growth* was a direct outgrowth of the 1997 plan and the 1993 Open Space, Recreation, and Environmental Resources Plan. In fact, much of that plan's mission was to meld the two planning documents into one plan oriented to the provision of growth management, environmental resource protection, and recreation planning. As such, the plan placed significant emphasis on goals and policies for future growth and the provision of services, protection of community values, provision of adequate community facilities, including parks and

recreation, and guidance for implementation.

The Township took a closer look at trails and greenways in the 2013 *Malvern – Willistown Greenway Master Plan*. A cooperative planning process involving the Township, Malvern Borough and the Willistown Conservation Trust, the plan was intended as a multi-phased effort to create an inter-municipal greenway, consisting of existing and new pedestrian walkways ranging from community sidewalks to hard surface trails to mown paths and natural, soft surface trails.

In 2020, the Township undertook a comprehensive plan update survey as an initial step in the planning process for the 2023 plan update (see Appendix 1 for a summary report). The survey was conducted online, as well as mailed to every Willistown household and business, to better understand community perspectives on municipal services, infrastructure, and the protection and enhancement of the Township's natural, scenic, and historic resources.

The 2023 plan update continues to build on the Township's past planning efforts while recognizing the unique nature and continued relevance of the 2011 plan revision. The 2011 effort was considered a full plan revision, that is, every component of the plan was reevaluated, prior open space planning and comprehensive planning efforts were combined, and new implementation strategies were devised to address the host of issues facing the community. The current plan update expands on this effort but recognizes that the 2011 plan is unique to the region, still timely, and relevant (it is not uncommon for an update to follow a full plan revision, particularly if the existing plan still holds value). This approach also builds efficiencies into the planning process and saves the community time and effort.

1.3 PREPARATION OF THIS PLAN

The planning process for this comprehensive plan involved the assistance of many community residents, appointed municipal board and committee members, and elected officials. Participants included the Board of Supervisors, the Planning Commission (which served as the Steering Committee for this effort), the Historical Commission, the Park and Recreation Board, the Open Space Review Board, the Environmental Sustainability Commission (formally the Recycling Commission), municipal staff, and citizens at large. Many of the Township's staff and volunteers participated in past planning efforts and

their assistance provided valuable continuity to this process. The comprehensive plan survey was also a key source of information for this plan.

It should be noted that this effort was partially funded by and supported through a Chester County Vision Partnership Grant. Chester County's grant program is intended to support the Township's planning efforts as well as ensure the Township's planning policies are consistent with the objectives of *Landscapes* (including *Landscapes3*, *Watersheds*, *Linking Landscapes*, and other county publications related thereto). County Planning staff worked closely with the Township and provided helpful guidance throughout the process.

Finally, several public information/review meetings and a public hearing were held during the planning process; discussions held, and comments received were reflected in the plan's content and ultimately contributed greatly to the process.



Cindi Myers

Three fundamental goals underlie Willistown Township's planning efforts. These goals were first articulated in the 1980 *Guidelines for Growth* and have remained the core goals of the Township ever since. They are echoed in, expanded upon, and advanced by this planning effort and are reflected in the Township's Code of Ordinances, specifically the Zoning Ordinance (Chapter 139), the Subdivision and Land Development Ordinance (Chapter 123), and the Environmental Protection Ordinance (Chapter 73). The Township's three fundamental goals are:

- Goal 1 - Protect Community Values;**
- Goal 2 - Guide Future Growth, and;**
- Goal 3 - Provide Community Facilities and Services.**

Much of the information contained in this Plan is a reflection of past planning efforts, recent community input, and the extent to which past goals have been acted on or revised to reflect current thinking.

Community input was sought throughout the drafting of Guidelines for Growth and includes, among other things, information gathered through the 2020 comprehensive plan update survey, the release of draft chapters of the plan, public meetings, and review by Township Boards and Commissions. The goals stated above, and the policies ascribed to them, reflect Willistown Township residents' values.

The following is a summary of the policies endorsed for each of the goals listed above; additional detail is provided in Chapters 4, 5, and 6.

2.1 GOAL 1 - PROTECTING COMMUNITY VALUES

General policies for protecting community values emphasize the Township's desire to protect those natural and man-made scenic, historic, cultural, recreational, and archeological features which either enhance the rural character, contribute to community character, are limited and irreplaceable, or which are ecologically sensitive. Resource-based policies described in Chapter 4 address such issues as natural topography, ground water, surface water, soils, vegetation and wildlife, historic and cultural resources, and neighborhoods and housing stock.

2.1.1 General Policies for Preserving Environmentally Sensitive Lands and Natural Resources

- Continue to develop techniques by which to guide and encourage the conservation of land and promote its connectivity.
- Reexamine priorities for the conservation of land within the Township, e.g. woodlands and other vegetation, wetlands, habitat areas, surface water and ground water recharge/supply areas, steep slopes, etc.
- Encourage creative and innovative site planning using conservation design principles that maximize the protection of key land and environmental resources; evaluate and maintain site hydrology; preserve and/or enhance significant concentrations of natural resources, open space, wildlife habitat, biodiversity corridors, trails/walkways and greenways (interconnected open space); incorporate unique natural, scenic, and historic site features into the lot configuration; preserve the integral characteristics of the site as viewed from adjacent roads; and ensure flexibility in development design to meet community needs for complementary and aesthetically pleasing development. Assist property owners, as appropriate, with land conservation and development alternatives during the sketch plan review of subdivision and land development proposals.
- Continue to protect individual environmental resources such as wetlands, floodplains and other hydrological resources, areas of steep slope, and woodlands. Monitor efficacy of regulatory provisions and update and refine as needed. Identify invasive species of vegetation and seek to reduce and/or eliminate their impacts through community education.
- Continue to support the Environmental Sustainability Commission and Planning Commission in appropriately fulfilling their roles to protect resources. Consider training, workshops, and other techniques for ensuring these voluntary bodies have the support and tools they need.
- Continue to support the Parks and Recreation Department in environmental stewardship projects on Township park, preserve and trail lands.
- Continue coordinating with local environmental organizations such as the Willistown Conservation Trust and the Ridley-Crum Watersheds Association on stewardship and protection of environmentally sensitive lands and natural resources.

- Collaborate with county (CCPC, CC Parks, etc.), state (PA DEP, DCNR, PennDOT, etc.), and federal agencies (USGS, FEMA, EPA, etc.) to identify and protect environmentally sensitive lands and natural resources.
- Recognize the future impacts of climate change and consider working with other municipalities, the county, and the state to recognize the need for sustainability initiatives, adaptation planning, and the development of integrated climate action plans.

2.1.2 General Policies for Preserving Areas of Significant Physical, Historic and Scenic, Cultural, and Archeological Value

- Encourage the dedication of protective easements for historic or cultural resources.
- Encourage future development to reinforce the Township's historic settlement pattern and continued use of land for agricultural purposes.
- Monitor efficacy of regulatory provisions related to scenic quality protection, including, for example, any landscaping, buffering and screening standards.
- Monitor efficacy of regulatory provisions related to historic resource protection and documentation.
- Promote techniques for creative land planning and design consistent with conservation design principles to reserve scenic resources in the Township.
- Consider actions by which to identify parcels being considered for a change in use and strategize options for preservation.
- Assist in the implementation of the recommendations made in the 2006 Okehocking Preserve Management Plan.
- Consider additional opportunities to recognize and protect significant cultural resources and archeological resources.

2.1.3 General Policies for Protecting Neighborhoods and Housing Stock

- Protect and enhance the established neighborhoods within Willistown Township. Work to ensure pedestrian circulation and the interconnection of such neighborhoods with sidewalks and trails where deemed appropriate and consistent with overall Township transportation initiatives, circulation patterns, and identified recreational trail planning.
- Allow for a variety of housing types and densities in those areas where infrastructure exists to support

such growth, consistent with existing and future land use policies and guided by the need to protect environmental resources and existing community character. Promote green building technologies intended to reduce consumption of energy and environmental resources, reduce the impacts of climate change, and encourage future development that is sustainable.

- Promote safe housing conditions.
- Promote housing opportunities consistent with the 2001 Paoli Community Master Plan, as reflected in Chapter 139, Zoning, Article XXXI, Transportation District (TD) and Article XXXII, Town Center District (TCD).

2.2 GOAL 2 - GUIDING FUTURE GROWTH

A variety of land uses including residential, institutional, commercial, and industrial land uses shall be provided consistent with the protection of the Township's community values.

2.2.1 Policies for Residential Land Uses

- The locations, types and densities of future residential development shall be consistent with the intent of the Township's residential districts as set forth in its current Zoning Ordinance. Therefore, residential land uses as permitted in the Township's current Zoning Ordinance shall continue to serve as a general guide for residential development.
- In the interest of protecting the character of the Township, providing for a diversity of housing opportunities, and encouraging imaginative and environmentally-sensitive site planning practices, Willistown shall focus on redevelopment and infill opportunities in the northern portion of the Township. The intent of this policy is to address the housing needs of future Willistown residents (particularly a growing elderly population and a diverse mobile population), complement the public transit and pedestrian circulation investments being made in this area, provide housing opportunities that do not require large land areas (and so further protect open space and wildlife habitat), and benefit from the Township's efforts and those of Malvern Borough and Tredyffrin Township to enhance the vitality, livability, and walkability of their "town" cores.
- Residential growth occurring in agricultural/residential zoning districts shall utilize the conservation design principles espoused herein and in Chapter

139, Zoning, Article XXVI, Open Space Conservation (OSC), the intent being to accommodate new residential development in a manner that complements the Township's efforts to preserve and protect agricultural land and open space through innovation and flexibility in site design.

- Reevaluate existing opportunities for multi-family housing in the context of mixed use, transit-oriented and village development concepts. Consider form-based design standards and codes as an additional tool to address physical form, building mass, and the relationship of building facades to public settings.
- In order to best accommodate residential uses, the Township will promote, encourage and incentivize green building technologies (including but not limited to LEEDs certification or other green building principles) intended to reduce consumption of energy and environmental resources, reduce the impacts of climate change, and encourage future development that is sustainable. The Township will also promote zero net-energy provisions to reduce energy use.

2.2.2 Policies for Institutional Land Uses

- Willistown Township shall accommodate future institutional development as permitted in select zoning districts or as conditional uses or special exceptions in areas where it is deemed appropriate and/or can be demonstrated to the satisfaction of the Township that such uses would be harmonious with the character of surrounding land uses, be consistent with local landscape character, protect community values, and have adequate infrastructure available. Institutional uses will be considered in the rural portions of the Township only when they contribute to the permanent preservation of open space and are congruent with agricultural activities.
- To best accommodate institutional uses, the Township will promote, encourage and incentivize green building technologies (including but not limited to LEEDs certification or other green building principles) and green stormwater infrastructure.
- intended to reduce consumption of energy and environmental resources, ameliorate the impacts of climate change, manage runoff with nature-based systems, and encourage future development that is sustainable. The Township will also promote zero net-energy provisions to reduce energy use.
- Due to the potential for greater impact associated with institutional uses, and the variety of activities

that fit this category, the Township intends to scrutinize such uses more carefully than it does residential uses.

2.2.3 Policies for Commercial and Office Land Uses

- Willistown Township shall accommodate future commercial development as permitted along the Route 30 business corridor (including King and Central Avenues east of Malvern), along the Paoli Pike corridor west of Sugartown Road, and along the Route 3 planned highway corridor extending along Route 3. The Township will consider opportunities for mixed use, transit-oriented development where appropriate; and, will consider form-based design standards and codes as an additional tool to address physical form, building mass, and the relationship of building facades to public settings.
- To best accommodate commercial uses, the Township will promote, encourage and incentivize green building technologies (including but not limited to LEEDs certification or other green building principles) intended to reduce consumption of energy and environmental resources, reduce the impacts of climate change, and encourage future development that is sustainable. The Township will also promote zero net-energy provisions to reduce energy use.

2.2.4 Policies for Industrial Land Uses

- Willistown Township intends to remain consistent with County and regional land use plans in guiding future industrial development along the Route 30 transportation corridor. Future industrial uses within the Township shall be limited to those permitted in Article XV, Restricted Industrial District. Should county or regional studies involving the Township determine that industrial demand exceeds areas planned for industrial uses, further consideration will be given to expanding industrial areas within the Township.
- To best accommodate industrial uses, the Township will promote, encourage and incentivize green building technologies (including but not limited to LEEDs certification or other green building principles) intended to reduce consumption of energy and environmental resources, reduce the impacts of climate change, and encourage future development that is sustainable. The Township will also promote zero net-energy provisions to reduce energy use.

2.3 GOAL 3 - PROVIDING COMMUNITY FACILITIES AND SERVICES

- Community facilities and services shall be provided as appropriate for a second-class township and shall meet the needs of Willistown's current and future residents. Where services are provided by others, the Township shall periodically monitor the quality and cost of such services. If required and appropriate, and if municipal resources permit, the Township shall intervene to improve service delivery to meet the needs and/or address the safety of Township residents.

2.3.1 Policy for Fire Protection

- Continue to financially support volunteer fire companies providing fire protection services to Willistown Township residents.

2.3.2 Policies for Police Protection

- Continue to operate and fund the Willistown Township Police Department.
- Periodically examine whether services are adequate for needs.
- Continue to support the mission of the Department to enhance the safety and security of all the people of Willistown Township and work in partnership with the public to maintain their confidence and trust.

2.3.3 Policy for Emergency Medical Assistance

- Continue to cooperate with Chester County in the provision of '911' services.

2.3.4 Policies for Roads

- Continue to clarify and plan for those roads intended to transmit through traffic and those roads designed primarily for local traffic. Discourage through traffic on roads not intended for or incapable of such traffic.
- Continue working to improve the regional transportation network to provide for efficient movement of through traffic, including the use of innovative transportation strategies such as roundabouts as alternatives to new signalized intersections. Encourage ride sharing where feasible and appropriate. Both

direct municipal action and continuing dialogue with PennDOT are necessary to accomplish the policies contained herein.

- Continue to ensure that new development minimizes impact to the existing road net-work. Ensure that the local road network provides adequate internal circulation to meet the needs of Willistown Township residents. Consider traffic calming strategies as appropriate to ensure safety and promote better circulation.
- Develop strategies to correct any identified circulation and parking problems, and assign priorities to any needed improvements.
- Discourage haphazard development along Route 30 and Route 3. Continue implementation of the mutually acceptable local and regional transportation components of the Paoli Community Master Plan, including its multi-modal transportation center with corresponding circulation improvements (both roads and pedestrian facilities) to improve and enhance transportation choices in and around Paoli.
- Provide regular road maintenance to ensure that local roads are maintained in optimum condition and minimize, as needed, potential safety hazards.
- Consider recognition of and protection for those roads identified by the Township as Scenic Roads. Work to protect the intrinsic natural, scenic and historic qualities of such roads.
- Examine opportunities for safe bicycling along identified roads and road shoulders in the Township. Consider the recommendations and vision statements identified in Chester County's Linking Landscapes Plan.
- Identify Willistown's three dirt roads including the sections of Warren Avenue, Plumsock Road, and Green Lane as mixed use vehicular and recreational corridors and establish protection for these roads and uses.

2.3.5 Policies for Public Transportation

- Encourage any new development constructed within ½ mile of public transportation centers to establish pedestrian linkages on those parcels undergoing development.
- Encourage pedestrian linkages throughout the Township as appropriate to access public transportation and reduce reliance on automobiles.
- Encourage land use patterns that increase choices for

residents and accommodate but do not require private automobiles for all trips.

- Promote the expansion of public transportation and pedestrian environment improvements including continued support for and implementation of the Paoli Community Master Plan.

2.3.6 Policy for Municipal Services and Facilities

- Monitor municipal administrative needs to provide services in the most efficient manner possible. Consider incorporating sustainable municipal practices into municipal decision-making, including such things as auditing energy use in government buildings, incorporating energy efficiency and green building technologies into government buildings, using retrofit LED lighting, and undertaking vehicle replacement (as needed over time to improve efficiency and introduce hybrids and electric vehicles).

2.3.7 Policies for Water Supply

- Protect and safeguard sources of water supply in order to ensure that an adequate supply of potable water is available for domestic use and fire protection.
- Promote the protection of ground water quality and emphasize ground water recharge to meet water supply needs.
- Monitor regional river basin commission activities pursuant to monthly notifications and ensure that water withdrawal permits do not negatively impact local supplies.
- Promote watershed protection consistent with Chester County's integrated water resources plan *Watersheds*, as updated and amended, and the PA State Water Plan.

2.3.8 Policies for Sewage Disposal

- Coordinate land use planning with sewage facilities ('Act 537') planning.
- Coordinate the extension of public sewer service to existing developed areas of the Township where existing needs have been documented.

Continue to coordinate development activity with existing sewage facilities where capacity exists and growth is appropriate; restrict the extension of public facilities in those areas identified for preservation.

In addition, the Township believes the following policies should guide future actions:

- Sewage facilities should use the best available technology at the time of installation and should be properly operated and maintained. The Township recognizes that innovative technology is constantly being developed in the field of wastewater treatment and will consider incorporating newly developed types of treatment facilities when there is sufficient evidence presented to the satisfaction of the Township to support the use of such new technology.
- Treated wastewater shall be disposed as close to its generation source as practicable. Ground water recharge shall be promoted to the greatest degree possible and the beneficial reuse of treated wastewater shall be investigated and implemented where practical.
- Individual residential onsite sewage disposal systems shall be operated and maintained by the property owner using best management practices for the system in place.
- All non-residential and community sewerage systems shall be operated and maintained by a responsible management entity.

2.3.9 Policies for Stormwater Management

- Encourage and maximize the storage of rainfall and ground water recharge in order to sustain ground water supplies and stream baseflow.
- Minimize increases in surface water runoff volumes that contribute to downstream flooding, additional submerged land, eroded streambanks, and other flood related health-welfare-property losses.
- Encourage utilization of ecologically sound stormwater management facilities through the implementation of Best Management Practices and Green Stormwater Infrastructure (GSI).
- Implement the requirements of the Pennsylvania Act 167 Stormwater Management Plans for the Crum Creek, Ridley Creek, and Valley Creek Watersheds, as available; continue to work with Chester County as it works to update *Watersheds* and its county-wide Act 167 Plan; implement the requirements of the National Pollutant Discharge Elimination System Phase II (NPDES II) program.

2.3.10 Policy for Solid Waste Collection, Disposal and Recycling

- Monitor cost and quality of privately provided trash collection services to ensure residents' needs are met; regulate accordingly pursuant to the authority granted under the "Municipal Waste Planning, Recycling, and Waste Reduction Act" (Act 101).

2.3.11 Policy for Education

- Monitor Great Valley School District plans which might affect local land use planning.

2.3.12 Policy for Library Services

- Continue to financially support local public library services.

2.3.13 Policies for Parks and Recreation

- Ensure Willistown is an attractive place to live, work and visit through the provision of parkland and recreational facilities, as well as administrative and programming services that highlight Willistown's park and recreation assets.
- Provide parks and recreation facilities and programming for the benefit of the physical, social, and mental health of the Willistown community.
- Provide parks, preserves and recreation facilities and services within an effective budgetary and fiscal planning program, as outlined in the Township budget for parks and recreation.
- Provide well maintained, safe, and updated park facilities. Create and update plans for current and future park maintenance, facilities, and programs.
- Continue coordinating with other Township Boards and Commissions on park, preserve, and trail planning, protection, and programs.
- Continue leading, coordinating, and partnering with local municipalities and other organizations on programming and parkland maintenance and protection.
- Continue partnering with local environmental and conservation organizations such as Chester-Ridley-Crum Watersheds Association and Willistown Conservation Trust on habitat improvement and ecological stewardship projects and programs.

- Continue outreach to and solicit feedback from Township residents about their park and recreation system and program offerings.
- Manage the ecological assets and systems of the Township's parks and preserves while accommodating public access and recreational opportunities.
- Educate the public about the importance and methodology of ecological management of Township lands and relay what they can do at home through events, communications, and interpretive signage.
- Maintain, plan, and expand the open space and recreational network and infrastructure of Willistown.
- Implement the Okehocking Preserve Management Plan and revise and update the plan as necessary over time.
- Establish trail and recreation interconnections throughout the Township and identify likely interconnections to adjoining municipalities.
- Work toward providing every resident in the Township access to a park and/or recreation facility within one half mile of their home.

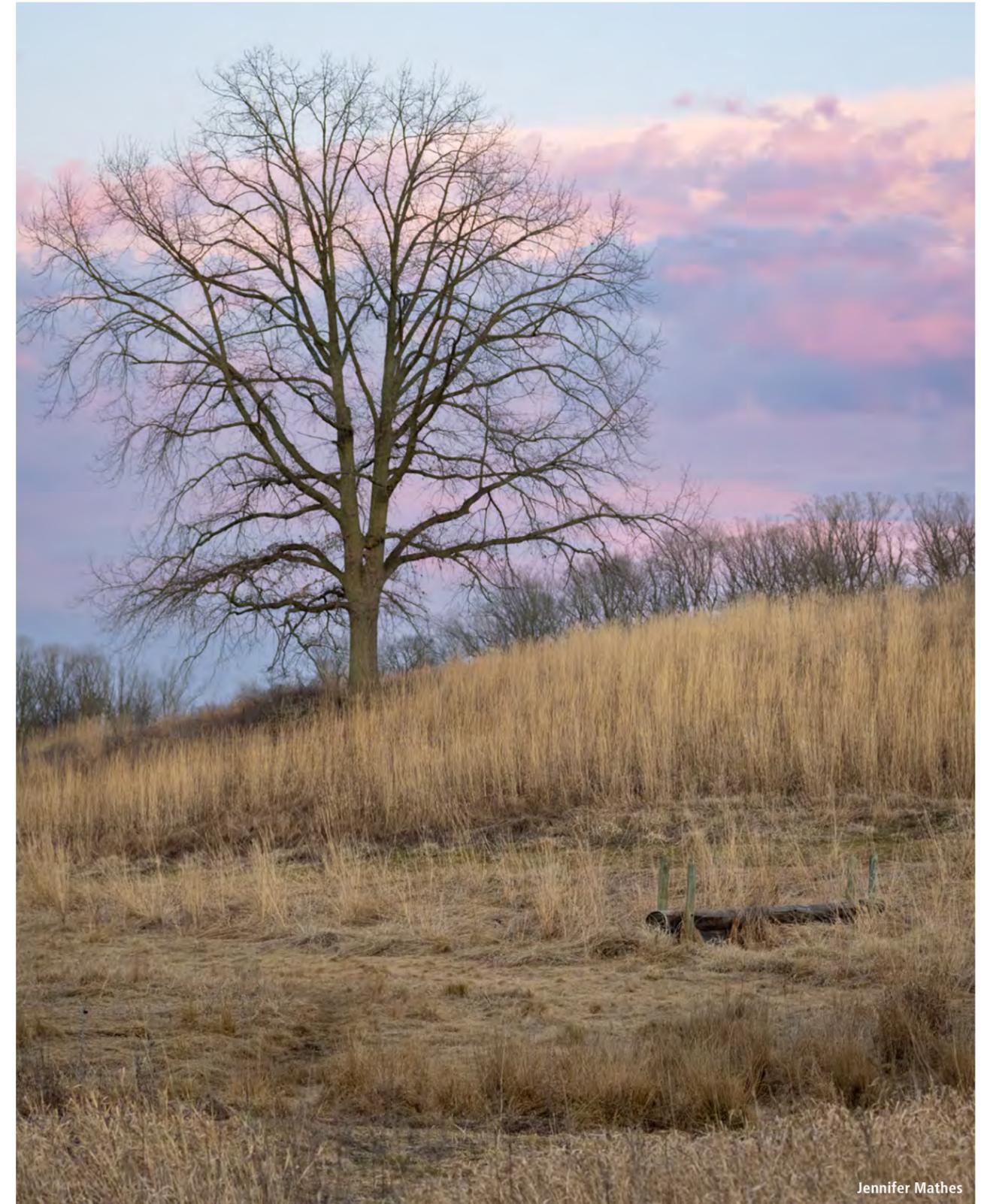
2.3.14 Policies for Open Space Preservation, Landowner Assistance and Private Land Stewardship

- Continue to support ongoing dialogue with and initiatives by private landowners and community groups championing land protection and land stewardship. Continue to provide information to residents about the Township's comprehensive planning efforts, including efforts to preserve land and protect the Township's natural resources for future generations.
- Continue Township efforts to protect natural and man-made resources, preserve land and interconnect open space through innovative site design and natural resource protection efforts, open space purchases, and park and recreation facilities, among others. Consider partnering with local environmental and conservation organizations on a project-by-project basis to identify public rights-of-way and public easements that could be utilized to expand trail systems and connect public lands.
- Continue championing public access to open space and providing programming and educational opportunities.

- Partner with and support action by local land trusts such as the Willistown Conservation Trust and Natural Lands to assist landowners in the protection of environmentally sensitive lands and areas of significant physical, historic, and scenic value, as well as recreational assets such as pedestrian and equestrian trails.
- Continue to support and collaborate with local land trusts and environmental organizations to support the sound stewardship of the area's private lands.
- Provide stewardship education and interpretive signage on Township properties and at Township events. Coordinate with local environmental, conservation groups, and volunteers as possible.
- Partner with local land trusts, watershed associations, libraries, etc. to serve as a community educational resource for residents on matters concerning land conservation and stewardship.

2.3.15 Policy for Transmission Pipelines

- Monitor existing and future pipeline activity and coordinate with pipeline companies to protect the public health, safety and welfare of Willistown Township residents.



Jennifer Mathes

3.1 | REGIONAL CONTEXT AND INFLUENCES

3.1.1 Location

Willistown Township is located in the eastern portion of Chester County, five miles east of West Chester and approximately 20 miles from Philadelphia and Wilmington, Delaware. Socially and economically the Township has a greater orientation to Philadelphia than to Wilmington. The 1980 comprehensive plan described the Township as within the “rural fringe of the Philadelphia metro area,” however the western advance of development since that plan led to the conclusion in the 1997 comprehensive plan that the Township “has the appearance of being a rural island surrounded by a sea of intense development”. The 2011 comprehensive plan acknowledged this assessment but went on to say that development of the Township itself represents a development pattern of dense to less dense “concentric circles” emanating from the town centers of Paoli and Malvern. In many respects, all these assessments hold true today although the Township is seeing development pressure of a different sort for two reasons: 1) much of the Township is either built out or preserved in some capacity (parkland, conservation eased land, nature preserve, etc.) and 2) COVID-19 contributed to a modest out-migration from cities to Townships like Willistown. The result has been pressure to develop some of the Township’s remaining open space parcels.

3.1.2 Chester County Influence

Willistown Township is strongly influenced by its setting in Chester County, a relatively affluent suburban county of Philadelphia. A majority of the social and economic factors influencing Chester County also play a significant role in Willistown Township.

Chester County has traditionally been a strong economic engine for southeastern Pennsylvania. The County has enjoyed relatively low unemployment rates, historically under 5% since the early 1980’s. Chester County is also well educated. The County has consistently had some of the highest percentages of high school and college graduates, as well as some of the highest household and family incomes in the

state. Finally, the median housing value has been and remains one of the state’s highest.

Chester County is particularly scenic. The gently rolling hills of the Piedmont Plateau supported the creation of a rich agricultural heritage and the County is fortunate to have a citizenry that is strongly committed to the preservation of open space and scenic landscapes. Residents of this region were among the first to champion the use of conservation easements. Many local governments (Willistown among them) have successfully experimented with innovative planning techniques for managing growth and preserving unique regional features. Residents of Chester County voted to support the first county-wide, open space preservation program in Pennsylvania and have consistently voted in favor of utilizing tax monies for preservation efforts.

Chester County appears well positioned for the future, having seen strong economic growth in industries related to home shopping, investment services, computer technology, health services, and pharmaceuticals. Agriculture, while certainly not the economic driver of the past, continues to be an important industry to the citizens of the County. Manufacturing, defense industries, and extractive industries, although not entirely absent in Chester County, have not been significant factors in its history and are not anticipated to play a meaningful role in the future.

At the same time, an attractive landscape and healthy economy will likely continue to attract new growth to Chester County in the years to come. The County’s population is expected to increase approximately 21% from year 2020 to 2050. While this percentage may not be as large as rates experienced in the past, if not managed appropriately, it will nevertheless threaten the many of the qualities which attracted growth in the first place.

Chester County adopted its Comprehensive Plan, *Landscapes*, in July 1996, updated that document with *Landscapes2* in November of 2009, and recently published *Landscapes3* in November 2018. *Landscapes3* encourages managed growth to ensure municipal character and quality of life. The plan establishes a preservation and growth vision for the county and its municipalities, helps to guide local municipal planning, and creates a framework for collaboration across municipal borders. According to the county’s recent assessment, Willistown Township contains urban and suburban growth areas, rural resource areas, and significant natural and historic landscapes.

3.1.3 Regional Transportation Networks

The most important regional transportation components of the Township are the presence of Routes 3 and 30 which traverse the Township at its northern and southern borders. These routes are major transportation corridors for southeastern Pennsylvania and are very important influences on the Township’s character, both historically and today.

Willistown Township is also somewhat influenced by regional rail systems, with easy access to both SEPTA and Amtrak at the Paoli station. The SEPTA line connects Philadelphia and Main Line communities to western Chester County, terminating in Parkesburg. The Amtrak line connects to both Harrisburg and Philadelphia (in fact, the line connecting to Philadelphia also continues to New York City). Recent upgrades to the Paoli Rail Station have created a more multi-modal transportation experience, providing better car and bus access, enhanced pedestrian circulation and more parking. Such upgrades are expected to continue and towards that goal, both Tredyffrin and Willistown Townships’ have modified zoning provisions in the area to provide enhanced mixed-use opportunities. While initial investigations into bringing West Chester’s train station back online have commenced, costs are likely prohibitive in the short-term and action to bring this rail service back is years away.

In addition, SEPTA operates several bus lines that provide service to portions of the Township, among them: #104 and #120 (serving portions of Routes 3 and 926), #104 (serving Route 3 with connections to #92, #106 (serving Route 30 from Paoli to Overbrook Park with connections to #92, #120, #204 and #206), #92 (linking King of Prussia to Paoli, Malvern, and West Chester), #204 (linking Paoli to Malvern, Exton and beyond), #205 (linking Paoli to Industrial Boulevard, Cedar Hollow Road, Great Valley, Chesterbrook and beyond), and #206 (linking Paoli to Route 29, Great Valley and beyond).

The Philadelphia International Airport is approximately 45 minutes by car from Willistown Township. While no direct rail lines connect Paoli to the airport, commuters can take the train to Center City and transfer to the airport line. Airport shuttles are also readily available for door-to-door service.

3.1.4 Surrounding Municipalities and Their Plans for the Future

Malvern Borough, Chester County

Willistown Township surrounds Malvern Borough

on three sides, most likely because the Borough was incorporated out of Willistown Township in 1889. The economic and social histories of Willistown Township and Malvern Borough have been linked for many years, with Malvern serving historically as a market center and transportation hub for traditionally rural Willistown Township. As auto-dependent suburban development dispersed shopping patterns and lessened the importance of rail traffic, the corresponding links between Malvern and Willistown weakened somewhat, but remains strong. In fact, the resurgence of small towns has, if anything, led to increased interest in the Borough by residents in surrounding townships. Regardless of these changes, the development character of Willistown and Malvern continues to be closely linked today.

Malvern Borough completed its most recent comprehensive plan in 2012. In the Fall of 2020, the Borough initiated a comprehensive plan update process that anticipates an 18–24-month plan completion timeline. In fact, this plan and Malvern’s plan are likely to be adopted on a similar schedule. The current plan’s main goal is to retain and enhance the Borough’s “small-town character, which makes the Borough a special place to live and work” Towards this end, the Borough has been encouraging redevelopment and new development in the King Street Corridor that is consistent and compatible with its existing mixed-use small-town nature, including a focus on pedestrian access. Further efforts have focused on the Borough’s Victorian-era architecture, and on traditional neighborhood design that retains the Borough’s diverse existing neighborhood character.

In the intervening years, the Borough has also undertaken several other planning initiatives, including the 2013 Malvern-Willistown Greenway Plan (discussed elsewhere herein), a 2014 transit-oriented development study, a 2015 walkability study, a 2017 official map, a 2018 multimodal transportation study, and a 2020 Randolph Woods Nature Preserve Master Site Plan. Of note are the efforts undertaken on behalf Willistown and Malvern to create trail and greenway linkages between the two municipalities and beyond. The greenway plan referenced above provided a blueprint for action to link Willistown’s and Malvern’s neighborhoods with Malvern’s business center; in addition the plan recognizes the importance of historic and cultural sites such as the Paoli Battlefield, and the need to provide linkages to schools and to nearby trail systems, such as the Chester Valley Trail and the Patriots Path (a pedestrian link between Valley Forge National Historical Park in Tredyffrin Township

and both the Paoli Battlefield Site/Paoli Memorial Association Grounds in Malvern/Willistown and the Battle of the Clouds Park in East Whiteland Township). One connection that has been pursued over the years is between Greentree Park in Willistown and Randolph Woods in Malvern. The Borough's 2020 preserve plan for Randolph Woods was intended to provide a strategy for phased improvements to the preserve and the eventual goal of linking Greentree Park, the Preserve, and Borough Hall (the Preserve falls within the central portion of the identified greenway connection between the Greentree Park and Borough Hall). A further discussion of pedestrian and greenway linkages is provided in Chapter 6.

In recent years, private entrepreneurs have opened a number of shops along King Street, catering to the antique, craft and boutique shopper. This trend is likely to continue.

It is anticipated that the Borough's active comprehensive planning effort will likely address many of the issues referenced above and capitalize on many of the Borough's past efforts. Chapter 6 of this plan specifically talks to the desirability and willingness on behalf of Willistown to move coordinated trails and greenways planning forward.

East Whiteland Township, Chester County

East Whiteland Township shares two short lengths of its borders with Willistown Township. They are the northern borders of the Township on the north and west side of Malvern Borough. As stated in the 2011 plan, East Whiteland has experienced significant development activity which will likely impact Willistown for years to come. The southern portion of East Whiteland (the portion closest to Willistown) is strongly affected by the U.S. Route 30 corridor, which traverses the Township from east to west. In addition, both townships are impacted by the developing portions of the Route 202 corridor. In the Township's 2016 comprehensive plan the area of Route 30 is seen as the focus of redevelopment and revitalization in the coming years. The Township intends its land use policies and zoning to focus on village mixed use and general commercial, multifamily, and office uses.

East Whiteland's original Zoning Ordinance was adopted in 1966 and it has been updated regularly since. Currently, zoning along almost the entire length of the southern border (that which is shared with Willistown Township) is zoned for residential uses and a majority of this land is significantly built out. The portion of the border abutting Willistown Township to the west of Malvern Borough is zoned for low-density residential development.

Tredyffrin Township, Chester County

Willistown Township shares portions of its northern and eastern borders with Tredyffrin Township. Although the length of the shared border is relatively small by comparison to other neighbors, Tredyffrin (and the Paoli community in general) exerts a strong influence on Willistown Township. As a regional employment center, it provides employment for some Willistown residents and contributes to the commuter traffic volume through and to Willistown Township. As a result of this interrelationship, Willistown and Tredyffrin cooperated on a special planning district study entitled the *Paoli Community Master Plan*. The genesis for this planning effort stemmed from Amtrak's decision to relocate its train storage and maintenance operations adjacent to the Paoli station, thus providing opportunities for urban redevelopment of the site. Initial planning efforts led to the creation of the *Paoli Rail Yard and Transportation Center Plan*, undertaken by the Townships in conjunction with Chester County, SEPTA and Amtrak. This effort, and its advancement, led the communities to prepare the long-range development plan referenced above for the Paoli Community in 2001. This plan has been the subject of implementation efforts ever since, including the improvements to the station, apartment redevelopment and commercial development. Part of this effort involved each municipality's adoption a consistent zoning subdivision scheme for the area, intended to contribute to the livability and community character of Paoli for many years to come. The Chester County Planning Commission completed an update to Tredyffrin's comprehensive plan in 2020; the plan recommends continued coordination with Willistown on the redevelopment of Paoli.

The Patriots Path described above includes trail creation efforts in Tredyffrin Township, as well as joint planning efforts with East Whiteland Township, Willistown Township, and Malvern Borough (also reflected in the 2020 comprehensive plan update).

Easttown Township, Chester County

Easttown Township, Chester County, shares much of Willistown Township's eastern border. Easttown completed its most recent comprehensive plan in 2018. This plan is currently being updated to reflect current trends and a vision for the future. The current plan places significant emphasis on the desire to improve pedestrian and bicyclist mobility and improve the character, design and functionality of Route 30 (the goal being to reimagine Route 30 as a "Complete Street").

The majority of the lands abutting Willistown Township continue to be zoned AA, the Township's

lowest density residential use, and "intended to provide for farming, conservation, recreation and low density single-family detached dwellings on lots of sufficient size for on-lot sewage disposal systems." Minimum lot sizes in this district are 80,000 square feet, although the Township has a lot-averaging option which permits smaller net lot sizes, (in the case of AA, 56,000 square feet).

Much of the land area in Easttown Township along the Willistown-Easttown shared border has been subdivided into large lots. Several areas (those portions lying west of Darby Paoli Road) appear to be protected either by conservation easements or deed restrictions. In recent years infill development has occurred on both sides of the Willistown-Easttown border. Pressure in both Townships is leading to development of the remaining infill parcels.

Newtown Township, Delaware County

Newtown Township shares Willistown Township's border along Crum Creek, in the southeastern corner of the Township. The shared border is also the dividing line between Chester County and Delaware County. Traveling east on Goshen Road, away from Willistown Township and toward Newtown Square, land uses become more intense in coverage and density. Current land uses along Goshen Road and the vicinity of the shared border with Willistown Township are primarily residential. Although much of the land bordering Willistown has been developed, several parcels remain open, and it is likely these parcels will eventually be developed according to the Township's suburban density R-1 residential zoning (60,000 sq. ft. per unit).

Edgmont Township, Delaware County

Edgmont Township borders Willistown Township on the south side. The shared border also forms the boundary between Chester and Delaware County.

Edgmont's current comprehensive plan was adopted in 2015. The land along the border between Edgmont Township and Willistown is currently a mix of single-family residential development, agriculture/farmland, light industrial/warehousing and recreation/open space (Ridley Creek State Park and what was the Edgmont Country Club, which was sold in 2016). The owners of the former country club are developing the site with single-family and carriage style homes, surrounded by open space and setback from West Chester Pike (RT.3). Other than the former country club, significant additional land use change

seems unlikely, although some infill could occur in the Township's low density residential districts, which permit lots of between 2 and 4 acres.

Westtown Township, Chester County

Westtown Township lies to the west of Willistown Township and shares a small portion of Willistown Township's border at the very southwestern corner of the Township.

Westtown Township's 2019 comprehensive plan shows land uses bordering Willistown to be predominantly single family residential, commercial and open space. The Township's future land use map urges the preservation of the current residential uses but encourages linking adjacent open spaces and converting much of the land along Rt. 3 to mixed use (commercial and housing)

Most of the land areas abutting Willistown Township are developed. A small parcel of land on the south side of Route 3 and directly abutting Willistown Township is multi-family development. Several commercial uses are located to the east on Rt. 3. Land use along the remaining border is predominantly single family residential.

One of the main commuter routes into Willistown Township is Route 926, which travels along the border of Thornbury Township (Chester County) and Westtown Township, where it terminates at Rt. 3. Traffic on Route 926 is likely to continue increasing in the years to come.

East Goshen Township, Chester County

Willistown Township shares almost its entire western border, along Township Line Road, with East Goshen Township.

East Goshen Township's most recent comprehensive plan was adopted in 2015. A majority of the land bordering Willistown Township is low density residential (principally 1 acre residential zoning). While most of this land has been built out, several large tracts to the southeast remain open along Ridley Creek. Of interest is the Paoli Pike Corridor, which is identified as transforming to a more mixed-use corridor (referred to as a walkable, connected artery).

3.2 HISTORIC DEVELOPMENT

3.2.1 Historic Settlement Themes

Willistown Township illustrates several major historical themes as documented by local historians.

Among them are *settlement along a watershed*, first by Native Americans, then by settlers for industrial and agricultural reasons; *interface of early settlers with Native Americans* as part of the settlement process, as evidenced by the district containing the site of William Penn's first and only land grant for an Indian reservation; *Quaker settlement within a compact area for proximity to a "meeting"; agricultural land use over three centuries; and vernacular and regional architecture* as interpreted by the Quakers and later land owners.

3.2.2 Exploration and Settlement

The Holmes Map of 1681 holds the first written reference to Willistown as Willeston.

Willistown was a part of the 50,000-acre Welsh Tract surveyed for William Penn in 1684. It was to be reserved for settlement by persons from North and South Wales and adjacent counties of Haverfordshire, Shropshire, and Cheshire. Penn made six grants within the Township, but there is doubt that the grantees ever lived on the land other than the Okehocking tribe of the Lenni Lanape to whom he granted a 500-acre reservation.

Native Americans

William Penn's respect for and protection of the Native Americans found in Pennsylvania is well documented. He used a variety of mechanisms on their behalf, including legal purchase of land, establishment of courts to adjudicate Native American complaints, and creation of manors as places of refuge. The Okehocking Historic District, listed on the National Register of Historic Places in 1993, is in the heart of Willistown. It is the sole example of Penn's creation of a place of refuge (reservation) for Native Americans. It was possibly the first reservation in the country and the only one established in Pennsylvania. From its creation in 1702 until its abandonment in 1735, it was known as Okehocking Indian Town.

Despite the good intent of its creators, the reservation's boundaries were poorly conceived for the Okehocking tribes' purposes. The hilliest tract was without water much of the time. In 1710 neighboring farmers succeeded in having a road laid out through the middle of the tract, rather than along their own property lines. The road did nothing to foster a lasting bond with this particular land for the Native Americans. The Okehocking tribe chose to leave the land as forest. They occupied it only intermittently and left it for extended periods each year during hunting season. By 1735 they ended their occupancy of the land.

Under terms of the deed, the land reverted to the Proprietary. In 1737, the land was reallocated to Quaker brothers Amos and Mordecai Yarnall.

Quaker Settlement

Much of Willistown Township's historic pastoral landscape and patterns of early 18th century settlement by English Quakers remains. The rural Quaker lifestyle was reflected by the strong, agriculturally oriented communities of families located within a half-day's distance of a meeting house, the site of all their religious life.

Three English Quaker extended families dominated the history of much of Willistown Township; the Yarnalls, the Smedleys and the Garretts. The written record paints them as agriculturally oriented and more interested in natural science than the "frivolous" pursuits of art, music and literature. As Quakers, they held a respect for history, cherished their homesteads, and kept family and community records.

In the same year that the Okehockings were deeded their reservation (1702), 400 acres abutting the Native American land were sold to Charles Whitaker. His purchase included most of the watercourses and fertile bottom land denied to the Native Americans. In turn, he sold the 400-acre tract to Francis Yarnall, his brother-in-law, who obtained by patent another 150 acres west of his original purchase in 1713. His sons, Mordecai and Amos, inherited much of his lands and added to them.

Following the reversion of the Native American lands to the Proprietary in 1737, the brothers Mordecai and Amos obtained the Okehocking lands. The Yarnalls intermarried with other Quaker families and occupied farms on the original purchases through the 1800's.

The Smedley family settled in Willistown and intermarried with the Yarnalls and other Quakers. George Smedley, born in Derbyshire, England, established a plantation on 400 acres to the west of Francis Yarnall's holdings in 1706. In 1713, he and son Thomas acquired another 200 acres immediately to the east. Thomas inherited his father's holdings in 1723. In addition to farming, he operated a bark mill and tanyard on portions of his land which straddled Ridley Creek. At his death in 1758, the plantation and holdings in other parts of the Township were divided among his several sons; the tanyard was left to the family to hold jointly for 10 years. Succeeding generations of Smedleys lived on the land, acquired other nearby parcels, built additional houses and operated farms and mills well into the mid-19th century.

The third major Quaker family to settle Willistown

Township was the Garrett's. William Garrett (originally Garat) emigrated from Leicester, England to Darby, Pennsylvania in 1684. By 1739, William's grandson, Isaac, held a mortgage on 141 acres of Mordecai Yarnall's land along Ridley Creek. This parcel was deeded to his son Isaac II in 1793. The Garrett family eventually held Yarnall land through the marriage of Amos Yarnall to Sarah Garrett, the widow of Samuel Garrett (first cousin to Isaac). Two of her sons married Yarnall women and another, Aaron, inherited the Amos Yarnall homestead.

Scattered villages emerged in the late 1700's as businesses grew, usually at major crossroads, and contained schools, taverns, general stores and craft shops. Prime early examples of these are Sugartown, White Horse and Plumsock. Sugartown was listed in the National Register of Historic Places in 1984.

Religion and Education

Initially, early settlers were members of meetings in other townships but by 1753, enough Quakers had settled in this area of Willistown to justify a school in which to educate their children. In that year, land was deeded by Francis and Ann Smedley to various local Quakers for the purpose of building a "commodious school" and hiring a teacher. Quaker meetings were held there until 1798 and it was used by the Orthodox group for meetings between 1828 and 1873.

In the 1780s, the Quaker population had swelled to the point that a larger meeting house was required. Permission was sought to hold a Preparative Meeting through the 1780's and in 1793 permission was granted to build a two-story stone meetinghouse which was erected adjacent to the school in 1798 on land deeded by Ann Smedley, Francis' widow. This deed also provided for a burying ground which in 1809 was walled in stone from monies raised by subscription. The large meetinghouse, six bays wide with two entrances, adequately served the needs of the local Quaker community until the 1870's when some minor changes were made. In 1956, an addition containing classrooms was built.

Popular tradition and some written accounts hold the area and early peoples of part of Willistown as being involved in the 19th century's Underground Railroad movement. William Hibbard Jr. (of Plumsock Farm) is noted in the *History of the Underground Railroad* by R.C.Smedley (1883) along with Davis Garrett for taking slaves to Philadelphia in two one-horse dearborns. The Rising Sun Tavern still has tunnels on its property that are said to have been involved in this massive, Quaker-supported movement, although no evidence supports this. Members of the Garrett family

of Willistown were also relatives of Thomas Garrett, a noted abolitionist of Wilmington, Delaware.

The Revolutionary War

The Battle of Paoli, fought on the evening of September 20, 1777, spanned parts of northern Willistown, including what is now the Borough of Malvern. British troops encamped in Tredyffrin descended upon General Wayne's Pennsylvania Division Continentals camped in modern day Malvern. In fact, much of the fighting took place southwest of the intersection of Monument and Warren Avenues in Malvern. In retreating, the Continental Army (and the pursuing British) crossed much of northwest Willistown. The battle became known as the "Paoli Massacre" for the brutal and one-sided defeat of forces under American General Anthony Wayne and is thought to have become the first American battle rallying cry "Remember Paoli". The Paoli Memorial Grounds, located in the Borough, is the burial site for dozens of soldiers who died during the battle.

In the early 2010's, Chester County received a grant from the American Battlefield Protection Program to fund a project to study and map Revolutionary War troop movements, recommend archaeological sites for further investigation, and identify existing historic resources that contribute to our understanding of the Paoli Battlefield area. This project, completed around 2015, produced a Battle of Paoli historic resource atlas, an animated battle map, and historic resources atlases for Willistown, Easttown, Tredyffrin, East Whiteland and East Goshen Townships. Malvern Borough's atlas was completed in 2008. Although education is a key component of this project, information available to identify, preserve and interpret historic resources related to the battle can be used to influence land use planning at the municipal level. Several undeveloped pieces still exist in Willistown, and Chester County has developed maps that identify troop encampments and troop movements in relation to remaining open space parcels.

Transportation

Transportation and milling were early factors in the settlement and development of Willistown. The first roads in Willistown were Indian trails. As the Township grew, new routes were needed. Goshen Road was laid out in 1710 as the main road between Willistown and Philadelphia, followed by Boot Road (1710) and Sugartown Road (1710 and 1732).

In the 1800s, railways became important to the development of Willistown. In 1832, Chester County's first operating railroad "The West Chester Rail Road"

was completed running from West Chester to its eastern terminus in Willistown. It linked West Chester to the Philadelphia and Columbia Railroad (later the Pennsylvania Railroad) at Malvern Borough. A trolley line linked Philadelphia to West Chester over what is now the West Chester Pike.

Through the 1870's, a stagecoach also traveled from West Chester to White Horse via Sugartown three days a week, delivering mail and passengers.

The electrification of the Paoli and the Main Line commuter railway in 1915 increased suburbanization in the area. Vehicle Routes 76, 202 and 476 have spurred this development since the second half of the 20th century.

Commerce

In 1796, the following trades were represented in the Township: 5 cordwainers, 2 carpenters, 2 tanners, 2 masons, 3 wheelwrights, a weaver, a saddler, 3 storekeepers, a cooper, 2 fullers, an innkeeper, a clock and watchmaker, 2 millers, a tailor, a chairmaker, and a smith.

Mills were an important industry in the Township through the 1800s. Thus, much of the Township's settlement occurred along the Ridley Creek watershed. Between 1720 and 1900 the Okehocking area contained Willistown Township's most active milling enterprises. The full gamut of milling occurred here, including bark mills, fulling mills, sawmills, grist mills, tilt mills, and paper mills. Only scattered ruins make evident the existence of these mills today.

Blacksmith and wheelwright operations, inns, and other services grew up along the major routes of travel. Standing examples include Goshen Road's Rising Sun Tavern and the State Road's (now West Chester Pike) Willistown and William Penn Inns.

In 1865, one of the country's first platinum refineries was located in Sugartown. It was destroyed by fire in 1903.

Agriculture

Agriculture was one of the most important industries in the Township from the period of first settlement until the 1950's. While not nearly as significant today, agriculture does continue to dominate the local landscape character. Much of the Township's historic architecture reflects its agricultural roots and the changes that occurred in that industry over the last 250 years.

The agricultural evolution began with 18th-century family farms producing a variety of crops, among them grains, such as wheat and corn, or orchards. By mid-19th century, farms grew larger and included

crops of wheat, Indian corn, oats, potatoes, hops, hay, butter, as well as livestock such as horses, sheep, cows, beef cattle, and swine. Mid-19th century barns reflect these expansions with large forebays and shed additions to accommodate a larger variety of crops and livestock. From the latter decades of the 1800s to the mid-20th century, dairy farming was prevalent throughout much of the Township.

In the early 1900's Dr. Thomas G. Ashton of Philadelphia acquired many small farms and assembled them into the mammoth Ridley Valley Farm, known today as the Delchester Farm. Ashton assembled more than 1,400 acres of land in about 1913 and joined the ranks of the area's "millionaire-owned" breeding establishments.

Ashton established a model horse breeding operation at Del-Chester Stock Farm along Ridley Creek, with initial efforts centering on Percheron horses and some cattle. By the 1930's, Delchester Farm, while maintaining its horse breeding, had shifted its major focus to dairying and was distributing milk it produced (as well as milk it obtained from other farmers) locally. In the 1940's, Delchester joined other dairy farms in selling directly to Abbot's Dairy in Philadelphia. The herd was sold after a disastrous fire in 1943.

On October 2, 1909, Charles E. Coxe, the owner of Willisbrook Farm, deeded land and a building to the Township for the first permanent Township Office and Meeting Room.

In 1996, Willisbrook Farm was designated by the Commonwealth as a Century Farm to honor continuous farming by the same family for over one hundred years. The owners of this farm have also participated in Chester County's Agricultural Lands Preservation Program.

In 1981 the State Legislature adopted Act 43 which authorized a borough or township to establish an Agricultural Security Area in its municipality. Two hundred and fifty (250) or more acres of viable farmland, not necessarily contiguous, may be included at the request of landowners. Including farmland in an Agricultural Security Area protects farmers from ordinances that would restrict their farming practices; in addition, it makes it more difficult for state and local agencies to acquire the farmland through the power of eminent domain. Membership in an Agricultural Security Area is required for farmers to become eligible for both State and County "purchase of development rights" programs.

Architecture

Willistown has a splendid collection of rural vernacular architecture dating from 1720. Most notewor-

thy are the Township's massive stone "Pennsylvania" bank barns.

Many of the residential structures in the Township can be characterized as Pennsylvania additive farmhouses which started with modest stone cores and grew as family size demanded and economic prosperity permitted. Materials were locally obtained, and plans were modest and utilitarian. Only a few significant historic houses vary from the more utilitarian examples. One is the frame Victorian Harvey Garret house, with its Gothic crossed-gables and bits of bargeboard; another is the A. Atwater Kent House, designed in the Georgian Revival style. Both of these exceptions are testaments to the late 19th and early 20th century styles.

Historic Resources and Districts

The Township has no individual resources listed on the National Register of Historic Places. As mentioned above, however, three historic districts, Sugartown, Okehocking, and White Horse, are listed on the National Register.

The Willistown Township Historic Commission is charged with gathering information, documenting, and helping to preserve the Township's resources through planning efforts such as this. As an advisory agency, the Commission also helps the Township administer its Historic Preservation Ordinance, Article XXIX of Chapter 139, Zoning.

Conservation

Willistown Township is known in the region for its extensive private and public open space network. Willistown Township residents have displayed a strong conservation ethic for many decades as witnessed by the number of private landowners placing conservation easements on their land. Illustrating their commitment to conservation, Willistown residents passed an open space referendum in 1999 with a resounding 80% of the vote. Since then, the Township has continued to leverage its Open Space Fund with federal, state, and county funding to protect publicly accessible park, trail, and preserve land both on its own and in private/public partnerships with local non-profit organizations.

Conservation Organizations working in Willistown

Brandywine Conservancy

Land conservation efforts began over 40 years ago as the Brandywine Conservancy's Willistown Area Conservation Program. Between 1980 and 1996, the Program's staff worked closely with more than ninety

landowners in Willistown and neighboring townships to protect their lands in perpetuity through the donation of conservation easements.

Willistown Conservation Trust

With the encouragement of the community and key local conservation leaders, the Brandywine Conservancy's Willistown Area Conservation Program evolved into the Willistown Conservation Trust in 1996. The mandate of this independent, non-profit, community-based land trust is to meet the increasing challenges that threaten the area's critical, natural, scenic, and historic resources and to assure the continuation of vigorous conservation efforts in Willistown Township and surrounding communities using the Crum, Ridley and Darby Creek watersheds to delineate their 28,000-acre program area.

Despite tremendous growth pressures that have contributed to sprawl development in neighboring communities, the Willistown Conservation Trust program area still remains largely an oasis of green space. The Trust's programs and services fall into six major categories: (1) Land Protection; (2) Bird Conservation; (3) Habitat Restoration; (4) Community Farm; (5) Watershed Protection and (6) Education and Community Outreach.

The Trust's holistic approach to conservation explores the connections among land, birds, habitat, farm and water. Although their land protection efforts are local to the Willistown area, much of their work has regional and national conservation impact.

Protecting open land in the Willistown area is the Trust's highest priority, and they are working to add another 4,000 acres of land to the already protected 7,500 acres in their program area. The Trust believes the land they protect inspires people to be good stewards of nature. Their programs enable hands-on research, internships, workshops, training, youth education, and conservation leadership.

The Trust employs all available conservation tools including donated conservation easements from private landowners, the purchase of conservation easements, the purchase of land, seeking and leveraging public funds to acquire land or easements, and accepting donations of land. All Trust easements are monitored annually to ensure that the provisions of the easement agreements are upheld.

In 2010, the Trust started a Bird Conservation Program dedicated to advancing avian research and education, dedicated to fostering a love of birds whose populations are in rapid decline. Since the program's inception, over 12,000 birds have been banded at their federally licensed banding station and the Trust

leads the effort to expand the Motus network in the Northeastern U.S., a system that tracks bird migration. The Program's primary initiatives include bird banding, bird monitoring, and habitat restoration and is nationally recognized. It attracts students, scholars, and scientists from all over the country.

The Trust Land Stewardship efforts focus on habitat restoration in their preserves and stewardship guidelines for properties held in private ownership. Native tree, shrub, and wildflower plantings are the most common habitat restoration projects used enhance bird and wildlife habitat and to protect water resources.

Willistown Township has partnered with the Willistown Conservation Trust on numerous conservation projects including the acquisition of Kirkwood Preserve, owned by the Trust, Okehocking Preserve, owned by the Township. the Bryn Mawr Rehabilitation Hospital project which resulted in the Township's ownership of its Serpentine Preserve, the protection of the Greater Chester Valley Soccer Association property, and a 60 acre addition to Natural Land's Willisbrook Preserve.

Natural Lands

Natural Lands is a non-profit organization that has been saving open space, stewarding nature, and connecting people to the outdoors in eastern Pennsylvania and southern New Jersey since the early 1950s. Today, nearly five million people live within five miles of lands under permanent protection. Natural Lands' first preserve in Willistown was a section of Willisbrook Preserve donated in the mid-1960's by the Lange family.

Natural Lands was a partner with Willistown Township, the Willistown Conservation Trust, and the Greater Chester Valley Soccer Association in saving 109 acres of the Bryn Mawr Rehabilitation Hospital, 60 of which were added to their then 66-acre Willisbrook Preserve. Along with Willistown Township and Chester County, Natural Lands holds a Declaration of Covenants, Conditions, and Restrictions on Kirkwood Preserve and monitors the Declaration for the group.

Township Conservation Efforts

In addition to the specific projects mentioned above, in 1999, Willistown Township approached the Willistown Conservation Trust to assist in the presentation and passage of the Township's Open Space Referendum. The referendum asked residents to favor increasing the Township's earned income tax by 1/8th of one percent to establish a fund solely for the purchase and preservation of open space. Township vot-

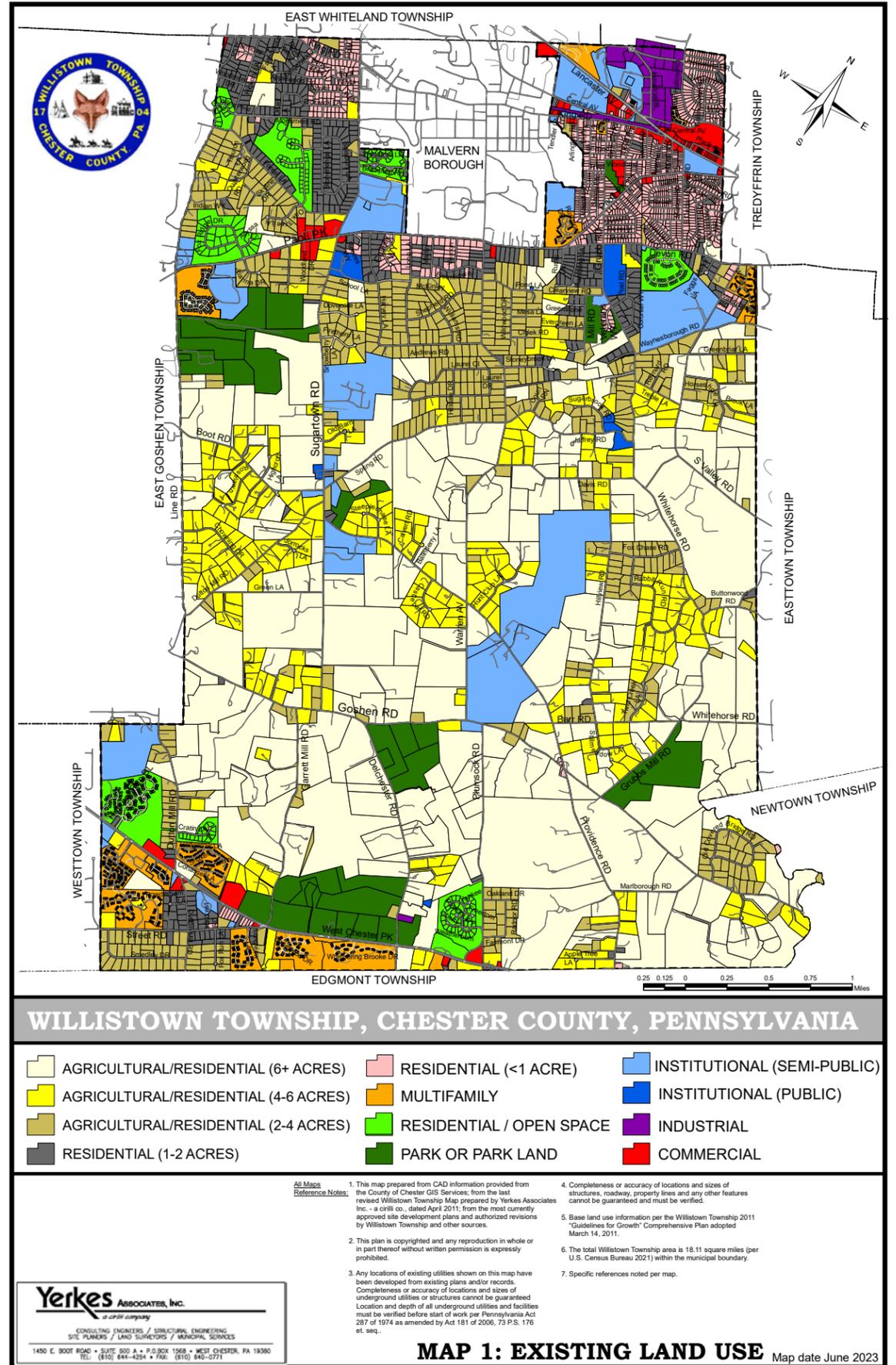
ers overwhelmingly passed the referendum reflecting their strong valuation of protection of open space for natural, scenic, historic, and recreational lands. The Open Space Review Board, comprised of seven Township volunteers appointed by the Board of Supervisors, was created in 2000 to identify, review, evaluate, and rate the desirability of parcels for acquisition and make recommendations to the Board. The additional establishment of the Open Space Fund has enabled the Township to leverage significant dollars from other public sources, principally Chester County, the Pennsylvania Department of Conservation and Natural Resources (DCNR), and the Federal Land and Water Conservation Fund, as well as private donations, toward the purchase of natural, scenic, historic, and recreational lands. Over 400 acres has been protected to date through public/private partnerships.

3.3 LAND USE PATTERNS

3.3.1 General Description of Land Uses

The land use patterns in Willistown Township reflect the Township's rural, agricultural origins in the south and the development of markets and rail transportation in the north (see Map 1: Existing Land Use). Although only a handful of farmers still operate within the Township, the nature of large farming operations is to create and sustain a very rural landscape. Thus, active farming and/or large residential uses (over 6 acres per unit), many of which are equestrian-based, comprise approximately 5,141.42 acres (43.94%) of the Township's land area. Agricultural/rural residential uses remain the largest uses of land in Willistown Township and are a testament to the enduring use of land for agricultural purposes. Substantial acreage has been permanently preserved throughout the southern portion of Willistown Township. These lands continue to perpetuate the Township's rural landscape character even though agriculture as a leading industry ended in the 1950's.

In addition to being fairly open, buildings in the rural portion of the Township are few and widely separated from one another except in the villages of Sugartown, White Horse, and Okehocking. Buildings are often old and true to Willistown's rural roots. This is a landscape that has maintained its historic integrity. Signs and other visual intrusions are rare. In today's world, this landscape is a rare jewel, especially as the broader landscape becomes more developed and auto oriented. Clearly, the actions of Willistown and many of its partner conservation organizations have contributed greatly to the preservation of land in this



MAP 1
back

and other portions of the Township.

It must be noted that the land uses along Route 3 in the southern part of the Township demonstrate a more intensely developed pattern than does the rural heart, although not at the same level as does Route 30 or Paoli Pike. Nevertheless, Route 3 contains isolated commercial uses (such as restaurants) and townhouse complexes. Where permitted, additional commercial and higher density residential uses will likely be drawn to this accessible corridor. However, the Township has taken great pains to ensure that such uses do not overwhelm adjacent lands, that access is carefully managed, and that limits are placed on the extent to which such uses are permitted to encroach on the rural heart of the Township. It has been the Township’s energy and vision that have largely contributed to the protection of viewsheds along the Route 3 corridor and its continued vigilance will be needed if these viewsheds are to be preserved in the future.

Heading north toward Paoli Pike, land use becomes more suburban, reflecting a significant growth period between 1950 and 1970. Although lots are smaller (often between one-half acre and two

acres), the land uses are predominantly residential in nature. Within many of these residential developments, particularly those where density is higher and houses are closer to one another, the sense of community is strong. In fact, Willistown Township was described as a community of neighborhoods in the 1980 *Guidelines for Growth*; such neighborhoods include Paoli Manor, Ronnie Park, Stonehenge, and Willistown Acres, among others. Large parcels in these areas of the Township are often utilized for institutional, educational, or religious purposes. Such uses do not tend to detract from the residential character but contribute to it.

Land use in the northernmost portion of the Township is more varied and intense than that in the south. It is characterized as suburban and urban in some places, particularly around Malvern Borough and near Paoli. North of Devon Road and Paoli Pike on both sides of Malvern Borough, land uses are even more intense, both in terms of density and variety of land uses. Commercial, retail, transportation centers, and quasi-industrial uses are found. Land adjacent to Route 30 and Paoli Pike east of Malvern is strongly oriented to vehicular traffic.

Table 3-1: Summary of Land Uses in Willistown Township, 1980, 1995, 2008, 2020

Land Use	1980		1995		2008		2020	
	Acres	%	Acres	%	Acres	%	Acres	%
Agricultural/Residential (6+ acres)	6,590	55.9	6,387	54.2	5,242.91	44.86	5,141.42	43.94
Agricultural/Residential (4-6 acres)	810	6.9	1,218	10.4	1,341.62	11.48	1,337.57	11.43
Agricultural/Residential (2-4 acres)	1,640	13.9	1,689	14.4	1,576.15	13.49	1,571.65	13.43
Residential (1-2 acres)	450	3.8	1,211	10.3	550.88	4.71	550.07	4.7
Residential (< 1 acre)	510	4.3	73	0.62	579.64	4.96	674.68	5.77
Multifamily	60	0.5	162	1.38	418.81	3.58	469.46	4.01
Institutional (Semi-public)	1,200	10.2	755	6.4	863.56	7.39	863.56	7.38*
Institutional (Public)	70	0.6	38	0.33	48.18	0.41	10.87	0.09
Industrial	70	0.6	90	0.76	106.5	0.91	106.5	0.91*
Commercial	60	0.5	73	0.62	188.42	1.61	185.20	1.58
Parkland	30	0.2	71	0.60	415.82	3.56	415.82	3.55*
Roads	280	2.4	-	-	355.63	3.04	362.69	3.10
Total								
					11,767	100	11,688.12	100
					(see Note 1)		(see Note 2)	(see Note 2) (see Note 3)

Notes:

- 1. Actual amount rounded to nearest 10th
- 2. Actual amount totals less than previous accountings.
- 3. Percentages based on 11,700 original 1980 acres
- * No Change in Acres from 2008

Table 3-1: Summary of Land Uses in Willistown Township, 1980, 1995, 2008, 2020

It is useful to look closely at Table 3-1: Summary of Land Uses in Willistown Township, 1980, 1995, 2008, and 2020. One distinction from the 1997 plan is the allocation of what had been called “vacant land” into the Agricultural/Residential category. The main reason for this reallocation is that it became clear there is no real distinction between what had been labeled “vacant” and what had been open land on larger agricultural/residential properties. Map 8: Protected and Developed Lands differentiates developed from undeveloped or uncommitted lands in order to more fully understand what land is truly “vacant.”

Changes in other categories also warrant explanation. For example, the residential 1–2-acre category shows a marked increase from 1980 to 1995; although it is tempting to explain this as a partial consolidation of lots due to a decline in residential <1 acre, a thorough evaluation of current GIS data assembled from local and county databases indicates a much closer allocation of acreage in both categories for 2008 and 2020. The most likely explanation for this anomaly is the misallocation of acreages for these two categories in 1995. Another interesting anomaly is the decline in institutional (public) land from 1980 to 1995, followed by a slight increase in 2008 and another significant decline in 2020. The explanation here is attributed to a slight increase in land for this category from 1995 to 2008 and a decline in land since 2008. Furthermore, the Township has seen increases in land used for industrial and commercial purposes (a good indication of the success of the Township’s efforts to provide a fair share of such uses), although commercial land uses dropped slightly since 2008. Also worth noting is the large jump in parkland from 1995 to 2008 (much of which is attributable to acquisitions such as the Okehocking Preserve).

In general, the Township continues to see a decline in land attributable to agricultural/residential (6+ acres) consistent with increases in land allocated to other residential categories [agricultural/residential (4-6 acres), residential (1-2 acres), residential (<1 acre), and multifamily]. This is likely attributable to several things: simple subdivision (where applicable), changes in zoning categories, and the use of overlay provisions that provide for higher density development in select zoning districts. It should also be noted that the methods of accounting used from 1980 to 2020 may have contributed to slight differences in data sets. This type of variation may always be an issue although the use of GIS for calculating acreages may reduce inconsistencies over time.

3.3.2 Notable Land Uses

Many institutional uses are located within Willistown Township. In fact, prior planning efforts note that other than residential or agricultural uses, institutional uses accounted for the largest proportion of land uses. This category appears to have increased substantially during the 1960’s. Uses include the American Institute for Property and Liability Underwriters, Bryn Mawr Rehabilitation Hospital (now a division of Main Line Health), Daylesford Abbey, the Devereux School, Norbertine Seminary, Paoli Memorial Hospital, Phelps School, the Radnor Hunt Club, Villa Maria Academy, the White Manor Country Club, and the General Wayne and Sugartown schools.

As noted above, most of these institutional uses do not diminish neighborhood character. Rather, they often enhance quality of life for neighbors by ensuring sufficient property maintenance, keeping large portions of properties “green”, and by making properties available to neighbors to enjoy. Such institutions tend to be good neighbors.

Willistown has been a hub for equestrian farms and sport for many decades. For example, the Radnor Hunt, which was founded in 1883, is recognized by the Masters of Foxhounds Association of America as the oldest continuously active fox hunt in the United States. It moved to Willistown Township in 1931 and has continuously operated, albeit with reduced frequency, ever since. In 1954, the Radnor Hunt Pony Club was founded to teach children all phases of horsemanship—dressage, cross country riding, jumping, horse care, fox hunting, sportsmanship, and teamwork. The pony club, located next to Radnor Hunt, thrives to this day. For the past 40 years, Radnor Hunt has been hosting the Radnor Hunt Races. Top-level flat and timber horses have participated in the “Races for Open Space,” raising funds and awareness for the Brandywine Conservancy’s open space and clean water programs. The 91st Radnor Hunt Races were run in 2022.

Yet these land uses also have great potential for impacting landscape character. They occupy large parcels of land yet may be significantly under-utilized. During difficult economic times, some of these institutions may seek to ease financial woes by selling off or developing portions of their land. In fact, proposals like this have been presented to the Township in recent years (most notably, the residential development approved on lands formerly owned by Bryn Mawr Rehabilitation Hospital). While this kind of planning effort cannot anticipate such development

proposals, the Township has attempted to maintain a dialogue with local institutions; this effort should be encouraged in the future.

It should be noted that a significant amount of Township land, particularly in the southern portion of the Township, is set aside as open space, either through ownership (such as the Okehocking Preserve) or through the voluntary donation of conservation easements. Taken as a whole, land either protected or already developed makes up a large percentage of the Township’s overall land area; as such, the Township’s uncommitted or undeveloped land (potentially available for future development) has diminished greatly in recent years. As development pressures intensify regionally, Willistown will likely see its remaining uncommitted lands developed; in fact, the Township is currently seeing the acquisition and possible development of several large remaining parcels. It is also likely the Township will experience increased redevelopment as the scarcity of “green fields” intensifies.

3.4 DEMOGRAPHIC PROFILE

3.4.1 Population Analysis

Population Growth

Since 1950, Willistown Township has experienced a substantial population increase. By the year 2020, its

net gain of 8,564 residents represented a growth rate of 316% during that 50-year period. On a decade-to-decade basis, the rate of growth has fluctuated. In the 1950’s, a rather modest population base more than doubled, as Willistown’s northern end felt the impacts of post-war suburbanization, spurred in this case by rail access to center city from Paoli. During the 1970’s, the Township lost population. More recently, as reflected in data from the U.S. Census for 1990, 2000, 2010 and 2020, the growth in population has become more moderate and less volatile. This places Willistown in a comparable position to several of its neighboring municipalities as a maturing community with a diminishing reservoir of developable land.

Census figures for the Township through the year 2020, including the rate of growth during each decade, are as follows:

Year	Number	(%)
1950	2,709	
1960	6,492	(139.6)
1970	9,128	(40.6)
1980	8,282	(-9.2)
1990	9,380	(13.2)
2000	10,011	(9.4)
2010	10,497	(4.9)
2020	11,273	(7.4)

Table 3-2: Population Growth and Percentage Rate of Growth for Willistown Township

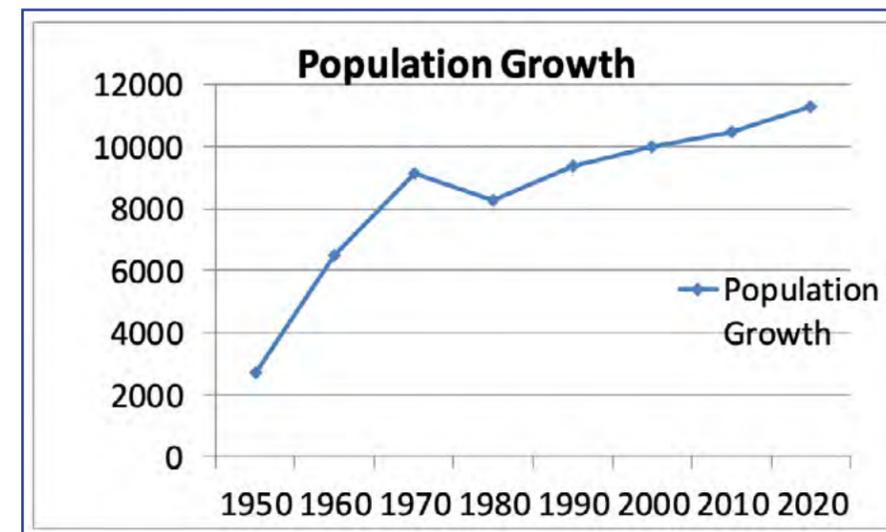


Figure 3-1: Willistown Township Population, 1950-2020

For the period 1960-2020, the U.S. Census documents the overall rate of growth in Chester County and Willistown Township as follows:

Location	%
Chester County	154%
Willistown Township	74%

Table 3-3: Rate of Growth in Chester County and Willistown Township

Population changes for the most recent two decades (based on U.S. Census Bureau information) place Willistown roughly in the middle of its Chester County municipal neighbors with respect to growth rates, well behind Malvern and East Whiteland, on par with Tredyffrin, and Chester County as a whole, while outpacing East Goshen, Easttown and Westtown. The amounts and rates of population growth in the County, Willistown, and its neighboring municipalities compare as follows:

Location	2010	2020	% Increase 2010-2020
Chester County	499,132	534,413	7.0
Willistown	10,497	11,273	7.4
East Goshen	18,026	18,410	2.1
Easttown	10,477	10,984	4.8
East Whiteland	10,650	13,917	30.6
Malvern	2,998	3,419	14.0
Tredyffrin	29,332	31,927	8.8
Westtown	10,827	11,154	3.0

Table 3-4: Population Growth and Rate of Growth for Chester County, Willistown and Neighboring Communities

For the year 2021, the Township approved one land development proposal for 34 single family dwellings. At an average household size of 2.64 (as reported in the 2020 Census), the new dwellings represented by these permits could be expected to add an increment approximately 90 to the estimated 2020 population of 11,273, producing an estimated current population of 11,363.

Population Characteristics

Data from the 2000 U.S. Census offer a statistical depiction of a variety of aspects of the Township's residents, as well as the ability to make comparisons over time and with the population of Chester County. Among them are the following:

TOWNSHIP POPULATION DENSITY (persons per square mile; 18.11 sq. mi. total)				
1980	1990	2000	2010	2020
455.2	515.4	541.1	579.6	622.5

Table 3-5: Willistown Township Population Density

This measure can be seen as a surrogate for tracking population growth. As noted in past planning efforts, it has a bearing on such matters as planning for recreation facilities. In that regard, it continues to be true that the Township's overall population density consists of the relatively dense northern sector and the far less dense southern area. For purposes of context, the 2020 population densities among Willistown's neighbors included, East Goshen (1,753 persons per sq. mi.), Easttown (1,334), East Whiteland (1272), Malvern (2,713), Tredyffrin (1,615), and Westtown (1,288).

The following data offer a snapshot of the ethnicity, age composition, and education levels of the Township population in 2020.

Township population by race	1990 (%)	2000 (%)	2010(%)	2020(%)
White	9,117 (97.2)	9,618 (96.1)	9,661 (92.0)	9,887 (87.7)
Black	184 (2.0)	225 (2.2)	213 (2.0)	223 (2.0)
Asian, Pacific Islander	72 (0.8)	149 (1.5)	383 (3.6)	594 (5.3)
Hispanic or Latino	*	*	159 (1.5)	288 (2.6)
Other	7 (0.1)	49 (0.4)	81 (0.8)	281 (2.4)

* Note: 1990 and 2000 numbers did not reflect Hispanic or Latino as a separate category. 2010 and 2020 numbers reflect this breakout.

Table 3-6: Willistown Township Population by Race

In 2020, Chester County's population was distributed across these groups as follows: White, 77.3%; Black, 5.5%; Asian, Pacific Islander, 6.6%; Hispanic or Latino, 8.1%, Other, 3.5%.

Median age:	1980	1990	2000	2010	2020
Willistown Twp.	34.7 yrs	39.4 yrs	42.8 yrs	48.2 yrs	49.1 yrs
Chester Co.	30.5 yrs	33.8 yrs	37.0 yrs	39.3 yrs	40.4 yrs

Table 3-9: Median Age for Chester County and Willistown Township

Census data make clear that, since 1980, the Township's population not only has a median age that is older than Chester County's, but the difference between the two figures has been widening, with the exception of the year 2000. This is further borne out when comparing the County's cohorts of 18-and-over (%), and 65-and-over (%) with those of the Township. While the Township percentages seem to correlate with, and quite likely are attributable to, the cost of housing in Willistown, increased housing diversity may eventually impact this trend.

TOWNSHIP POPULATION BY GENDER, 2020		
Male	5,422	48.1%
Female	5,851	51.9%

Table 3-10: Willistown Township Population By Gender

This distribution of the Township's population in 2020 was only slightly at variance with Chester County's, in which males comprised 49.2% and females 50.8%.

TOWNSHIP POPULATION, EDUCATIONAL ATTAINMENT, 2020	
High school graduate or higher	97.1%
Bachelor's degree or higher	62.9%
Graduate or professional degree	27.8%

Table 3-11: Educational Attainment in Willistown Township, 2020

Not unexpectedly, educational levels attained by Willistown residents exceeded those of Chester County in 2020. For the County's population, 93.6% were high school graduates or higher, 53% had a bachelor's degree or higher, and 21.5% had a graduate or professional degree.

TOWNSHIP POPULATION, BY AGE GROUP, 2019*

Under 5 years	470	4.3%
05 to 9 years	508	4.6%
10 to 14 years	763	7.0%
15 to 19 years	771	7.0%
20 to 24 years	299	2.7%
25 to 29 years	417	3.8%
30 to 34 years	421	3.8%
35 to 39 years	665	6.1%
40 to 44 years	593	5.4%
45 to 49 years	713	6.5%
50 to 54 years	921	8.4%
55 to 59 years	871	8.0%
60 to 64 years	936	8.6%
65 to 69 years	871	8.0%
70 to 74 years	677	6.2%
75 to 79 years	413	3.8%
80 to 84 years	281	2.6%
85 years +	357	3.3%

Note: 2019 Census estimates. 2020 Census breakout by 5-year increments not available.

Table 3-7: Willistown Township Population By Age Group

TOWNSHIP POPULATION UNDER 18, 18 +				
	2010	2010%	2020	2020%
Under 18	2,133	20.3	2,135	18.9
18 and over	8,364	79.7	9,138	81.1

Table 3-8: 2010 and 2020 population under 18, 18 and over, 2020 Census

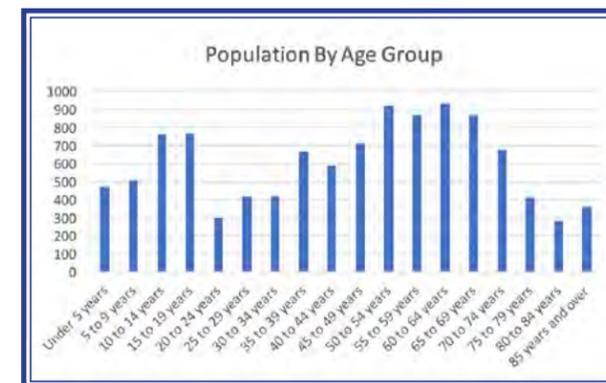


Figure 3-2: Willistown Township Population, by age group, 2019

Population Forecasts

Forecasts of municipal population are prepared periodically by the Delaware Valley Regional Planning Commission in collaboration with the Chester County Planning Commission. The most current forecasts are based on the 2010 U.S. Census data, and take account of birth, death, and migration rates, as well as land use regulations and anticipated future development. The DVRPC/CCPC forecasts to the year 2050 for Willistown and its neighboring municipalities, and for the County as a whole, are as follows:

Location	2030	2040	2050	Change (#,%) 2030–2050
Willistown	11,336	11,526	11,684	348 (3.0%)
East Goshen	18,534	19,119	19,496	962 (5.2%)
Easttown	11,676	11,874	12,041	365 (3.1%)
East Whiteland	16,524	16,671	16,808	284 (1.7%)
Malvern	3,607	3,951	4,165	558 (15.5%)
Tredyffrin	31,009	31,570	31,949	940 (3.0%)
Westtown	12,231	12,692	13,007	776 (6.3%)
Chester County	586,300	620,391	645,673	59,373 (10.0%)

Table 3-12: Population Forecasts for Chester County, Willistown and Neighboring Communities

Consistent with the differences in current populations, the rate of growth in Willistown’s population to 2050 is expected to lag behind that of East Goshen, Malvern, Westtown and Chester County as a whole, but to remain generally compatible with rates in Easttown, East Whiteland and Tredyffrin. These forecasts serve as one benchmark in the development of future land use policies in Chapter 5, where they can be examined in comparison to the results of a build-out analysis. One note of interest is Malvern’s rate of growth, which among other reasons, could be attributable to the general trend among Americans to move back to “small towns.”

AVERAGE HOUSEHOLD SIZE (PERSONS PER HOUSEHOLD)			
Location	2000	2010	2020
Willistown Twp	2.55	2.43	2.64
Chester County	2.7	2.65	2.65

Table 3-13: Average Household Size in Willistown Township

The notable decline in average household size in Willistown until 2010 is not unlike the modest declines seen throughout the region and the County. What is interesting to note is that the decline reversed itself in Willistown (yet remained stable in the County). While it is unclear why this occurred, a lack of affordable housing, coupled with other factors such as the high cost of land and a tight labor market, could be contributed to this rise.

3.4.2 Housing Analysis

The following information relates to housing growth, mix of units, ownership and value.

TOWNSHIP POPULATION AND HOUSING UNIT GROWTH, 2000–2020				
	2000	2010	2020	% change
Population	10,011	10,497	11,273	12.6%
Housing Units	3,932	4,500	4,719	20.0%

Table 3-14: Willistown Township Population and Housing Unit Growth

Although the present change in housing units compared to populations looks promising over the twenty-year period from 2000 to 2020, the proportion from 2010 to 2020 alone is not so positive; during this period the percent change in housing units was only 4.8%, as contrasted with a change of population of 7.4%.

The figures below offer another look at Willistown’s housing composition, which shows a diverse mix of single-family detached and attached dwelling types, but little variation otherwise, since 2000. As noted in past planning efforts, diversification from the traditional makeup of families led to greater demand for townhouse (single family attached) dwellings. The diversity of single family detached and attached dwellings, although inconsistent on a yearly basis, continues when viewed over time. The lack of housing beyond single-family detached and attached dwellings is likely due to a number of factors, including: the slowdown in housing growth during the Great Recession: 2007-2009+, the high cost of land in Willistown (making it difficult to build and sell/rent multi-family housing), and the higher-than-average age and income levels of Willistown residents (possibly reducing demand).

Over the years, Willistown has sought to increase housing opportunities in several ways, most notable being its effort with Tredyffrin Township to provide increased housing and commercial opportunities in the area surrounding the Paoli Rail Yard. Residential opportunities in two zoning districts, the Transportation District (TD) and the Town Center District (TCD), provide for a variety of townhouse, duplex, and multi-family housing. However, development in and around the rail yard has been slow to unfold.

Willistown has also reviewed its fair share of uses in the context of recent development proposals. Although construction activity of diverse housing is slow, the Township believes it provides a varied mix of uses and opportunities for development.

TOWNSHIP HOUSING STOCK, BY % MIX OF DWELLING UNIT TYPES, 2000–2020					
	2000	2005	2010	2015	2020
Single-family detached	75	20	100	15	68
Single-family attached (townhouses)	21	80	-	85	32
Multi-family (apartments)	4	-	-	-	-

Table 3-15: Willistown Township Housing Stock by Mix of Dwelling Units

TOWNSHIP HOUSING STOCK, RATE OF HOME OWNERSHIP		
2000	2010	2020
89.1%	87.9%	87.5%

Table 3-16: Willistown Township Rate of Home Ownership

The Willistown community remains firmly based in the owner-occupancy of its dwelling units. Recently, this continuing upward trend appears attributable to the addition of townhouse units, and not apartments, to the housing stock. County-wide, in data updated through 2020, the home ownership rate stood at 75%. Among Willistown’s neighbors, none have a higher rate of home ownership.

TOWNSHIP HOUSING STOCK, MEDIAN PRICE OF OWNER-OCCUPIED UNITS	
2020	\$459,950

Table 3-17: Willistown Township Median Value of Owner-Occupied Units

For Chester County as a whole, the median price of owner-occupied dwelling units in 2020 was \$375,064. Data provided in the Township’s 2011 Guidelines for Growth show that, in 2000, the median sale price of a home in Willistown was \$211,800, as compared to the County’s median of \$188,000. The 2011 plan makes the point that, to the extent residences in the Township are affordable, it is attributable to the income levels of current residents. “Affordability,” as a vehicle to attract greater diversity among future Township residents, continues to lag.

Among all housing units in the Township in 2020, 94% were occupied, leaving a vacancy rate of 6%. The overall vacancy rate of 6% constitutes an increase from the 3.26% of 2000.

3.4.3 Economic Profile

Data from the 2020 U.S. Census also provide indicators of certain economic characteristics of Willistown Township residents. These include types and locations of occupations, the means by which employed residents travel to their place of employment, and selected data on income levels.

Among the Townships 9,012 residents aged 16 years and older 5,593 (62.1%) were in the civilian labor force. Of these, 5,385 were employed while 208 individuals (2.3% of the civilian labor force) were unemployed. This total work force was comprised of the following occupations:

Management, professional, related occupations	3,152	58.5%
Sales & office occupations	1,119	20.8%
Service occupations	640	11.9%
Production, transportation, material moving occupations	250	4.6%
Construction, extraction, maintenance occupations	224	4.2%

Table 3-18: Willistown Township Workforce Occupations

Census data reported 5,321 workers who described their commute to work according to the following options:

Car/truck/van, drove alone	4,112	77.3%
Car/truck/van, carpooled	178	3.3%
Public transportation	262	4.9%
Walked	175	3.3%
Other means	54	1.0%
Worked at home	541	10.2%

Table 3-19: Willistown Township Workforce Commuting Options

The mean travel time to work was 26.1 minutes.

	<\$50,000	\$50,000–\$99,999	\$100,000 – greater	Median
Chester County	23.5%	26.3%	50.1%	\$100,214
Willistown Twp	20.1%	23.3%	56.6%	\$114,116

Table 3-20: Willistown Township Household Income

Of data accessed in 2020, a total of 567 individuals (approximately equivalent to 215 families at a household size of 2.64 persons per household) were reported to be below the poverty level. It is important to note that although the Township’s median household income is higher than the County’s, and has been for a number of years, some interesting variations now exist: the 2011 plan indicated that more than 60% of the Township’s population had household income of under \$100,000, today that number is just over 40%; and, today more than 56% have income of \$100,000 or greater.

3.5 DEMOGRAPHIC IMPLICATIONS FOR PLANNING

The Township’s 2011 *Guidelines for Growth* described past Township planning effort’s identification of the “globalization” of the national economy and the uncertainty instilled in many workers regarding job security and long-term earning potential. The financial crisis (and its reverberations around the world) that immediately preceded the 2011 plan attest to the fragility of global markets. Nevertheless, financial uncertainty today, partially related to COVID-19 and other impacts on the global economy, continues to leave many workers unsure of their job stability. The 1997 *Guidelines for Growth* identified

the first wave of “baby boomers” turning 50; in the 25 years since, successive baby boomers have retired, although many have had to do so under unanticipated and disquieting conditions.

We have seen and will continue to see rapid changes in technology that promise to change the way we work, play, and relate to the world. In addition, the high cost of fossil fuels and their impact on air quality and contributions to climate change will surely influence our use of the automobile and affect land use in the coming years. As discussed below, COVID-19 has seen an enormous increase in the use of “remote work” and such options will likely influence land use decisions and housing opportunities in the years to come.

Willistown Township remains a vibrant and healthy community. The potential to expand employment opportunities is directly related to a well-educated population and while the Township’s population is certainly aging, the historic trend towards valuing education continues.

Other advantages exist as well, including: proximity to Philadelphia with its social and business opportunities and regional transportation systems (which have seen and will continue to see improvements in the coming years); modest yet still significant additions to the Township’s housing stock, particularly those units geared to the aging population and young professionals; and a large population of adults (generally a stable, responsible, committed, and involved population group).

Prior Township planning efforts addressed areas in which Willistown’s then-current and projected demographic trends could have potential implications for the Township’s future. Each of these has taken a distinct course over the intervening 11 years and forms the basis for future trends.

3.5.1 Growth in Population

The slowdown in Willistown’s rate of growth, its aging population, and its increase in median salary data in recent years speak to a prosperity not experienced in many of Willistown’s neighboring communities. Curiously, the Township’s household size seems to have bottomed out recently and even started to rise again. There could be many reasons for this, but some experts point to COVID-19, an unstable and sometimes weak employment market, and other economic uncertainties as reasons

for young people to remain home longer than they would in past generations. Modest housing growth, the majority of which has remained in single family detached residential (although some attached units have been built), should facilitate modest population growth into the future (although large jumps of any kind are not anticipated) If anything, the Township’s rate of population growth is slowing, quite possibly because the Township is reaching buildout capacity, and partly because much of its land has been successfully preserved over many years. This is not to say future development is not possible, as the Township has been experiencing in recent years greater rates of infill development and land development proposals on parcels that were not preserved in past years. Regardless, the issues of resource protection, future land use (including such issues as redevelopment), and the provision of services and facilities with which this plan deals should retain much of their relevance.

3.5.2 Affordable Housing

Since the late 1990’s, the fit between housing demand and supply improved somewhat and continues today. However, the cost of land in Willistown is an impediment to the provision of a broader mix of unit types and affordability. With the vast majority of recent dwelling units being single-family detached and attached units, land valuation provides little opportunity for alternatives, regardless of the fact that the Township has increased opportunities for townhouse, duplex, and multi-family housing through zoning district creation. While the expanded opportunity for varied housing choices is certainly welcome, and should better meet the needs of downsizing older adults, first-time homebuyers, and other housing consumers, land valuation threatens to jeopardize the Township’s efforts and make housing unaffordable for many. Over time the Township will monitor this issue and continue to look for opportunities to address changing housing needs.

3.5.3 Digital Revolution

While past planning efforts in this regard were rather prescient in terms of this change, the pace of that change was perhaps less accelerated than anticipated until recently. COVID-19 has seen an enormous increase in the use of “remote work” as an alternative for many workers accustomed to commuting to office buildings. Computer communications platforms such

as Zoom and Microsoft Teams, among others, have changed the way many people do business. Whether a significant return the office environment will occur in the years ahead is difficult to determine but recent trends suggest things will not go back to the way they were. For example, many companies permit and even encourage staff to work remotely from anywhere and even employ people remotely. Others now offer staff options to work remotely different days of the week (anywhere from 2-4 days). This is a trend that will likely continue, although the full ramifications to employment, commuting and land use may be years away. The pursuit of home occupations undoubtedly will expand among Willistown’s residents as well, and regulatory language permitting such uses is likely to require periodic review. Cell phone and other wireless device technology are undergoing rapid change and, here, too, the Township will likely need to continually examine its accommodation.

3.5.4 Increasingly Health-Conscious Population

As discussed in the 2011 *Guidelines for Growth*, the aging population of baby-boomers, as well as health-conscious younger generations is to maintain energy, vitality, and mobility. Clearly some of these needs are being met through private and non-profit fitness facilities; however, the Township’s provision of, and continued planning for, trails and other forms of passive recreation will remain essential. As the Township’s population becomes more diverse over time, the need for more varied recreation opportunities, including active sports options, may present themselves. These issues are examined in greater detail in Section 6.13.

The Covid-19 pandemic’s impact on individual health consciousness is yet to be fully understood. As research continues and data is analyzed over time, there is one trend that Willistown also witnessed: park use increased dramatically during the pandemic. The Pennsylvania Department of Conservation and Natural Resources (DCNR) reported that state park attendance increased from 37 million in 2019 to more than 46.9 million in 2020, a 26.6 percent increase. DCNR conducted a poll in fall of 2020 of 1,001 Pennsylvanian’s and found:

- Eighty-six percent of those who visited parks, trails or open spaces agree time spent in these areas has been essential to their mental and/or physical health during the COVID-19 pandemic.

- Seventy-five percent agree that funding outdoor recreation facilities, such as parks, trails, and open spaces, should be considered a top priority by state and local governments.
- Thirty-seven percent of respondents said their interest in learning new outdoor recreation hobbies/skills increased since the coronavirus/COVID-19 pandemic began.

3.5.5 Comprehensive Plan Update 2020 Survey Implications for Planning

Willistown Township conducted a Comprehensive Plan Update survey from May 22 through July 10, 2020, as a component of this plan update (see Appendix 1 for additional survey information). The survey was sent to each tax parcel (property) owner and was also available online to residents and non-residents. An extensive outreach campaign was conducted encouraging participation.

The responses received represented the opinions of entire household or businesses. Chester County identifies 4,571 total tax parcels in Willistown, from which 2,216 surveys were submitted, 92.8% of which were Willistown residents. Of this response, 45% of total Willistown parcels were represented, including 48% of residential parcels in the Township (these percentages indicate a significant response as compared with “good” sample sizes of 10-15%). Based on a 3rd party statistical review *“the Township can be confident that the survey responses not only reflect every resident in Willistown but also represent the sentiment of each individual Planning Area.”*

Willistown’s exceptionally high response rate has produced a confidence level of 99% and a very small margin of error or +/- 2%. The data collected was utilized in this plan and will help the Township to identify areas of improvement and expand upon areas of success.

The survey was designed to provide Township-wide sentiment as well as five identified Planning Area perspectives. Planning Areas identified by number and location: Area 1: Northwest; Area 2: Northeast; Area 3: Northcentral; Area 4: Central; and Area 5: Southwest. The Planning Areas were taken from historical Willistown Parks and Recreation surveys and were drawn based on land use/zoning, geography, neighborhood planning, and the sectioning of the Township by roadways.

A survey Top Line Report provides overarching Township sentiment and findings and can be found in

Appendix 1. This Report addresses the statistical success of the survey, discusses the survey approach, supplies baseline land use demographics, and provides a 30,000-foot view of overall Township survey responses. In addition, the Report provides the percentage and number of respondents for each Planning Area by survey question and provides responses to open-ended questions. What will likely be helpful in the future is the ability to drill down into the data, customize reports based on specific inquiries, and gain further insights.

3.5.6 Other Potential Implications for Township Policy

- As noted, the prospects for increased diversity in race and family structures among the Township’s future population is favorable. On the other hand, the Township’s population is aging and its income levels, land values and housing prices are rising. In the short term, diversity may be impacted by a challenging housing market and lack of housing availability at affordable prices. Over time the Township may wish to examine how affirmatively it desires to address such issues.
- Improvements in and around the Paoli rail station have and will likely contribute to the diversification of Willistown’s population and an increase in rail use. This, in turn, should yield benefits in reduced auto commutation and the vibrancy of a pedestrian-friendly, mixed-use environment.
- Economic and employment uncertainties can become an issue at any time, although it is likely that current revenue sources important to the Township, such as the earned income tax and federal/state funding for road improvements and maintenance, will remain intact. Federal funding, in the form of the American Rescue Plan Act and proposed infrastructure funding, among other sources, will also remain viable sources of revenue over the next several years.
- COVID-19 impacted our society in new and unexpected ways. While its impact to the economy may be short-lived, the way people live and work may profoundly change over time. For example, as stated above, the use of virtual work environments has the potential to change the way we think about land use, specifically the amount and type of commercial, office, and industrial land needed in the future. Telecommuting will likely remain a significant trend for the foreseeable future. However,

working from home is but one trend associated with COVID-19; others include the desire to more fully know one’s community, including recreating locally and shopping locally (if you work from home its more likely you will exercise, recreate and shop locally). During COVID, the use of local parks and trails increased dramatically; this is unlikely to change anytime soon. Furthermore, we may begin to see the need to reevaluate the concept of “rush hour.” Working from home affords the opportunity to run errands at any time of the day or night.



The first of Willistown’s three fundamental planning goals is to protect the quality of Willistown’s natural and constructed environments as a function of the community values and quality of life Township residents hold dear. Protection efforts should be concentrated on those natural and man-made resources that are limited and irreplaceable, and/or are ecologically sensitive.

This version of *Guidelines for Growth* is a direct outgrowth of the 2011 plan and its immediate predecessors, including the 1997 plan and the Township’s 1993 *Open Space, Recreation, and Environmental Resources Plan*. The desire is to meld past planning efforts into a cohesive planning document oriented to the provision of growth management, environmental resource protection, and recreation planning.

General policies for protecting community values emphasize protecting those natural and man-made environmental features which either enhance the rural character, are limited and irreplaceable, offer recreation opportunities, or which are ecologically sensitive. Resource-based policies address such issues as natural topography, ground water, surface water, soils, vegetation and wildlife, historic and cultural resources, including local landmarks, parks and trails, and neighborhoods and housing stock.

4.1 GENERAL POLICIES FOR PRESERVING ENVIRONMENTALLY SENSITIVE LANDS AND NATURAL RESOURCES

- Continue to develop techniques by which to guide and encourage the conservation of land and promote its connectivity.
- Reexamine priorities for the conservation of land within the Township, e.g. woodlands and other vegetation, wetlands, habitat areas, surface water and ground water recharge/supply areas, steep slopes, prime agricultural soils, etc., being mindful of species loss, the needs of pollinator species, and the overall impacts of preservation initiatives. Consider partnering with local environmental and conservation organizations on a project-by-project basis to identify public rights-of-way and public easements that could be utilized to create and expand trail systems and connect public lands. Consider utilizing the Township

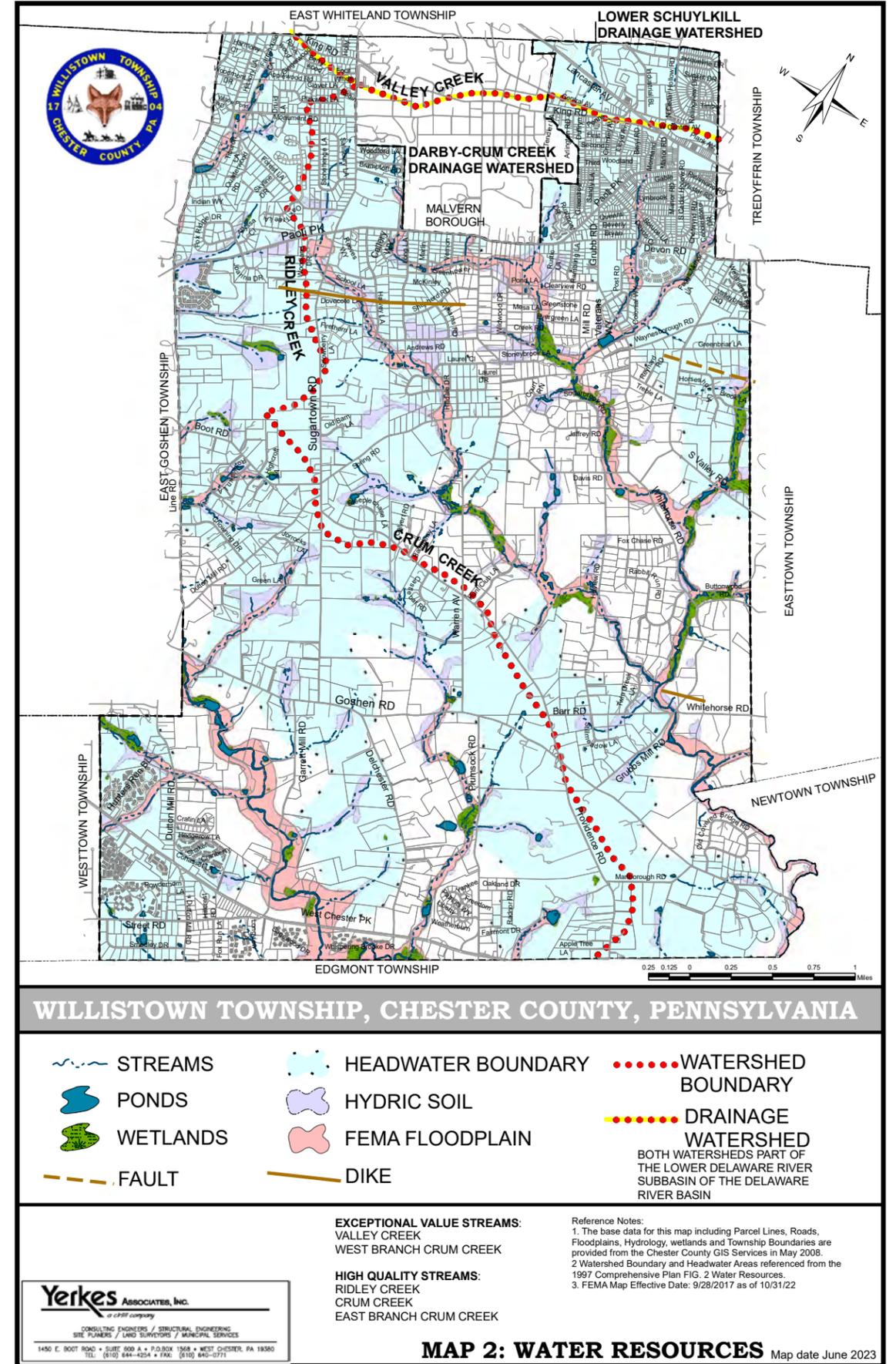
Open Space Fund to acquire trail easements or land in fee simple to create and expand trail systems.

- Encourage creative and innovative site planning using conservation design principles that maximize the protection of key land and environmental resources; evaluate and maintain site hydrology; preserve and/or enhance significant concentrations of natural resources, open space, wildlife habitat, biodiversity corridors, and greenways (interconnected open space); incorporate unique natural, scenic, and historic site features into the lot configuration; preserve the integral characteristics of the site as viewed from adjacent roads; establish internal trail systems and connections to external trail systems and future trail systems; and ensure flexibility in development design to meet community needs for complementary and aesthetically pleasing development. Assist property owners, as appropriate, with land conservation and development alternatives during the sketch plan review of subdivision and land development proposals.
- Continue to protect individual environmental resources such as wetlands, floodplains and other hydrological resources, areas of steep slope, and woodlands. Monitor efficacy of regulatory provisions and update and refine as needed.
- Continue maintaining, enhancing and expanding upon recreational resources that protect sensitive lands and natural resources while offering educational opportunities and public access.
- Continue to support the Environmental Sustainability Commission, Planning Commission, Open Space Review Board, and Parks and Recreation Board in appropriately filling their roles in a manner that protects resources. Consider training, workshops, and other techniques for ensuring these voluntary bodies have the support and tools they need.
- Continue to use Township preserve and park land as models of conservation, ecological improvement, and connectivity.

4.1.1 Water Resources

1. Resource-Based Policy

Continue to preserve and protect the Township’s water



MAP 2 BACK

resources, which include surface water resources (headwaters areas, flood plains, wetlands, hydric soils, and riparian buffer areas), and ground water resources.

2. Existing Conditions/ Background

Surface Water Resources

- Willistown Township falls within the headwaters of Ridley and Crum Creeks, both of which serve as significant sources of water for downstream urban areas (see Map 2: Water Resources). A small portion of the Township, the segment in the northeast corner which borders the borough of Malvern, drains into the Little Valley Creek. Headwaters areas include springs and marshes which exist at the uppermost terminus of stream corridors.

The water quality of the Township's streams and ponds has remained relatively high over the years, supporting healthy aquatic communities. As the Township comprises significant headwater areas, any man-induced impacts (primarily from land use practices, but also from microplastics and PFAS 'forever chemicals') will have significant impacts on the quality of its surface water, thus potentially impacting downstream users. Headwaters areas recharge streams during periods of low flow, but are susceptible to pollution impacts, sedimentation and erosion, and runoff.

Stream order in Willistown Township, as mapped by the U.S. Geological Survey, consists of first-order or perennial streams, which constitute the headwater areas discussed above; second-order streams, which have first-order stream tributaries; third-order streams, which have second order (and possibly first-order) tributaries; and fourth-order streams, often referred to as main stems, which are made up of third-order (and lower) tributaries. Four orders of the Crum Creek, two orders of the Ridley Creek, and one order of the Little Valley Creek exist in the Township. As first-order streams are fed by springs or ephemeral streams, these streams are more impacted by direct runoff than are higher order streams.

Water use designations, to which certain water quality criteria apply, have been established by the PA Department of Environmental Protection. The West Branch of the Crum Creek is designated as Exceptional Value (EV) (the highest designation possible and the one with the most stringent water quality criteria), while the remainder of the Creek in the Township is listed as High Quality (HQ). The

majority of the Ridley Creek in Willistown is designated High Quality (HQ). Although the Valley Creek is designated EV, pollution has been a source of concern on the Valley and Little Valley Creeks (while all three streams show some impairments, the Valley and Little Valley are the only creeks to which a Total Maximum Daily Load (TMDL) standard has been applied).

- Floodplain areas, in particular the 100-year floodplain as mapped by the Federal Emergency Management Agency (FEMA) for the Flood Insurance Program, are areas considered by FEMA to be susceptible to flooding events (the 100-year flood is considered the base flood along streams, although flooding can and does occur beyond this boundary – it is more accurate to refer to the 100-year flood as a 1% annual chance of the area flooding in any given year). Alluvial soils are those soils that result from repeated deposition of flood waters throughout long periods of time; alluvial soils indicate not only past flooding events but probable future flooding events. In Willistown Township, alluvial soils are the Calvert, Chewacla, Guthrie, Wehadkee, and Worsham soils. It should be noted that FEMA published an updated flood insurance study in 2019 that revises and updates information on the existence and severity of flood hazards for Chester County.
- Wetlands have been increasingly recognized in recent years for their important ecological functions. They provide significant wildlife habitat and are important as storage areas for surface and ground water resources. Furthermore, such areas help filter and purify runoff that potentially enters streams and ground water aquifers. Wetlands also provide important nesting areas for birds and provide habitat for many other species of aquatic and terrestrial species. The U.S. Army Corps of Engineers and the Pennsylvania Department of Environmental Protection (PADEP) have established criteria for the delineation of wetlands; such criteria are based on soil type, hydrologic regime, and vegetation. Soils typical to wetland areas have been classified as hydric soils, e.g., those soils that have been formed under saturated (or anaerobic) conditions. In Willistown Township, hydric soils are the Calvert, Guthrie, Watchung, Wehadkee and Worsham soils.
- Riparian buffer areas contribute significantly to the health of watersheds and stream ecosystems. Riparian areas consist of land which forms a transition zone between aquatic and terrestrial environments;

such areas serve to filter and remove pollution-laden runoff from entering water bodies, protect against streambank erosion and tree loss, provide shade that maintains cool water for healthy aquatic ecosystems, promote stabilized streambanks which reduce downstream transport of eroded sediment and pollutants, and provide food, cover and thermal protection for aquatic organisms and other wildlife.

Ground Water Resources

- The Township is underlain primarily by Gabbro (g), Gabbroic Gneiss (g) and Granite Gneiss (gn), with bands of Serpentine (Xs) and Wissahickon formation (Xwc and Xw). Gabbro and Gabbroic Gneiss, while highly resistant to weathering, provide good surface drainage. Wells in these formations have been found to yield an average of 15 gallons per minute, adequate for domestic residential use at low to moderate densities.

The Township's Serpentine formations, while also resistant to weathering (and providing good surface drainage), are rare geologic formations due to their composition and the fact that they were heavily mined in years past. As serpentine bedrock weathers, it forms soils high in magnesium and heavy metals, including chromium, iron, cobalt and nickel, but lacking in other essential nutrients. Such limitations have resulted in rare flora being found to exist in areas of Serpentine rock. As such, portions of these areas have been placed on the Pennsylvania Natural Diversity Inventory (PNDI) (see discussion below).

Wissahickon formations are moderately resistant to weathering, provide good drainage and are capable of yielding an average of 75 gallons of water per minute.

The Township also contains several dikes and one fault. Due to the potential for increased fractures in fault zones, the ground water yields in these areas may exceed that of the surrounding areas. Conversely, such areas are more susceptible to ground water contamination and may pose stability questions for building foundations. Since such areas often indicate shifts in geology, care should be taken when digging or where other kinds of earth disturbance activities are anticipated.

As with any geologic structure, care must be taken to prevent pollution impacts to ground water.

- Radon has become an issue of concern in Chester County. In a study titled "Radon in Ground Water in Chester County, Pennsylvania," (USGS, 1998) the median concentration of radon-222 in ground

water from wells sampled throughout the county was 1,400 pCi/L (picocuries per liter). About 89 percent of the wells sampled contained radon-222 at concentrations greater than 300 pCi/L, and about 11 percent of the wells sampled contained radon-222 at concentrations greater than 5,000 pCi/L. The highest concentration measured was 53,000 pCi/L. Radon is a naturally occurring gas formed from the decay of radium, a common element in soils and geologic rock structures. Radon is a colorless and odorless gas that can be found dissolved in ground water or can seep through building foundations into homes as a gas. It should be noted that other isotopes of radium in addition to radon-222 may also be found in ground water. As of now, the EPA recommends that individual water systems reduce radon levels in drinking water to 4,000 pCi/L or lower (public water supplies should reduce levels to 300 pCi/L or lower). Indoor airborne levels should be below 4 pCi/L; remedial action is suggested above this level.

As noted in the Chester County Hazard Mitigation Plan of April 2021, Chester County is considered a Zone 1 – High Radon Potential County. According to the plan, the "PADEP Bureau of Radiation Protection provides homeowners with information on how to test for radon in their houses. If results of a test reported to the Bureau exceed 4 pCi/L, the Bureau works to help the homeowner repair the house so as to mitigate high radon levels." Because Chester County typically has high levels of radon, residents are encouraged to have their air and water tested.

3. Basis for Policy

- Surface waters provide amenity value, offer opportunities for recreation, help manage and channel flood waters, provide habitat for aquatic and terrestrial life, enhance biological diversity, and are sources of drinking water. Ground water is an important source of water supply and contributes to streamflow. Together, the Township's water resources constitute a dynamic, interdependent system vital to the Township's long-term welfare and quality of life.
- Headwaters areas should be protected from the negative impact caused by sedimentation, erosion, runoff, and pollution. Wetlands and hydric soils provide important ecological functions and should therefore remain substantially undisturbed. To the extent possible, floodplain areas should remain

undeveloped and undisturbed—for obvious safety reasons—and to limit the potential for erosion, downstream sedimentation, and obstruction or alteration of the floodway.

- Water quality and quantity can be directly and indirectly impacted by land use development and the modification of natural patterns of runoff. Site grading, building elevations, imperviousness, and a host of other issues need serious consideration during the development process.
- Withdrawals and discharges of water directly affect surface and ground water resources. Ground water withdrawals should not exceed sustainable supplies or contribute to reductions in streamflow. Given ground water yield (average of 15 gallons per minute) in the majority of the Township, those areas not served by public water should maintain low to moderate zoning densities; without proper planning, such areas' ground water needs could exceed available supplies, particularly during periods of prolonged drought.
- Riparian buffer areas contribute significantly to the health of watersheds and stream ecosystems.
- Significant analysis of and guidelines for water resources protection comes from *Watersheds*, the water resources element of the County's comprehensive plan prepared by the Chester County Water Resources Authority (CCWRA) in 2002. The plan outlines specific strategies, criteria, and recommendations for municipalities and others to protect water resources while accommodating for planned growth. To assist with implementation, CCWRA also prepared Watershed Action Plans (WAPs) "to assist municipalities, watershed and conservation organizations, and other stakeholders in understanding what needs to be done to protect and restore the water resources of each watershed." These documents indicate the need to protect the resources of the watershed at the municipal level through floodplain management, stormwater management, riparian buffer protection, cultural and recreational resource protection, source water protection, and integrated water resources planning. In addition, Townships are encouraged to increase public access to streams, where feasible, and assist in the restoration of impaired stream segments. It should be noted the County is currently updating *Watersheds*; as such, it is likely new strategies and recommendations for the County's municipalities will be forthcoming in 2023.

4. Township Planning and Regulation Today

- The Township's Environmental Protection Ordinance (EPO), Chapter 73, contains net-out provisions that assess potential impacts to sensitive natural resources through subdivision and land development and protects such resources by minimizing their disturbance. The provisions require the application of a resource protection ratio to protected land in order to calculate developable land. Natural resources protected through these provisions are: floodplains/floodways, wetlands, steep slopes, woodlands, hydric soils, and riparian buffer areas.
- Willistown Township has floodplain regulations that are also part of the Township's EPO. Floodplain regulations address the floodway, the flood-fringe, and the general floodplain area as documented in Flood Insurance Studies prepared by FEMA or as otherwise identified by alluvial soils. The Township's floodplain regulations were amended in 2017 to reflect updated FEMA floodplain maps and requirements.
- Wetland delineation and protection standards also exist within the Township's EPO. Delineation, as well as protection, is required for all wetlands in the Township.
- In 2000, the Township recognized the importance of riparian protection by enacting riparian buffer regulations. These standards, contained in the EPO, govern riparian corridor identification, permitted uses, corridor protection, riparian area management plans and selective planting enhancements where disturbance occurs, or native vegetation does not exist.
- In recent years, the Township has been working to monitor and manage water resources on its own lands. For example, the Okehocking Preserve Management Plan (2006) contains water protection recommendations aimed at monitoring stream quality, eliminating invasive plant species, and installing riparian forest buffers along the Ridley Creek and Delchester Run (a first order tributary of the Ridley Creek). The Township coordinates with organizations such as the Willistown Conservation Trust and Drexel University on water quality testing and stream bed assessment in Okehocking along the Main Stem of Ridley Creek. Management strategies such as these, which also include educational components, are being considered for the Township's other preserves, parks and trails.

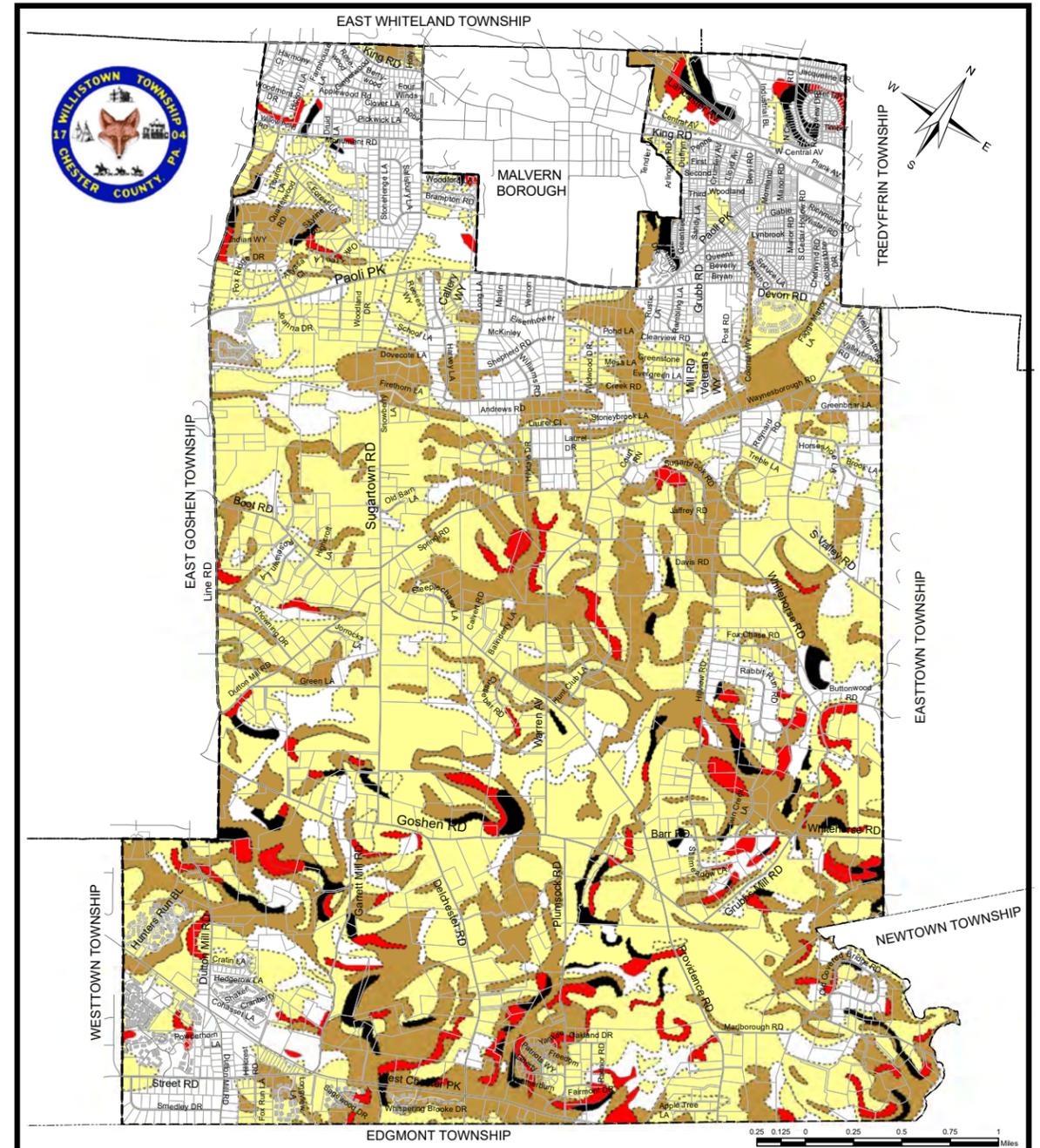
- Individual sewage disposal systems, a potential threat to both surface and ground waters, are addressed in the Township’s Subdivision and Land Development Ordinance.
- Water supply testing, distribution, and maintenance requirements exist within the Township’s Subdivision and Land Development Ordinance.
- The Township’s sewage facilities planning, as mandated under Act 537, the Sewage Facilities Planning Act, is discussed in the community facilities and services section of Chapter 6.
- The Township has updated its stormwater management standards several times in recent years, the last effort being in 2013. As of the spring of 2022, Chester County released the latest version of its countywide model ordinance, the relevant portions of which were to be adopted by the Fall of 2022 pursuant to PADEP requirements. Among the items addressed in the Township’s standards are water quality, peak rate control, volume and infiltration. The Township also continues to participate in Act 167 (the Pennsylvania Stormwater Management Act) planning efforts with Chester County and others; furthermore, the Township is an MS4 municipality (a population-based designation that requires the Township to maintain its inlets, pipes, swales, open channels, and other components of its public stormwater infrastructure). The MS4 program also required the Township to prepare a Pollution Reduction Plan (PRP) (a planning effort that estimates the pollutant loads generated by existing land cover within the Township and provides a 5-year plan to reduce these loads pursuant to a permit issued by PADEP). Also included in the plan is a public education component that obligates the Township to provide public outreach and other education about the MS4 program and the Township’s efforts. The Township’s most recent PRP was completed in 2018.
- The Township’s EPO requires erosion and sedimentation control during land disturbance. Among other things are requirements for conservation plans, permits, preservation of topsoil, site grading, and sedimentation and erosion control. The ordinance also contains additional conservation practices aimed at limiting the impacts of site construction activities; among these is the protection of vegetation and valued woodlands.
- The Township’s Zoning Ordinance, Chapter 139, provides protection for water resources (both

ground and surface) in several ways: impervious cover standards were adopted to address research that suggests watershed imperviousness contributes to stream degradation (Schueler, 1995, et. al.); the Township’s agricultural zoning district (the RU Rural District) strives in part to facilitate the conservation and proper utilization of ground water supplies and control of surface water flooding; finally, the Township’s Open Space Conservation District provides incentives for recharge-based land treatment and stormwater management facilities, encourages less impervious surfaces than conventional development, contributes to a reduction in pollutants from surface water runoff and helps maintain high levels of ground water recharge.

- The Township’s Subdivision and Land Development Ordinance, Chapter 123, contains provisions for determining adequate water supply and sanitary sewage disposal.
- As is the case with water resources, regulation by the county (Public Health Department), the state (PA-DEP, PUC) and the federal government (US-EPA, DRBC) provide additional protection for water resources.

5. Recommendations for Policy Implementation/ Actions to Implement

- Continue to enforce the Environmental Protection Ordinance (EPO) and periodically refine and expand, as needed, the resource protection strategies contained therein. Educate public and private landowners on, and encourage them to adhere to, the management and protection strategies contained in the EPO, even on those lands not undergoing development; continue to promote wise land management practices.
- Review and, where necessary, revise the Township’s development regulations to further encourage innovative site design, especially within headwaters regions.
- Consider additional public education and outreach activities specified as part of the U.S. EPA’s NPDES MS4 program for reducing pollutants and protecting water quality. The program’s Minimum Control Measures (MCMs) address this issue; specifically, MCMs 1 and 2 require municipalities to address public education, outreach, involvement, and participation as part of their stormwater planning. Consideration should be given to working



WILLISTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

	15 TO 25 PERCENT SLOPES		PRIME AGRICULTURAL SOILS CLASS I & II
	25 PERCENT OR GREATER SLOPES		PRIME AGRICULTURAL SOILS CLASS III

Reference Notes:
 1. The base data for this Map including Parcel Lines, Roads, Soil Lines, Steep Slope Classifications and Township Boundaries are provided from the Chester County GIS Services in May 2008.

Yerkes ASSOCIATES, INC.
 a crill company
 CONSULTING ENGINEERS / STRUCTURAL ENGINEERING
 SITE PLANNING / LAND SURVEYING / MUNICIPAL SERVICES
 1450 E. BOOT ROAD • SUITE 800 A • P.O. BOX 1568 • WEST CHESTER, PA 19380
 TEL: (810) 644-4254 • FAX: (810) 640-0771

MAP 3: LAND RESOURCES Map date June 2023

MAP 3 BACK

with watershed organizations that have created programs to assist municipalities in meeting these requirements.

As background, the U.S. EPA's NPDES Phase II rule identifies a specific management program for municipal separate storm sewer systems, or MS4s. Historically most stormwater systems discharged directly into local streams and rivers without water quality controls; as a result, the EPA made identified (MS4) municipalities responsible for reducing pollutants and protecting water quality. While Willistown's stormwater management ordinance and PRP go a long way towards achieving this goal, the Township will need to continuously educate the public about safe stormwater practices.

- Consideration as warranted must be given to Total Maximum Daily Load (TMDL) issues identified by the U.S. EPA and PADEP for impaired stream segments within the Township. Although neither the Ridley Creek nor Crum Creek currently have established TMDLs, the Little Valley Creek (and portions of Valley Creek) in the northern part of the Township have TMDLs established to address impaired water quality due to Polychlorinated Biphenyls (PCBs), pathogens, and storm sewer runoff. As such, the Township should continue to monitor and participate in the TMDL planning process as additional steps may be needed to mitigate pollution impacts to the Little Valley Creek.
- Utilize the findings of Chester County's updated Watersheds plan (spring of 2023) to plan for the Ridley, Crum and Valley Creeks, further protect resources and promote a better understanding of surface and ground water resource issues.
- Maintain the Township's current sewage treatment and disposal emphasis on land application in rural areas to avoid stream discharge, consistent with the intent of the NPDES program.

The National Pollutant Discharge Elimination System (NPDES) program was created initially to reduce the amount of sewage effluent going into the nation's streams and rivers. The intent was to eventually eliminate all stream discharges in an effort to better protect streams from pollution. While numerous stream discharges exist today, the policy of reducing, if not eliminating stream discharges remains. As such, the Township should actively seek opportunities to minimize stream discharges and continue to encourage land application, where appropriate. This philosophy should be explicitly stated in the Township's sewage facilities plan and pursued as appropriate.

- Encourage the donation of conservation easements in headwaters and flood plain areas.
- Expand the water resources management efforts at Okehocking Preserve to the Township's other preserves, parks and trails. For example, the Sugar-town Preserve contains two unnamed first-order tributaries to the West Branch of Crum Creek and pond frontage. Continue and enhance collaboration with local university programs and conservation/watershed organizations such as the Willistown Conservation Trust, which has a Watershed Protection Program that includes research, education, and monitoring of streams in partnership with the Stroud Water Research Center, Drexel University, and the Chester Ridley Crum Watersheds Association. Consider, and expand where needed, public education and volunteer efforts for each project area. Update current planning efforts for the Okehocking Preserve, as needed. Such efforts also contribute to the Township's MS4 program requirements.

4.1.2 Land Resources

1. Resource-Based Policy

Continue to guide and encourage the conservation of land. Continue to preserve and protect the natural resources of Willistown Township and promote techniques for land conservation, creative land planning and design.

2. Existing Conditions/ Background

Land resources of significance in Willistown Township include soils and steep slopes, as depicted on Map 3: Land Resources.

Soils

- The Township's soils fall predominantly into sixteen soil series: Aldino, Brandywine, Calvert, Chester, Chewacla, Chrome, Conowingo, Edgemont, Glenelg, Glenville, Guthrie, Manor, Neshaminy, Watchung, Wehadkee, and Worsham. Several of these are alluvial soils (Calvert, Chewacla, Guthrie, Wehadkee, and Worsham); several of these are hydric soils (Calvert, Guthrie, Watchung, Wehadkee, and Worsham). Almost all of the upland soils of the Township are Class 1 and 2 prime agricultural soils.
- Soils generally have several properties which offer opportunities and constraints for their use. With

regard to constraints, some soils have limitations for building, may be wet or flood-prone soils, may be indicators of wetlands and/or riparian areas, and may be subject to erodibility. Conversely, some soils are particularly suitable (opportunities) for construction and agricultural purposes.

- Prime agricultural soils are formed by processes of mineral weathering and decomposition of organic matter; formation of these soils takes place over centuries. Prime agricultural soils are extremely fertile and produce high yield crops. Unfortunately, what makes these soils suitable for crops also makes them attractive for development and on-site septic systems. Development atop fertile soils renders them incapable of supporting crops, other vegetation, and wildlife. Given the nature of such soils, their removal is an irretrievable loss.

Steep Slopes

- In Willistown Township, steep slopes are largely related to stream corridors. Moderate to severe erosion can result from development in areas of steep slope. Such erosion can increase sediment loads in nearby streams, thus negatively impacting aquatic life. In addition, undisturbed sloped areas adjacent to streams contribute both to ground water recharge and stream base flows.
- Wooded slopes contribute immensely to Township character; furthermore, such slopes perform important natural functions, particularly in conjunction with stream corridors, by intercepting runoff, reducing erosion, shading streams, improving air quality, and providing habitat for terrestrial and aquatic species.

3. Basis for Policy

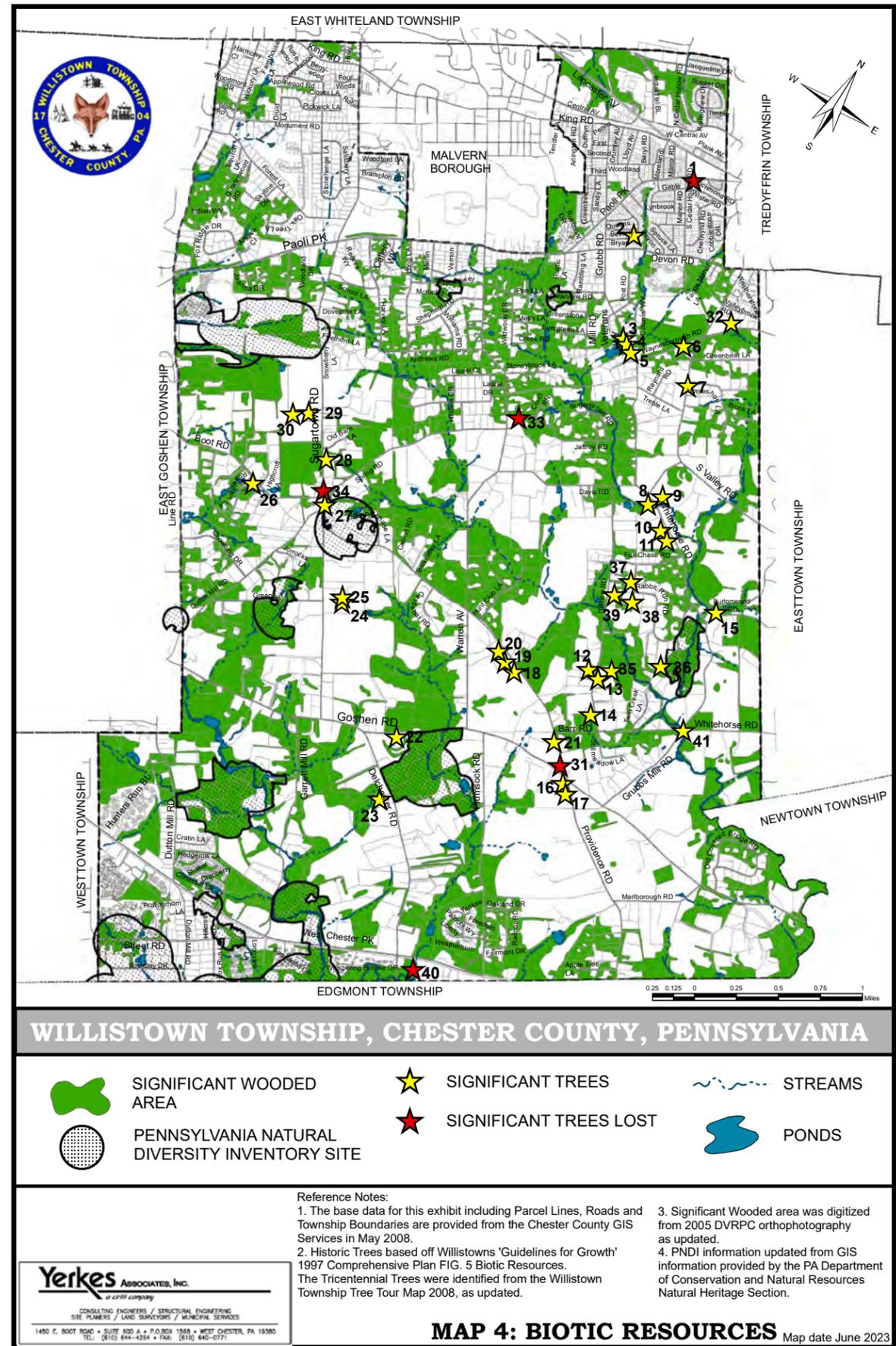
- Starting in 1982 there has been a series of Governor’s Executive Orders stating that the policy of the Commonwealth of Pennsylvania is to protect prime agricultural soils. Such executive orders build on programs and laws such as The Right to Farm Act (protecting farmers from nuisance lawsuits), ACRE (Agriculture, Communities, and Rural Environment Act—intended to protect farms from ordinances that treat normal farms operations as nuisances), the Agricultural Area Security law (authorizing the creation of agricultural districts that provide protection from condemnation and restrictive ordinances), the Clean and Green Act (the Act 319 preferential

tax assessment program), and Act 515 (another tax assessment reduction act addressing broader purposes including farm, forest, water supply and open space uses). Given the large amount of prime agricultural soils and the steep slopes located in Willistown Township, the Township should continue to encourage innovative site design and the protection of prime agricultural lands through available local, state, and county programs, laws, and ordinances.

- Use of land must take full account of the opportunities and constraints posed by the soils in the Township and seek to minimize soil loss under any circumstances.
- Development on sloped lands should only be done in accordance with standards that protect against structural instability, excessive erosion and sedimentation, and the loss of important ecological, visual, solar, and open space resources. On south-facing slopes, access to solar energy can represent a resource for which builders of new dwellings may, at their option, wish to avail themselves.
- Land preservation techniques can protect irreplaceable resources and be part of innovative site design that promotes resource conservation.
- Stewardship of land and environmental resources continues to be a major focus of Township efforts.

4. Township Planning and Regulation Today

- The Township’s Environmental Protection Ordinance (EPO), Chapter 73, provides protection to soils and slopes in numerous ways. Floodplain (alluvial) and wetland (hydric) soils are protected through the Floodplain Conservation District and Riparian Buffer Area Conservation District, respectively. In addition, standards also exist to protect topsoil during construction. Soil erosion and sediment pollution control standards work in conjunction with stormwater management standards to minimize the impacts of runoff, erosion, and sedimentation. As part of its stormwater management standards, the Township created a soil use guide to assist with proper facility design and construction. The steep slope conservation district provides protection to prohibitive slopes (those in excess of 25%) and precautionary slopes (those between 15% and 25%). Finally, other standards regarding conservation of vegetation, wetlands protection, and landscaping contribute to the protection of the Township’s soils and slopes.



MAP 4 BACK

- With regard to the conservation of land and the protection of natural resources, the EPO also contains net-out provisions intended to calculate the amount of natural resource land that must be protected during the development process.
- The Township's Zoning Ordinance, Chapter 139, contains both an agricultural zoning district (the RU Rural District) and an open space district (the OSC Open Space Conservation District). Among other things, the RU District is intended to facilitate agricultural, conservation and recreation purposes, and protect and preserve natural and historic resources. The OSC District provides opportunities for compact development using creative site design that conserves land and protects open space.

5. Recommendations for Policy Implementation/ Actions to Implement

- Continue to enforce the Environmental Protection Ordinance (EPO) and periodically refine and expand, as needed, the resource protection strategies contain therein; specifically, consider revising the EPO to provide greater protection to steep slopes.
- Encourage the donation of conservation easements in, and appropriate stewardship of, steeply sloping stream corridors, wetlands and agricultural lands containing prime agricultural soils. Encourage qualified lands in Agricultural Security Areas (ASA) that are not already preserved to consider selling agricultural conservation easements to the state or county (the Willistown ASA currently includes 85 parcels of 2,060 acres).
- Continue to promote the use of alternative "green technology" stormwater best management practices (also referred to as green stormwater infrastructure or GSI) that promote infiltration and reduce runoff. Simple management techniques, such as disconnection (diverting downspouts to pervious surfaces so as to avoid concentrating storm flows) and rain gardens contribute to soil preservation and reduce soil compaction. Conservation Design and Low Impact Development, both concepts incorporated into the Township's updated stormwater management ordinance, and promoted by Chester County and PADEP, should be given due consideration in all subdivision and land development projects in the future.
- Further promote the use of "minimum disturbance/ minimum maintenance" as a methodology for lim-

iting disturbance and compaction on development sites, thus preserving soils and natural site drainage characteristics.

- Review and, where necessary, revise the Township's development regulations to further encourage innovative site design, especially within sloped areas and on prime agricultural soils. Township efforts at promoting protection and regulating accordingly form the foundation for preserving remaining rural/ agricultural lands.
- Promote the restoration of agricultural land that has a long history of chemical fertilizer use.
- Encourage the conversions of grass lawns to meadow lands, where feasible.
- Continue to support and fund the Township's Open Space Fund for open space and conservation easement acquisition administered by the Open Space Review Board.

4.1.3 Biotic Resources

1. Resource-Based Policy

Continue to preserve and protect environmentally sensitive lands and areas of significant biotic resources.

2. Existing Conditions/ Background

Biotic Resources are depicted on Map 4: Biotic Resources.

Woodlands

- Willistown has a sizable number of woodlands scattered relatively evenly throughout the Township. A comparison of woodlands mapping from the 1980 comprehensive plan and subsequent plans and the aerial coverage utilized for this comprehensive plan indicates that woodlands have remained relatively stable over the last 42 years. While some loss has certainly occurred, such loss is relatively indiscernible. Today, woodlands comprise approximately 3,900 acres of Township land, or approximately 33% of the Township.

Much of the Township's woodlands are concentrated along Ridley and Crum Creeks and their associated tributaries. Trees play a particularly important role in these areas in terms of stabilizing slopes, protecting floodplains and providing riparian habitat for wildlife. Riparian areas also provide an important transition zone between the aquatic

and terrestrial environments; such areas provide both food and shelter for the majority of the Township's remaining aquatic species.

Wooded areas provide critical habitat. Several of the larger, more mature forest stands in Willistown are likely to support a considerable variety of species. Certain species of forest plants and wildlife depend specifically on the unique conditions of a healthy forest ecosystem. For example, many species of songbirds, particularly the colorful warblers, are specifically adapted to forest-interior conditions and will not nest elsewhere. In addition, numerous species of spring ephemeral wildflowers only bloom on the rich, moist soils of the forest floor. Such examples underscore the critical role that woodlands play in sustaining the natural variety of the landscape.

Woodlands also fulfill numerous other ecological functions, including their ability to reduce the rate of surface runoff, filter nutrients and sediment that might otherwise pollute streams, reduce thermal pollution to streams, moderate wind speeds, reduce air temperatures, improve air quality, reduce climatic stress, and abate glare, dust and noise. Woodlands also offer opportunities for passive recreation and quiet reflection.

Pennsylvania Natural Heritage Program (PNHP)

- The Pennsylvania Natural Heritage Program collects and stores location and baseline ecological information about rare plants, rare animals, unique plant communities, significant habitats, and geologic features in Pennsylvania. Data from the PNHP is used in the environmental review tool known as the Pennsylvania Natural Diversity Inventory (PNDI). The Township contains several areas of threatened and endangered species and species of special concern. Among the Natural Heritage Areas identified are the Crum Creek (its forested areas), the Clearview Road Barrens (off of Grubb Road), the Crum Creek Barrens (located below Malvern), the Ridley Creek Headwaters, the Ridley Creek-Hunters Run area, Goshen Road Woods, the Green Lane Woods, the Spring Road Wet Meadow, the Willistown Serpentine Barrens, and the Sugartown Serpentine Barrens. Two of these areas also contain impact zones for the Pennsylvania Natural Diversity Inventory. Both areas are geological structures known as serpentine barrens: the Malvern or Sugartown Serpentine Barren and the Willistown Serpentine Barren (also referred to as the Cedar Barren). Both of these also contain core habitat of regional and global sig-

nificance. In order to preserve the integrity of such areas, the state does not generally give the exact location of such sites (and as such, these areas overlap with several of the other Natural Heritage Areas identified above). The sites indicated on the Biotic Resources Map are only approximations of the actual barrens themselves.

In general, the serpentine barrens are rare geologic structures that have a unique mineral content. These structures provide habitat for an assortment of rare plant species, as well as species in danger of extinction. In addition, periodic fires have historically served to minimize the dominance of woody shrubs and trees on barrens. The resulting plant community is a rare, sparse collection of grasses, wildflowers, and stunted conifers and oaks. Natural succession to hardwood forest is stalled on these sites, with the adapted vegetation more closely resembling a savannah landscape.

Important to remember is that the uncommon structure and assortment of plants growing in serpentine barrens provides important habitat for wildlife. Most local species of mammals, songbirds, and birds of prey frequent the barrens habitat. In addition, barrens favor fewer common species, particularly ring-necked pheasant, American woodcock, savannah sparrow, blue-winged warbler, and yellow-breasted chat.

Since Willistown contains multiple barrens, it is also worth noting that interrelationships among barrens can be important. The long-term survival of certain populations of endemic plants (common to these habitats but uncommon elsewhere) may depend on "genetic exchange" between barrens, including pollination and seed dispersal.

Chester County Natural Areas Inventory

- The *Chester County Pennsylvania Natural Areas Inventory*, published in 1994 and updated in 2000 and 2015, identified sites in the County that provide habitat for species of special concern or are considered exemplary natural communities. In 1994, several sites of statewide significance were identified in Willistown Township: the Malvern or Sugartown Serpentine Barrens (which contains nine plants of special concern), the "Crum Creek Barrens" (containing small populations of two wildflower plant species along a very small serpentine outcrop), and the "Mill Road Site" (containing fair populations of a single wildflower plant species. This study also identifies one species of local significance in Wil-

listown Township: the Dutton Mill Marsh (a small cattail-sweet flag marsh and wet meadow with a diversity of sedges and wildflowers). Information updated in 2000 indicated the identification of a new site of statewide significance, the "Dutton Mill Woods" (containing two plant species). Information updated in 2015 added the Clearview Road Barrens, the Goshen Roads Woods, the Green Lane Woods, the Ridley Creek-Hunters Run area.

Local Vegetation of Importance

- The Township also contains vegetation of local significance, e.g., specimen trees that are integral to the characteristic landscape of the Township. Defined as historic trees, these resources were identified by the Township's Historical Commission in a publication entitled "Historic Trees in Willistown Township" and subsequently updated and refined as part of the Township's Tricentennial Celebration in 2004 and subsequent evaluations by the Historical Commission. (See Map 4 - Biotic Resources and Appendix 2). The trees contained on this list are believed to add character, beauty and a "sense of history" to the Township.
- Exotic, invasive vegetation are biotic resources not considered desirable for protection; such species can impact ecosystem processes and thereby out-compete or make unsuitable native habitat. The addition of invasive species and the reduction in number of native plants can affect both the structure and function of biological communities. Invasive plants can exclude native plant species by crowding for space or competing for nutrients, moisture and other resources, or can exhibit other qualities that make conditions unsuitable for natives. In addition, the loss of native plants and the proliferation of exotics can often lead to a loss of cover, food sources, nesting sites and other uses critical to the survival of native fauna.

Upper Ridley/Crum Important Bird Area

Nearly all of Willistown Township is located within the National Audubon Society designated Upper Ridley/Crum Important Bird Area (IBA) #72. Audubon's IBA program is a global conservation initiative that identifies and protects outstanding habitat for feeding, breeding, and migrating birds. The IBA, which was established in 2003, encompasses an area greater than 14,000 acres in Willistown and parts of neighboring townships, including all of Ridley Creek State Park, Tyler Arboretum, and a vast expanse of private

land in Willistown Township. It is made up of the permanently conserved lands within the IBA, as well as unprotected large tracts deemed critical for conservation by municipalities and conservation organizations. The Upper Ridley/Crum IBA is one of 78 such areas in Pennsylvania, and is part of a global network of lands critical to bird habitat conservation. Audubon has identified the deciduous woodlands within the Township as critical habitat for woodland dwelling bird species such as the Kentucky Warbler, Wood Thrush, Veery, and Scarlet Tanager. The old fields, hedgerows, and meadow habitats of the Okehocking Preserve are also home to important grassland bird species such as the Eastern Meadowlark, Field Sparrow, and Bobolink. Both woodland and grassland species are declining in population throughout southeastern Pennsylvania due to habitat fragmentation and loss caused primarily by suburban development. The size of protected habitat and its connectivity to neighboring natural areas are vital to the maintenance of these bird populations.

Deer Management

High deer populations have had dramatic negative effects on natural habitats in the form of degraded native plant communities, specifically woodland understory vegetation, which provides critical nesting and foraging habitat for migratory songbirds. Other challenging issues include increased deer-vehicle collisions, increased exposure to Lyme Disease and damage to crops and ornamental landscaping.

As reported in the 2011 plan, the Willistown Conservation Trust (WCT), in partnership with Audubon Pennsylvania and Willistown Township, initiated in 2007 a deer management plan covering nearly 7,000 acres of the Upper Ridley/Crum Important Bird Area (IBA) and including over 125 (primarily) private landowners. The program, while ambitious, was intended to use an ecosystem approach to deer management that required WCT to work with a wide range of professionals, stakeholders and organizations such as the Pennsylvania Game Commission, wildlife biologists, ecologists, landowners, hunters, and conservation partners. A steering committee was created to serve as ambassadors to local landowners and the Trust undertook outreach to the hunting community. Once up and running the program was very successful, culling upwards of 250-300 deer a year across the 7,000-acre management area. Unfortunately, the program also became quite labor intensive, requiring the kind of time and resources WCT did not have to manage the program effectively. Faced with the need to scale

back, WCT began working with hunting groups to cull deer on their preserves alone. While not unsuccessful, this approach has not culled nearly the number of deer that took place when the prior program was in place (partially due to deer roaming off-site during hunting season).

WCT and the Township both believe a middle ground needs to be found that allows for an effective deer management program involving the stakeholders from the previous effort. However, it is important to understand the level of commitment and coordination needed to undertake such a venture. WCT suggests the Township start with a small defined area and engage with landowners about the importance of deer management (WCT is willing to help with this endeavor). Part of this outreach requires educating landowners about the importance of management, both in terms of the benefits to the deer population itself, and in terms of the damage associated with a high population. For example, overpopulation leads to starvation, increased disease, and suffering. Because landowners are the first line of communication with hunters operating on their properties, the Township's and the Trust's relationships with them must be based upon mutual trust and respect.

With this in mind, the Township's Environmental Sustainability Commission (ESC) hopes to develop a new deer management plan to serve as the Willistown strategy for responsible deer management. The ESC will work with local and state organizations such as WCT, the Pennsylvania Game Commission, wildlife biologists, ecologists, landowners, hunters and conservation partners to begin to address and sustainably manage the white-tailed deer population in Willistown.

3. Basis for Policy

- The biotic resources of the Township represent valuable assets that sustain wildlife communities, contribute economic products, mitigate development impacts, offer recreational opportunities, and provide outstanding living environments that contribute to the character of the community. Residents should be encouraged to plant native species, in particular pollinator-friendly species, and limit the use of pesticides and other chemicals that reduce natural diversity.
- The Township's biotic resources are a limited and indispensable element of its natural and rural character and deserve protection.
- The Township's natural diversity remains generally good despite human disturbance associated with

settlement and development. Maintaining natural diversity requires both a concentrated effort to retain an abundance of natural areas and a desire to preserve the ecological interconnectedness of such areas; in other words, not only the existence of natural areas but how they interconnect to form habitat networks that contribute to species diversity. As such, the Township has an obligation to present and future residents to preserve its remaining biotic resources and sensitive natural habitats.

- In some parts of the Township's woodlands invasive species such as Amur Honeysuckle have created monodominance, out-competing native species. Invasives took hold as a result of increased deer population browsing the natural understory. Shifts in understory, increased precipitation and temperature increases related to climate change may also be contributing in part changes experienced in the plant hardiness zone this region is experiencing (such zones are based on plant hardiness and are used as an indicator of the cold tolerance of plants).

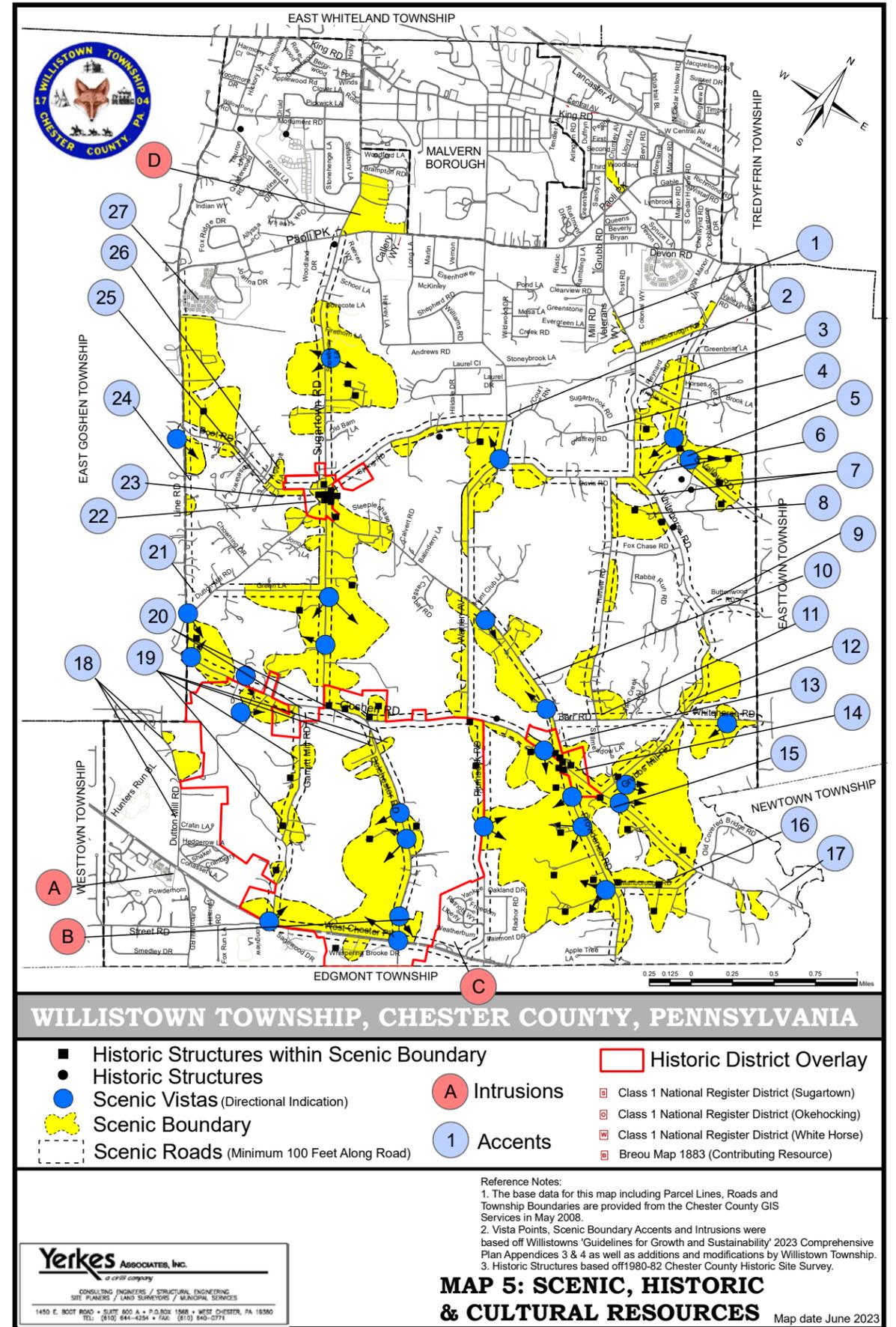
4. Township Planning and Regulation Today

- The Township's Environmental Protection Ordinance (EPO), Chapter 73, provides protection to biotic resources in numerous ways. Among other things, the ordinance contains standards for the conservation of vegetation; the protection of wetlands; the preservation and enhancement of riparian buffer areas; the protection of woodlands; and the provision of landscaping. Floodplain and steep slope regulations also contribute to the protection of sensitive habitat areas that are home to various flora and fauna.

With regard to the conservation of land and the protection of natural resources, the EPO also contains net-out provisions intended to calculate the amount of natural resource land that must be protected during the development process.

Finally, the Township's new stormwater management provisions within the EPO encourage Conservation Design/ Low Impact Development and Green Stormwater Infrastructure (GSI) that promote the use of vegetation for water quantity and quality benefits, encourage minimum disturbance to soils and vegetation, and advocate low impact development practices that protect vegetation and reduce soil compaction.

- The Township's Zoning Ordinance, Chapter 139, provides both a rural zoning district (the RU Rural



MAP 5 BACK

District) and an open space district (the OSC Open Space Conservation District). Among other things, the RU District is intended to facilitate agricultural, conservation and recreation purposes, and protect and preserve natural and historic resources. The OSC District provides opportunities for compact development using creative site design that conserves land, protects open space, and provides opportunities for the interconnection of habitat areas (through the creation of biodiversity corridors).

5. Recommendations for Policy Implementation/ Actions to Implement

- Continue to enforce the Environmental Protection Ordinance (EPO). The ordinance provides direct protection of natural habitats through woodland/vegetation conservation standards, conservation plan requirements, and other related standards. Periodically assess and, if necessary, refine the resource protection strategies contained therein.
- Research and evaluate ordinance examples and/or landowner agreements that protect biotic resources after properties have been through subdivision and land development. Consider enforcement challenges through such approaches, including models of enforcement, inspection practices, and public (self) reporting. Consider public education appropriate to such an effort.
- Review and, where necessary, update the plant list contained in the Environmental Protection Ordinance (EPO)(Appendix B thereof) to reflect changes in hardiness zone, plant tolerance, and species diversity. Consider adding a list of invasive plants that should no longer be encouraged in the Township.

Continue to utilize this list as a reference to specify suitable native species for planting under varying site conditions; cross-reference this list, as needed, in other chapters of the Township Code. Consideration should also be given to updating invasive species lists (such as that contained in the Okehocking Preserve Management Plan of 2006) and providing guidance to manage and control the spread of such species.
- When configuring open space set-asides as part of development, consider ways to reduce wildlife habitat fragmentation and protect biodiversity corridors and riparian buffers along streams and elsewhere; consider these issues when configuring public trail systems.

- Encourage the reduction in use of chemical lawn fertilizers that impact wildlife and aquatic life.
- Continue to promote zoning, subdivision and land development, stormwater, and site design options that enhance the prospects for the retention of vegetation on sites undergoing development. Techniques such as “fingerprinting” (site planning techniques that limit the zones of disturbance), minimum disturbance/ minimum maintenance standards (which can reduce or eliminate the effects of land disturbance, clearing and grading), no-mow zones, vegetated filter strips, and other techniques should be encouraged.
- Encourage conservation easement donations that protect biotic resources.

4.2 GENERAL POLICIES FOR PRESERVING AREAS OF SIGNIFICANT PHYSICAL, HISTORIC AND SCENIC VALUE

Encourage the dedication of protective easements for historic or cultural resources.

Encourage future development that reinforces the Township’s historic settlement pattern and continued use of land for agricultural purposes.

Monitor efficacy of regulatory provisions related to scenic quality protection, including, for example, any landscaping, buffering and screening standards.

Monitor efficacy of regulatory provisions related to historic resource protection and documentation.

Promote techniques for creative land planning and design, consistent with the Township’s conservation design principles, to preserve scenic resources in the Township.

Continue efforts to implement the recommendations made in the 2006 Okehocking Preserve Management Plan and update the plan as necessary over time.

4.2.1 Scenic, Historic, Recreational, and Cultural Resources

1. Resource-Based Policy

Continue to protect the quality of Willistown’s natural and man-made resource environments which enhance the overall character of the Township. Continue to preserve and protect areas of significant physical, historic, cultural, recreational, and scenic

value. Minimize disturbance to scenic resources within the public viewshed as land undergoes change or is converted to other uses. Protect the integrity of sites and structures of historical, cultural, or recreational significance.

2. Existing Conditions/ Background

Scenic Resources

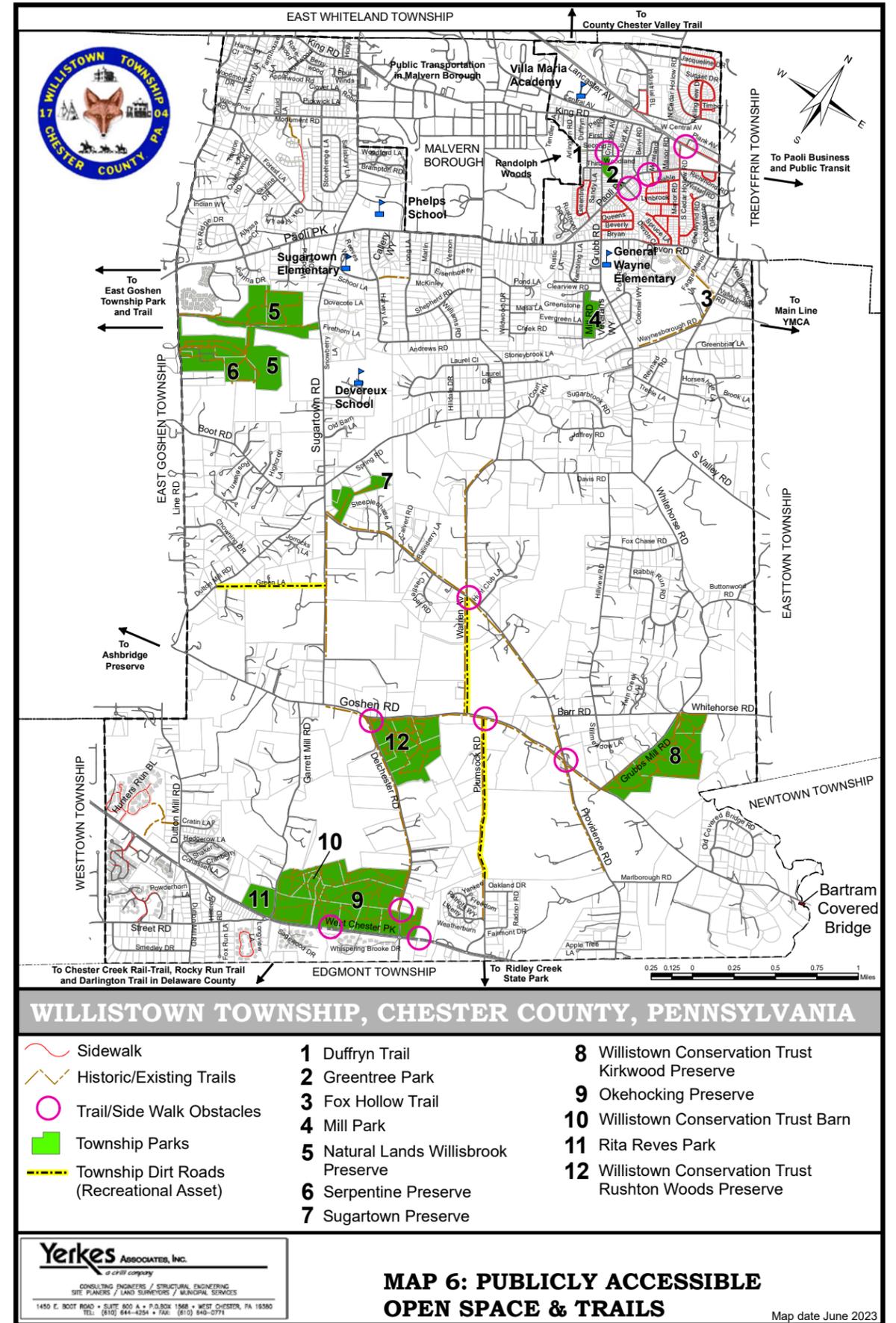
- The Scenic, Historic & Cultural Resources Map (Map 5) quantifies and depicts the visual landscape of the Township as seen from public roads. The full inventory, done in considerable detail, documents visually significant lands in the public viewshed, vista points, historic structures, and visual accents and intrusions. From a holistic perspective, the resources that comprise this landscape contribute significantly to the visual character of present-day Willistown and represent a significant component of the Township's heritage and sense of community. Further, the survival of such resources is a partial indication of Township and landowner commitment to preservation in light of continued growth. It should be noted that the Township's recreation land reflects the community's values as well, and therefore the Publicly Accessible Open Space and Trails Map (Map 6) can also represent scenic resources of significance.
- Visually significant lands are documented with regard to a visual boundary (referred to as the scenic boundary). Vista points designate broad, expansive views. Arrows leading from the vista points show the direction of the viewing opportunity. Twenty-six vista points were selected on the basis of the depth and undisturbed quality of landscapes representative of Willistown Township's character. This represents a two-fold increase in vista points since the last plan, predominantly due to the addition of two new scenic road segments, changes in the scenic boundary along some roads (likely an opening in an otherwise previously buffered landscape), and the reevaluation of several previously identified scenic roads.
- Visual accents are those manmade objects or structures (or natural habitats) which enhance or contribute to the landscape; visual intrusions are those manmade objects or structures which detract from the landscape. Examples of accents are stone walls, ruins and villages. Intrusions include such items as transformer facilities, silt fences and road-side trash. Twenty-seven accents and four intrusions

were identified (see Appendix 3). This count remains the same from the last planning effort and closely matches those identified in 1993 for the Township's "Open Space, Recreation, and Environmental Resources Plan." The 2011 comprehensive plan eliminated the intrusion identified on Devon Road in 1993, however added three intrusions, including: a utility station/transformer identified on the south side of West Chester Pike (Rt. 3) across from the intersection of Dutton Mill Road; a cell tower located on the north side of West Chester Pike (Rt. 3) just west of Plumsock Road; and a cell tower located on the south side of Paoli Pike just west of Sugartown Road (these intrusions remain in place today).

The visual landscape is highlighted by the natural, scenic, historic, cultural, and recreational resources of the Township within the context of public roads and vista points; contributing vegetation, topographic features, and man-made structures all influence the visibility of the landscape. Furthermore, the interrelatedness of these resources and their importance to the local community underscores the importance of continued protection efforts.

- For the purposes of identifying scenic roads, the Township utilized the methodology contained in its 1993 Open Space, Recreation and Environmental Resources Plan. This approach continues to provide a useful tool for evaluating scenic roads and resources; perhaps as significant, such an approach makes possible a clear evaluation of change over time.
- Scenic roads are those roads having a high degree of natural beauty and historic or cultural value. As a first step in identifying scenic roads within the Township, criteria taken in part from the Federal Highway Administration (FHA) publication *Scenic Byways* (and subsequent publications of the FHA) and from the methodology used to develop the Scenic, Historic and Cultural Resources Map, were applied to the Township's roads through field investigations. These criteria were further refined as a result of the field investigations and are contained in Appendix 4.

Using the refined selection criteria, an analysis of the scenic, historic, recreational and cultural resources inventories (summarized on Map's 5 and 6) and the natural resources inventories (water, land and biotic resources)(summarized on Map's 2, 3, and 4) was next performed on each road that had been preliminarily identified in the field. The purpose of this analysis was to quantify the amount of scenic value each road possessed based on applying the refined selection criteria to the resource invento-



MAP 6 BACK

ries prepared. Along with further fine-tuning of the preliminary designations, this analysis aided in pointing out the positive or negative attributes of each road and how such attributes contribute to or detract from the scenic quality of each road.

The result is a roster of twenty-one roads that are considered worthy of scenic road designation. It should be noted that two additional roads were added since the 2011 planning effort: the Willistown portion of Line Road from Paoli Pike to Goshen Road, and Barr Road, between Providence Road and Grubbs Mill Road (the 2011 plan eliminated Line Road but the current inventory again lists it as scenic, given the qualities noted in Appendix 4). Appendix 4 lists and describes all twenty-one roads, as well as points out the qualities or attributes that make these roads integral to the scenic fabric of the Township. To a degree, each has its own set of qualities worth protecting; arguably, though, they collectively serve as a means of public enjoyment within the Township.

Although the road corridors identified on Map 5 portray a uniform width (which acknowledges the immediate frontage of each road), in reality the scenic perimeters of these roads are a function of the Township's rolling topography, vegetative features, and built environment (hence, the designation of scenic vistas or outlooks of significant depth).

Historic and Cultural Resources

Willistown Township has 201 documented historic structures, not all of which are located within the documented scenic viewshed (see Map 5). The structures were identified in part from Chester County's Historic Sites Survey, as amended, and through research undertaken by the Township's Historic Commission. While no individual resources are listed on the National Register of Historic Places, three historic districts do exist: the Sugartown Historic District, the Okehocking Historic District and the Whitehorse Historic District. Structures shown as Contributing Resources (Breou Map 1883, commonly referred to as the Breous Map or Farm Atlas) contribute to the historic character of the overall Township. Appendix 5 lists the Township's historic resources (the identification number also being used as the reference for each resource on Map 5).

Recreational Resources

Willistown Township has over 400 acres of passive and active recreation lands within its borders, 235 acres of which are owned by the Township, the remainder being owned by private non-profits who

permit public access (including approximately 95 acres of the Kirkwood Preserve which was acquired in large part by using and leveraging the Willistown Township Open Space Fund). These recreational assets are critical to the mental, physical, and emotional wellbeing of Willistown residents and visitors and offer gathering places for the community (see Map 6). A significant percentage of private lands in central Willistown have trails that give access to recreational horseback riders and contribute to the popularity of Willistown's horse boarding stables and equestrian land use.

3. Basis for Policy

Scenic, historical cultural, and recreational resources are irreplaceable to the community and add immeasurably to the Township's quality of life. These resources should be preserved for future generations. Where direct management of a resource is not feasible, creative regulatory approaches can provide preservation incentives to property owners and others.

4. Township Planning and Regulation Today

- The Township's Environmental Protection Ordinance (EPO), Chapter 73, provides protection to water, land and biotic resources that in large measure make up the scenic quality of the Township. Among other things, the ordinance contains standards for the conservation of vegetation, the protection of woodlands, the protection of steep slopes, and the preservation of other natural resources that contribute to scenic quality. Furthermore, the ordinance contains provisions for landscaping and other land and resource management tools to enhance the natural (and scenic) landscape.
- The Township's Zoning Ordinance, Chapter 139, provides both a rural zoning district (the RU Rural District) and an open space district (the OSC Open Space Conservation District). Among other things, the RU District is intended to facilitate agricultural, conservation and recreation purposes, and protect and preserve natural and historic resources. The OSC District provides opportunities for compact development using creative site design that conserves land, protects open space, and provides opportunities for the protection of scenic road corridors through setbacks, buffering and innovative design.
- As part of the Township's Zoning Ordinance, Chapter 139, the Township adopted historic preservation ordinance provisions in 2001. The ordinance pro-

vides a “clear process by which proposed land use changes affecting historic resources can be reviewed by the Township”, encourage continued use and preservation of historic resources, discourage unnecessary demolition of historic resources, and provide guidance to help mitigate negative effects of proposed land use changes.

- Chapter 29, Open Space Review Board, Chapter 96, Parks, and Chapter 31, Park and Recreation Board, of the Township Code, provide for Township resident representation in the planning, acquisition, and execution of open space and recreation protection, maintenance, and programming.

5. Recommendations for Policy Implementation/ Actions to Implement

- Continue to enforce the Environmental Protection Ordinance (EPO) which regulates landscaping, buffering, and screening, among other things. Continue to enforce the Historic Preservation Ordinance, which provides a clear process by which to encourage protection of historic resources.
- Consider formal scenic road designation, either through local efforts (such as a local Adopt-A-Highway or scenic road designation program) or through the state scenic byway program; consider appropriate signage and education (see *also Goal 3 – local road character recommendations*).
- Consider adopting a broad scenic roads overlay district which would address site planning and design within a scenic road corridor, primarily through the siting of common open space, landscaping/buffering measures, and sensitive treatment of visual accents.
- Consider preparation of a brochure intended to outline the scenic qualities of identified scenic roads, including possible Historic Commission research regarding the history and use of each road.
- Consider additional policies and/or ordinances to protect scenic, historic, recreational, and cultural resources and ensure enforcement, including:
 - Additional landscaping policies or regulations designed to specifically protect or enhance existing viewsheds and scenic roads.
 - Updates to the Township’s historic preservation ordinance to leverage new ideas and thinking for the protection of historic resources.
 - Assigning enforcement to a specific Township department of staff member.

- Consider a scenic easement acquisition program and/or encourage the donation of conservation easements. Encourage the dedication or easement (including façade easements) of historic and cultural resources.
- Continue to actively engage Township residents on the open space and recreation missions of Willistown through its advisory boards and the Parks and Recreation Department.
- Map landmarks of historical or cultural significance.
- Review and update the 2006 Okehocking Preserve Management Plan; revise the plan’s recommendations, as needed, to address current issues, including stream water quality, climate change, and deer management.

4.2.2 Parks, Recreation, Preserves, and Trails

1. Resource-Based Policy

Preserve, protect, and expand the existing parks and recreation resources in Willistown Township through management, maintenance, and funding of these resources. Preserve the continuity of Willistown’s existing trail network. (Note: The term “trail” includes sidewalks in the more densely developed areas of the Township.) Connect recreational assets to each other and to neighborhoods through existing and proposed trails.

2. Existing Conditions/ Background

Park, recreation and trail resources in Willistown Township are depicted on Map 6: Publicly Accessible Open Spaces and Trails.

Existing park and recreation resources include Greentree Park, Duffryn Trail, Fox Hollow Trail, Mill Park, Crum Creek Lands (currently unnamed and consisting predominantly of wetland/riparian areas associated with sewer easements), Serpentine Preserve, Sugar-town Preserve, Rita Reves Park, Okehocking Preserve, and Willistown Conservation Trust’s Kirkwood Preserve and Rushton Woods Preserve and Farm (see Appendix 6 for the location and description of each facility).

Historic and existing trail resources in the Township include both public and private trails that provide for a variety of uses including pedestrian and/or equestrian trails. While some of these trails have been used infrequently in recent years, and in some cases have become overgrown or have other obstacle in their way, the historic nature of these trails and their potential for future circulation warrants their identification. A number of private trails were historically intended for

equestrian use only and a number of those are under conservation easements that dictate accessibility and type of use on each parcel. As time has passed, the equestrian land use in Willistown has changed. Many barns that once housed animals and cross-country horses are now show barns that rarely accommodate horses for riding across the countryside. Historically, the Radnor Hunt hounds went out fox chasing with equestrians three days a week. Due to significant increases in traffic, land development, a change in landowner access, and decreased local equestrians, the Radnor Hunt moved their outings to the Brandywine Valley two days a week. The sport is hosted in “Radnor Hunt Country”, or Willistown, only one day a week (Note: modern day fox “hunting” does not injure foxes and is referred to as “fox chasing”). This change in land use and diminished equestrian use has changed the equestrian trail network and poses great challenges to its integrity. Additionally, traffic volume and speed are impacting equestrian trail circulation safety (many trails have historically run along road rights-of-way).

The Township also contains a unique informal recreational ‘trail’ asset in its three unpaved, dirt roads: the southernmost section of Warren Avenue, the majority of Plumsock Road, and Green Lane. These roads are used by pedestrians, equestrians, and bicyclists and are important connections for existing and proposed trail networks.

As stated above, the term “trail” encompasses sidewalks in the densely populated portions of the Township. Public trails are composed of mown trails, gravel trails and paved trails, depending on location.

The rolling hills and bucolic views of Willistown continue to be a favored destination for road bicyclists; however, use has dropped due to heavy traffic volumes throughout the day. Risk is high on both narrow back roads (historic roads without shoulders, some of which remained unpaved) and high-speed state-owned roads (in part due to a rise in cut-through traffic). Additional risk in recent years is attributable to driver cell phone distraction and the use of global positioning systems (GPS) for vehicular navigation. There are no designated bike trails or bike lanes in Willistown Township.

3. Basis for Policy

Parks, recreation resources and trails provide an essential community service in Willistown Township and are valuable cultural assets that play an important role in enhancing the quality of life of Township residents and bringing the community together. Parks

and recreation programs contribute to a healthy lifestyle and provide documented mental, physical, emotional and societal health benefits to individuals and communities. Access to trails and recreation lands promote physical activity and social gathering. Walking and very limited bicycling provide documented quality of life, health, economic, transportation, and environmental benefits. Many of these benefits apply to horseback riding as well. Trails also offer residents a choice in their mode of transportation. As such, parks, recreation resources and trails in Willistown Township warrant protection and qualify as wise infrastructure investments. Together, they also create a sense of identity and place and make the Township an attractive place to live, work and visit. Additionally, the availability of recreational programs and facilities helps maintain community property values.

4. Township Planning and Regulation Today Parks and Recreation Resources

- Willistown Township Code Chapter 96, Parks and Chapter 31, Park and Recreation Board, identify use regulations, prohibitions, and enforcement; guide permitting; dictate violations and penalties; and define the powers and duties, composition, terms of office and business conduct of Park and Recreation Board members.
- Willistown Township Code Chapter 29, Open Space Review Board (OSRB), outlines the purposes of the Board to review, rate, value, and recommend fee simple land and/or easement acquisition expenditures to the Board of Supervisors; to review ordinance provisions relating to the protection, preservation and management of open space in the Township; and, to coordinate with the Parks & Recreation Board and Planning Commission in evaluating properties under consideration.
- The Willistown Township Comprehensive Plan Update Survey of 2020 provided resident opinions and desires by planning area on park and recreation issues. This survey is a powerful tool for future park, open space, and recreational planning efforts.
- Willistown Township incorporated its Open Space, Recreation, and Environmental Resources Plan into this document during a previous comprehensive plan update for efficiency purposes. Such plans focus on preserving and interconnecting critical open spaces and natural areas, expanding trails, increasing farmland preservation, and preserving historic landscapes.

An Official Map is a combined map and ordinance that helps municipalities plan for and make public improvements. An Official Map can designate areas for future roads or trails, or public grounds, such as parks, open space, or flood control areas. Willistown Township's Official Map and ordinance help guide planning and public improvements. The Map identifies Proposed Open Space Reservation, Proposed Township Park Lands, Restricted Open Space, Township Park Land, Township Owned Land, Conservation Organization Owned Lands, Lands under Agricultural Easement, Deed Restricted Lands, Lands Under Conservation Easement, Eased Township Lands, three Historic Districts, Class II Breou Map Historic Structures, and three Proposed Trail Corridors.

- Chester County's Comprehensive Plan, Landscapes III (2018), established a preservation and growth vision for the county and its municipalities, offering guidelines for municipal government decision-making, planning, and implementation; Willistown Township employs these guidelines in its planning. With nearly 144,000 acres of permanently protected land, nearly 30% of the county is preserved as open space or agricultural land. Willistown has contributed to this effort in many ways through its preservation programs and continues to play an important role in the protection of open space. As with the County, the Township has placed emphasis on expanding its protection efforts, providing connectivity of protected open space and recreational assets, and further protecting farmland from development.
- The Department of Conservation and Natural Resources' (DCNR) Pennsylvania Statewide Comprehensive Outdoor Recreation Plans informs and guides Willistown Township's planning efforts. The most recent Plan, Recreation for All 2020-2024, provides a blueprint every five years for how to meet the outdoor recreation needs of Pennsylvanians. Although DCNR develops and administers the state's outdoor recreation plan, Pennsylvania's 2,561 municipalities are instrumental in implementing it.

Trail Resources

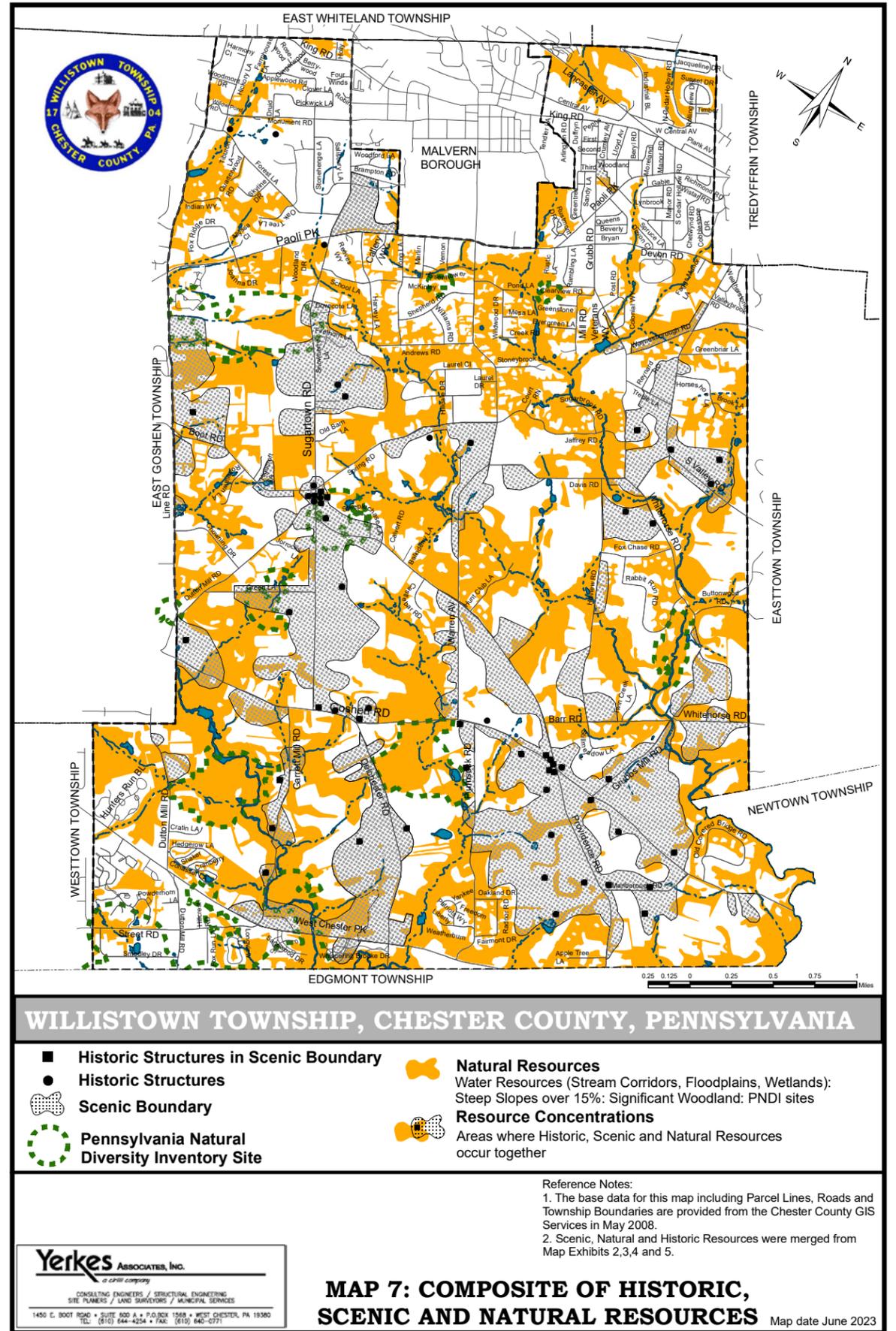
- The Planning Commission, in conjunction with other boards and commissions, plays an important role in protecting existing trails, including sidewalks, and assuring creation of new trails, trail connections, and sidewalks during the subdivision and land development process.

The Subdivision and Land Development Ordinance, Chapter 123, states that at the discretion of the

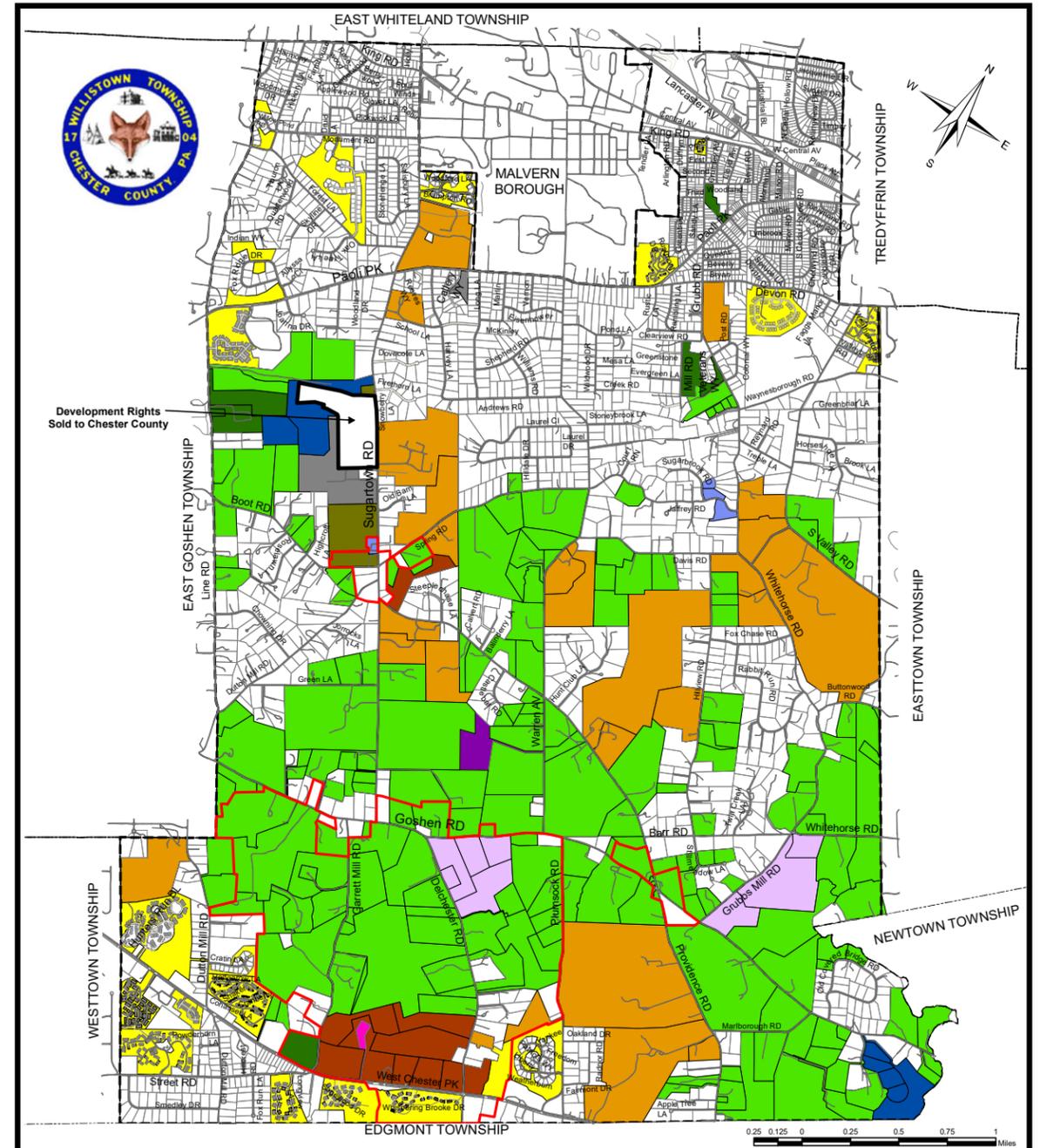
Board of Supervisors, with recommendations from the Planning Commission, a system of bicycle, equestrian and/or pedestrian paths for public use generally unrelated to and separate from streets shall be established and secured by dedication or easement. The paths and trails are to encourage the formation of an interconnecting trail network both within and beyond the Township. The code further protects existing paths by stating a path may be relocated if a connection with a path on an adjoining property is established. The code also includes sidewalk specifications for all subdivisions and land development on Lancaster Avenue

The Zoning Ordinance, Chapter 139, identifies specific policies directed toward the protection and continuity of the existing trail network, and opportunities for additions thereto. It also dictates that land designated as open space shall be configured so as to maximize conservation of site features identified as having recreational values, including pedestrian and equestrian trails. It further dictates that equestrian or pedestrian trail linkages identified by the Township shall not be disturbed unless the property cannot otherwise be developed and then only when relocation of the trails is approved by the Planning Commission. It states that specific uses are permitted in the common open space, including pedestrian or equestrian trails, and requires a management plan for the disposition, use, maintenance and insurance of the common open space; included here are provisions that funding be provided and approved by the Township Planning Commission and Township Solicitor prior to plan approval. For unified development plans, the ordinance dictates that the applicant shall endeavor to incorporate a trail system through residential portions of the development. The Open Space Conservation District provides opportunities for, among other things, reduced sidewalk requirements, where appropriate (where the creation of trail systems are used to reduce impervious cover and provide alternative recreation and transportation opportunities).

- Chapter 73, Environmental Protection, provides for recreational trails as a conditional use in the Riparian Buffer Area Conservation District, provided such trails are no wider than eight feet and are not surfaced with impervious materials. Relocation of pre-existing trails, where necessary, is at the discretion of the Board of Supervisors, with the advice of the Planning Commission.



MAP 7 BACK



WILLISTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

- HISTORIC DISTRICT OVERLAY
- DEVELOPED LANDS
- DEVELOPED LANDS GREATER THAN 15 ACRES WITH LITTLE OR SCATTERED DEVELOPMENT
- TOWNSHIP OWNED LAND
- TOWNSHIP PRESERVES (EASED)
- TOWNSHIP PARKS
- LANDS UNDER CONSERVATION EASEMENT
- BRANDYWINE CONSERVANCY OWNED LAND
- NATURAL LANDS TRUST OWNED LAND
- RESTRICTED OPEN SPACE
- LANDS UNDER AGRICULTURAL EASEMENT
- DEED RESTRICTED LANDS
- WILLISTOWN CONSERVATION TRUST OWNED LAND (EASED)
- WILLISTOWN CONSERVATION TRUST OWNED LAND

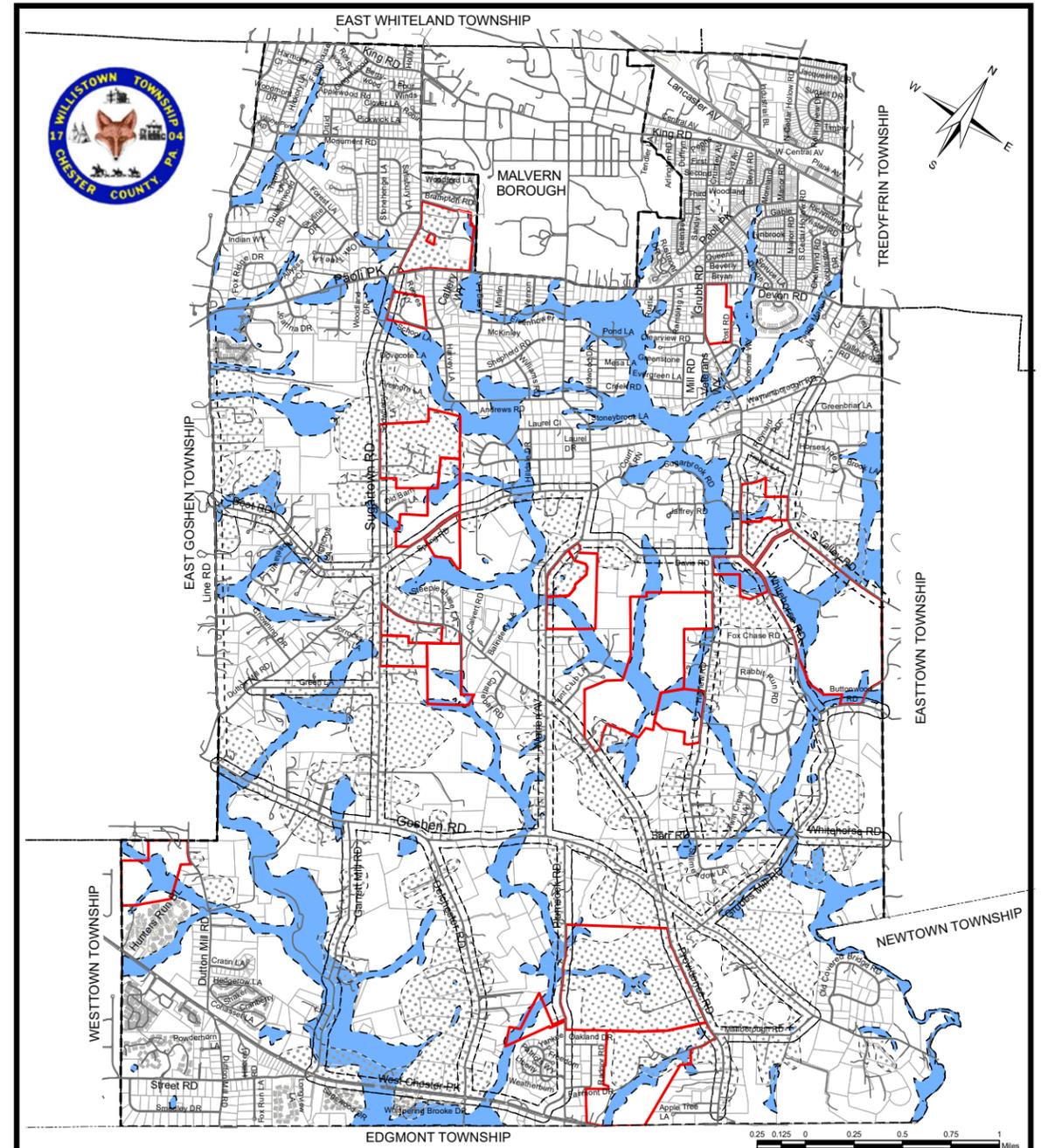
Reference Notes:
 1. The base data for this map including Parcel Lines, Roads and Township Boundaries are provided from the Chester County GIS Services in May 2008.
 2. Property status based off Willistown's 'Guidelines for Growth and Sustainability' 2023 Comprehensive Plan and Willistown officials.



MAP 8: PROTECTED AND DEVELOPED LANDS

Map date June 2023

MAP 8 BACK



WILLISTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

-  Water Resources
(Based off FEMA Floodplain, Hydric Soils and Wetlands)
-  Scenic Boundary
-  Scenic Roads
-  Properties Identified for Protection
These 21 properties are identified from the developed lands greater than 15 acres with little or scattered development that are illustrated on Map 8. Each property has a historic designation and intersects a Natural and Scenic resource.

Reference Notes:
 1. The base data for this map including Parcel Lines, Roads and Township Boundaries are provided from the Chester County GIS Services in May 2008.
 2. Protected Land Designations based off Willistown's 'Guidelines for Growth and Sustainability' 2023 Comprehensive Plan and input from Willistown officials on current property status.

Yerkes ASSOCIATES, INC.
 a cspw company
 CONSULTING ENGINEERS / STRUCTURAL ENGINEERING
 SITE PLANNERS / LAND SURVEYORS / MUNICIPAL SERVICES
 1450 E. 800TH ROAD • SUITE 800 A • P.O. BOX 1568 • WEST CHESTER, PA 19380
 TEL: (610) 644-4254 • FAX: (610) 640-0771

MAP 9: RESOURCES TARGETED FOR PROTECTION

Map date June 2023

MAP 9 BACK

5. Recommendations for Policy Implementation/ Actions to Implement

Recommendations below are for park, recreation, and trail resources within the context of protecting resource-based community values. Chapter 6 provides recommendations for park facilities and services.

Park and Recreation Resources

- Monitor and update park planning efforts as needed to guide the management, maintenance and funding of existing park properties and trails.
- Consider creating a two-fold park management plan that outlines a management and maintenance program and schedule for: 1) the ecological components of park facilities, and 2) facilities infrastructure. (See full recommendation in Chapter 6)
- Consider incorporating a Willistown Township Parks and Recreation Board review function (concerning trail creation, open space protection, and park infrastructure) into the subdivision and land development plan review process.

Trail Resources

- Update existing trail planning efforts to identify existing trails and guide the creation, linkage, management, maintenance and funding of existing trails and potential trails. Identify all current trails, including sidewalks, and their public or private accessibility status. Update the Willistown Township Code to reference trail planning maps and consider updating the Parks and Recreation code section with trail language.
- Consider the challenges to bicycle use throughout the Township and the desire of cyclists to ride both the scenic road network and into the neighboring business districts of Malvern Borough and Paoli, among others.

4.3 PROTECTING NEIGHBORHOODS AND HOUSING STOCK

4.3.1 Policies

Protect and enhance the established neighborhoods within Willistown Township.

Allow for a variety of housing types and densities in those areas where infrastructure exists to support such growth, consistent with existing and future land use policies and guided by the need to protect environmental resources and existing community character. Promote green building technologies intended

to reduce consumption of energy and environmental resources, reduce the impacts of climate change, and encourage future development that is sustainable.

Promote safe housing conditions.

Continue promoting housing opportunities consistent with the 2001 Paoli Community Master Plan, as reflected in Chapter 139, Zoning, Article XXXI, Transportation District (TD) and Article XXXII, Town Center District (TCD).

Provide and protect adequate access to pedestrian trails, park facilities and open space to enhance neighborhood amenities.

4.3.2 Existing Conditions/ Background

As a composite of existing neighborhoods, the Township exhibits a reasonable degree of variety. Areas adjacent to Paoli contain some mixed-use development of a traditional village character, along with uniform tracts of single-family detached dwellings on relatively small lots. The 2001 Paoli Community Master Plan, and its resulting transportation and town center zoning districts, attempt to further facilitate this traditional village development pattern through consistent ordinance provisions regarding use, setbacks, and streetscape amenities. Further to the south, newer developments have been clustered on tracts at a low gross density, again with single-family detached dwellings the sole dwelling type. Interspersed are several townhouse communities with enough dwelling units to comprise their own neighborhoods. Each of these neighborhoods is unique, owing to its location, similarities in housing stock, and residents. Several easily identified neighborhoods in Willistown are Stonehenge, Ronnie Park, Willistown Acres, and Paoli Manor.

With few exceptions, each of these locations has a genuine neighborhood quality, both from a physical and structural standpoint and as a social entity forming at least a basic link among its segment of the Willistown population. Many of these neighborhoods have their own form of self-governance through a community or homeowner association; these groups, in turn, help facilitate two-way communication with the Township.

Data from the 2020 U.S. Census does indicate the overall stability of Willistown’s neighborhoods and the quality of its housing stock. For example, in 2020, 87.5% of the Township’s housing stock was owner-oc-

cupied, as compared to 75% for the County. One concern is that the vacancy rate among all units rose to 6.0% in 2020, a rise of 2.7% since 2000; considering that current population growth is outpacing housing unit growth, it may be worth considering whether the cost of housing (both for rental and ownership) may be starting to impact affordability in a way that contributes to housing availability and vacancy rates.

Willistown has a sizable inventory of historic structures, many of which are used for residential purposes. The attention given to their continued integrity can generate a corresponding sense of stewardship on the part of neighboring property owners.

4.3.3 Basis for Policy

The existence and direction of Township land use policy has a substantial bearing on a neighborhood's character and the quality of life of its residents. The effects can be positive or negative, and stem largely from the compatibility of adjacent land uses, the provision and maintenance of public services, and the approach (not always through public regulation) to individual property maintenance. Vehicular traffic volumes, both within and in the vicinity of existing neighborhoods, have a similar potential for impact.

Township and other public and quasi-public service providers should experience fewer demands where neighborhoods are stable and well-designed and can communicate more effectively where residents participate in an established representative entity.

4.3.4 Township Planning and Regulation Today

Willistown's prior comprehensive planning efforts have addressed the importance of protecting neighborhoods and preserving the quality of existing housing stock. This plan carries a similar emphasis and recognizes the opportunities created for greater diversity in neighborhood makeup and dwelling types, while also recognizing that housing affordability is becoming an issue both in the Township and County-wide.

The Township Zoning Ordinance has been written and mapped to prevent incompatibilities among residential neighborhoods and between such neighborhoods and adjacent non-residential uses.

The Township provides, or seeks to assure the provision of by other responsible entities, those public improvements and infrastructure facilities necessary for the continuing quality of its residential neighborhoods.

The Township Code contains provisions related to property maintenance; given the strength and diversity of the Township's neighborhoods, these provisions should be reviewed periodically and revised as necessary to ensure their adequacy.

4.3.5 Recommendations for Policy Implementation/ Actions to Implement

- Administer and update the Township's Property Maintenance Code (the basis for which is the International Code Council's Property Maintenance Code, as amended) in a manner that minimizes regulatory impacts but also assures a sufficient standard of quality for residential structures and properties. The code aims to prevent "demolition by neglect" or the creation of unsafe, unhealthy, and/or visually detracting conditions.
- Zoning objectives that avoid land use incompatibilities but recognize the potential advantages of appropriate mixed-use settings should be sustained.
- Plan for the necessary and sufficient installation, maintenance, and/or refurbishment of public facilities that establish the optimum level of livability for all residential neighborhoods but do not result in unwanted growth inducement or strip/linear development.
- Maintain appropriate regulatory opportunities for accessory dwellings, conversion of single-family dwellings for multi-family use, and home occupations that protect the integrity of the neighborhood in which they may be proposed.
- Consider housing affordability in the context of the Township's housing stock, its neighbor communities, and the County as a whole; seek equitable solutions that potentially address housing mix and affordability through policies and regulations. Consider additional opportunities for mixed use and multi-family housing as appropriate to meet the needs of the community.
- Maximize opportunities and incentives for green building technologies, sustainable development, and Conservation Design/ Low Impact Development as tools for reducing development costs, enhancing housing marketability, managing stormwater, reducing energy use, increasing energy efficiency, and, in some cases, contributing to housing attainability and value.

4.4 Composite of Resources and Priorities for Protection

Introduction

A large portion of this chapter is devoted to an analysis and inventory of the natural, scenic, historic, and recreation resources of Willistown Township. The result constitutes a resource base that should be considered for most any decision regarding the future use of land in the Township. Only with a clear understanding of these resources—their location and characteristics—can the potential impacts from land use and circulation changes be assessed.

In order to fully protect the Township's community values and guide future growth, it is important to analyze where the Township's resources fall in relation to each other, to areas already developed, to locations where resource protection has already been achieved, and to portions of the Township where future growth is anticipated. This type of refinement is the purpose of this section and culminates in a proposed set of resources considered priorities for protection.

Clearly, the types of resources and the methods by which to protect them can vary substantially; for example, the approach taken to protect a stream corridor generally will differ significantly from that used to protect an historic building. On the other hand, there are many areas where a convergence of mutually enhancing resources occurs and areas where sensitive development patterns can assist in interconnecting preserved and undeveloped lands and resources. Such areas of concentration and convergence become important focal points for protection strategies.

One other key determinant of priority within a protection strategy is the degree of protection already afforded a resource. While various levels of protection exist, from regulatory protection to public ownership, the focus of this section is on ownership patterns (or the existence of conservation or agricultural easements) as the basis for graphically depicting protected and non-protected lands. Lands already protected due to ownership or easements need little additional protection measures for the foreseeable future; on the other hand, lands not protected in this manner clearly can be prioritized for future protective actions.

To arrive at these priorities, the following steps were taken:

- The resource inventories were refined to depict those of greatest significance to the Township;

- A composite of the refined resource inventories was made to illustrate relationships and areas of overlap or "concentration";
- Developed land and land protected through ownership or easement were identified to show areas that have some level of resource protection (included here are Township- owned and conservation organization-owned parks, preserves and trails); and
- The network of identified scenic roads was added as an additional resource category worthy of attention and protection.

The outcome of this process is a proposed set of targeted resources in need of protection.

Refinements to Resource Inventories

Natural Resources—undertaking a process similar to that used in the last plan, it is possible to identify *critical* resources and *sensitive* resources. Critical resources are those natural resources that place clear constraints on land use and development. Included here are water resources (stream corridors, floodplains and wetlands) and steep slopes over 15%. Sensitive resources, while not as constraining on land use, nevertheless are significant from the standpoint of resource protection and community character. These resources include significant woodlands, locally important vegetation (historic trees), and important Natural Areas Inventory sites (including PNDI sites).

Scenic Resources—the Township's most significant visual landscapes are defined as the scenic vista points identified in this chapter and the corresponding scenic boundaries associated with them. Scenic roads are also considered a key element of the visual landscape.

Historic Resources—for the sake of this process, historic resources within the scenic boundary, as well as the Township's National Register Districts, were identified.

Composite of Significant Resources

This process involved combining and overlaying the most significant resources described in the prior section to develop a Composite Map (see Map 7). Those areas where concentrations of natural, scenic, and historic resources occur together are distinguishable on the map.

Protected and Developed Lands

The next step in the prioritization process involved essentially discounting lands depicted on the Protected and Developed Lands Map (Map 8). In this step, the

composite map and the protected and developed lands map are compared: those resources found to exist on protected lands are eliminated (the assumption being that such resources receive some level of protection given their location, e.g., on protected lands); furthermore, those resources found to exist on developed land of under 15 acres are also eliminated because such parcels are considered to be essentially built out or fully developed (lands not protected over 15 acres with little or scattered development are considered candidates for some level of protection). (It should be noted that the selection of properties above/below 15 acres is consistent with Township zoning that requires open space conservation planning for properties greater than 15 acres undergoing development). Filtering out such lands allows the Township to focus protection efforts where needed. For example, this process outlines those resources immediately adjacent to properties defined as protected; the successful protection of these resources can then extend and enhance the security established on eased or publicly owned lands.

Resources Targeted for Protection

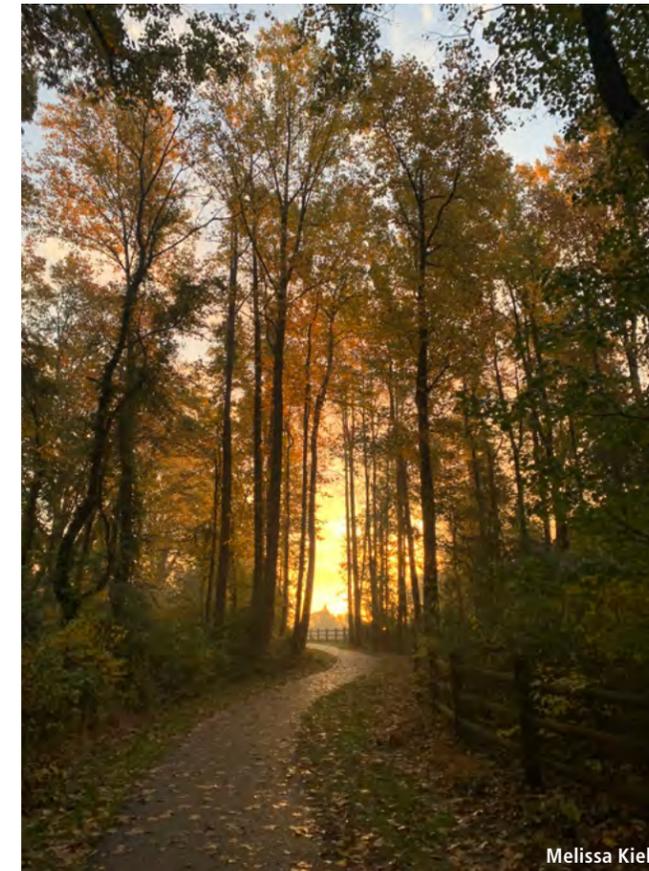
The final product of the prioritization process is Map 9, Resources Targeted for Protection. Shown herein are those first priority resources areas (be they natural, scenic, or historic resources) not currently protected, and the identified scenic road corridors.

It should be noted that this process does not attempt to evaluate regulatory protections offered under the Township's Code simply because such protections are not easily quantifiable or mapped. Clearly, however, the Township Code does provide significant protections for many of the resources prioritized herein. For example, the Environmental Protection Ordinance (EPO) provides significant protection for an array of natural resources: §73-11.1 provides full (100%) protection to floodplains/floodways, wetlands, steep slopes (greater than 25%), and riparian buffer areas; in addition, partial (50-75%) protection is provided to steep slopes (15-25%), woodlands, and hydric soils.

At its core, the prioritization process attempts to highlight areas of resource concentrations and underscore the potential for additional protection measures, be they public purchase, easement acquisition or new regulatory approaches that can essentially

protect resources and associated landscapes or contributing resources (e.g., resources within a broader context that provide interconnection or connectivity; examples include publicly accessible open spaces (park land, Okehocking Preserve, etc.), pedestrian circulation, biodiversity corridors and habitat).

In addition, this process can be used to help identify lands particularly well-suited to established preservation programs. For example, Pennsylvania's agricultural conservation easement purchase program, which requires properties be enrolled in Agricultural Security Areas (ASAs), is a popular program for preserving land with prime agricultural soils. Although the preponderance of prime agricultural soils in Willistown makes their protection difficult, the large land parcels identified herein that contain prime agricultural soils and are enrolled in Agricultural Security Areas (ASA) are ideal candidates for purchase of agricultural easements.



The second major goal of this plan is to guide future growth in a planned and orderly fashion, respect the need to plan sustainably for such growth, and provide for a range of land uses consistent with the protection of the community values identified in Chapter 4. Future residential, institutional, commercial and industrial development shall be respectful of existing land use patterns yet innovative in response to new planning and design practices, deferential to the carrying capacity of the Township's roads and the desire to reduce vehicle miles traveled, consistent with available water supplies and sewage treatment facilities and cognizant of environmental opportunities and constraints. Principally, Willistown acknowledges its responsibility to protect the stability of the region's residential areas from incompatible and poorly planned land uses.

Willistown Township is prepared to accommodate its fair share of population growth, employing sound planning practices to ensure such growth is in the best

Chapter 5

GUIDING FUTURE GROWTH: GOAL 2

interests of the residents of the Township. To that end, the Township has considered the population and household projections outlined in Chapter 3, taking into account the Township's regional location and its anticipated growth from now until the year 2045.

5.1 RESIDENTIAL DEVELOPMENT

5.1.1 Policies

- The locations, types and densities of future residential development shall be consistent with the intent of the Township's residential districts as set forth in its current Zoning Ordinance. Therefore, residential land uses as permitted in the Township's current Zoning Ordinance shall continue to serve as a general guide for residential development.
- In the interest of protecting the character of the Township, providing for a diversity of housing opportunities, and encouraging imaginative, sustainable, and environmentally-sensitive site planning practices, Willistown shall focus on redevelopment and infill opportunities in the northern portion of the Township. The intent of this policy is to address the housing needs of future Willistown residents (particularly a growing elderly population, a diverse mobile population, and an evolving work force), complement the public transit investments being made in this area, provide housing opportunities that do not require large land areas (acknowledging changing household composition and size, and further protecting open space and wildlife habitat), and benefit from the Township's efforts and those of Malvern Borough and Tredyffrin Township to enhance the vitality, livability, and walkability of their "town" cores.
- Residential growth occurring in agricultural/residential zoning districts shall utilize the conservation design principles espoused herein and in Chapter 139, Zoning, Article XXVI, Open Space Conservation (OSC), the intent being to accommodate new residential development in a manner that complements the Township's efforts to preserve and protect agricultural land and open space through innovation and flexibility in site design.

- Reevaluate existing opportunities for multi-family housing in the context of mixed use, transit-oriented and village development concepts. Consider form-based design standards and codes as an additional tool to address physical form, building mass, and the relationship of building facades to public settings.
- In order to best accommodate residential uses, the Township will promote, encourage and incentivize green building technologies (including but not limited to LEEDs certification or other green building principles) intended to reduce consumption of energy and environmental resources, reduce the impacts of climate change, and encourage future development that is sustainable. The Township will also promote zero net-energy provisions to reduce energy use.

5.1.2 Existing Conditions/ Background

Both single-family and multi-family types of residential development are allowed in Willistown Township under the current Zoning Ordinance. Single family residential development is permitted in the R-3, R-2, R-1, RA-1, RA and RU zoning districts, where gross densities range from approximately 0.25 to 4 units per acre. Multi-family residential development is allowed as a conditional use, with gross densities ranging from 1.5 to 12 units per acre. The Township's Open Space Conservation District is a form of density neutral compact development defined to include all parcels over 15 acres in any residential zoning district; a minimum open space requirement is intended to "preserve open land, sensitive natural, scenic and historic areas and rural community character that would be lost under conventional development." The Unified Development Area District is an overlay on the RA district for parcels of not less than 150 acres; permitted uses include single and multi-family residential development (up to 70% of a tract @ 2.25 units per acre), as well as non-residential uses such as physical rehabilitation and professional office, to name a few.

The Township's Transportation and Town Center Districts provide specific opportunities for compact mixed use and transit-oriented development in and around the Paoli area of the Township (similar standards also exist in the Tredyffrin Township portion of the Paoli area). Development in these areas is intended to incorporate a combination of existing buildings, adaptively-reused structures and new buildings that mix ground floor retail

establishments with office and residential uses above. New construction in this historic area is intended to build upon and enhance the positive attributes of Paoli. As such, recommended uses include mixed-use multi-story buildings, commercial uses interspersed with community uses (day care, senior center, post office, educational center, etc), residential uses within walking distance of services, pedestrian-oriented buildings accessible via sidewalks and designed with appropriate landscaping, lighting and benches; use not recommended include "big-box" retail or office uses, one story single-use retail buildings, large surface parking lots, and sparse or non-existent landscaping.

The highest gross densities for single family residential development exist and are encouraged in the northeastern portion of the Township, the first area historically to become suburbanized because of its proximity to Malvern and commuter rail service. In general, permitted gross densities decrease as a function of distance from this populated core area, also the point of origin for most community facilities and services.

Of ongoing concern is the use of residential housing for Airbnb or VRBO-type rentals. In general the Township discourages such uses and residents strongly discouraged such uses in the Township's 2020 Comprehensive Plan Update Survey.

5.1.3 Basis for Policies

Willistown Township has a responsibility to provide opportunities for a range of housing types and densities. Future emphasis on the northern portion of the Township is intended to provide additional opportunities for mixed use development in order to encourage transit oriented, walkable communities that respect the needs of an increasingly mobile society. It is anticipated that growth occurring in the agricultural/residential areas will continue to utilize the conservation design principles espoused in the Open Space Conservation District, both to provide desirable residential opportunities with managed open space, and to ensure much needed protection of natural resource and habitat areas that recognize the Township's historic agricultural uses.

Willistown Township must encourage varied and imaginative forms of residential development that is sustainable, protects community values, reduces energy consumption and recognizes the evolving impacts of climate change.

5.1.4 Township Planning and Regulation Today

The Township's Zoning Ordinance, Chapter 139, permits residential development at densities based upon the availability of community facilities and services, relationships to the existing pattern of land use, and environmental opportunities and constraints.

A multi-family district designation was added to the Zoning Ordinance in 1970 to provide for a wider range of housing types within the Township. In 1975, the Zoning Ordinance was amended to further provide for opportunities for a diversity of housing types. Amendments in 1999, 2003 and 2007 further provide opportunities for open space preservation, mixed use, and transit-oriented development, respectively. Recent amendments in 2022 better define agricultural land uses and attempt to both recognize the Township's support of such uses and Pennsylvania state law protecting and governing their use.

5.1.5 Recommendations for Policy Implementation/ Actions to Implement

- Periodically review the Zoning Ordinance to ensure that the Township continues to provide opportunities for a range of dwelling types and densities that are sustainable, protect community values, reduce energy consumption and recognizes the evolving impacts of climate change.
- Continue to examine code incentives and preservation opportunities by which to accommodate appropriate development while maintaining open space in sparsely developed areas. Continue to promote the use of land in the rural preservation area (predominately the RU zoning classification but including portions of the RA and other residential zoning classifications) for agricultural uses. Provide for active and passive recreation uses near to or adjacent to residential areas. Provide appropriate opportunities for pedestrian trails and sidewalks to interconnect Township neighborhoods and zoning districts, reducing the need for vehicular travel and providing opportunities for recreation and exercise.
- Continue to participate in regional planning efforts that permit the concentration of residential development in areas within walking distance of public transportation and promote an appropriate regional distribution of residential development.
- Review the Zoning Ordinance and building/housing codes to maximize opportunities and incentives

for green building technologies and sustainable development. Among the issues to be considered is the desirability of incorporating additional LEED (Leadership in Energy and Environmental Design – a certification program started by the U.S. Green Building Council) or LEED-type standards into the Township code, such as LEED-ND for neighborhood development. In this vein, also consider adding enhanced energy code provisions which set minimum efficiency requirements for new and renovated buildings. Options include EV-capable building standards, zero net-energy building codes, such as the model code provisions of the International Energy Conservation Code (IECC) and ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) Standard 90.1. The IECC describes benefits of such codes to include "reduced energy bills, occupant comfort, building durability, national security, greenhouse gas emission reductions, and energy resilience." It should be noted that Pennsylvania now enforces the IECC and Willistown adopted the IECC as part of the PA Uniform Construction Code.

- Discourage the use of residential properties for Airbnb or VRBO-type rentals and consider implementation of policies or ordinance that limit such uses.

5.2 INSTITUTIONAL DEVELOPMENT

5.2.1 Policies

- Willistown Township shall accommodate future institutional development as permitted in select zoning districts or as conditional uses or special exceptions in areas where it is deemed appropriate and/or can be demonstrated to the satisfaction of the Township that such uses would be harmonious with the character of surrounding land uses, be consistent with local landscape character, protect community values, and have adequate infrastructure available. Institutional uses will be considered in the rural portions of the Township only when they contribute to the permanent preservation of open space and are congruent with agricultural activities.
- To best accommodate institutional uses, the Township will promote green building technologies (including but not limited to LEEDs certification or other green building principles) and green stormwater infrastructure intended to reduce consumption of energy and environmental resources, ameliorate the impacts of climate change,

manage runoff with nature-based systems, and encourage future development that is sustainable. The Township will also promote zero net-energy provisions to reduce energy use.

- Due to the potential for greater impacts associated with institutional uses, and the variety of activities that fit this category, the Township intends to scrutinize such uses more carefully than it does residential uses and thoroughly evaluate such uses and their adherence to the Township’s codes and ordinances.

5.2.2 Existing Conditions/ Background

Institutional development includes public and semi-public land uses. Existing public institutions in Willistown include two public schools and the Township’s police and municipal buildings. Existing semi-public institutions in Willistown include churches and religious complexes, private schools, health care facilities, clubs and various recreational/entertainment facilities.

The Township has expanded provisions and districts under which governmental, educational, or religious uses are permitted (particularly in the northern, more dense portions of the Township); for example, several zoning districts governing transportation and highway uses, office/professional uses, and unified development permit some institutional uses by right. Such provisions recognize the suitability of such uses in select areas of the Township as part of a mix of uses suitable for and in proximity to the needs of Township residents.

5.2.3 Basis for Policies

The Township has traditionally held that the varied nature of institutional uses necessitates that they be considered on a case-by-case basis. However, the Township has also been proactive in providing opportunities for such uses as part of mixed-use development and/or transit-oriented development. Additional provisions for institutional development exist within Article XXX Unified Development Area District, Article XXXI Transportation District, and Article XXXII Town Center District. The intent in each of these districts is to provide mixed use opportunities in proximity to the Township’s greatest population base.

5.2.4 Township Planning and Regulation Today

The current Zoning Ordinance permits institutional development in areas where its character bears a relationship to surrounding land uses and in areas where population density warrants additional opportunities for mixed use development within proximity to Township residents. Ordinance amendments in 2003 and 2007 provide opportunities for health care facilities, government offices and libraries as part of mixed use and transit-oriented development.

5.2.5 Recommendations for Policy Implementation/ Actions to Implement

- Continue monitoring the districts for which provisions governing institutional uses exist; assess the viability of such uses in mixed use communities.
- Continue to accommodate, in rural and suburban areas, institutional development that preserves open space, is congruent with agricultural activities, and provides tax revenues, so long as there is minimal adverse impact upon the provision of community facilities and services and upon surrounding areas.
- Review the Zoning Ordinance and building/housing codes to maximize opportunities and incentives for green building technologies and sustainable development. Among the issues to be considered is the desirability of incorporating additional LEED (Leadership in Energy and Environmental Design – a certification program started by the U.S. Green Building Council) or LEED-type standards into the Township code, such as LEED-ND for neighborhood development. In this vein, also consider adding enhanced energy code provisions which set minimum efficiency requirements for new and renovated buildings. Options include EV-capable building standards, zero net-energy building codes, such as the model code provisions of the International Energy Conservation Code (IECC) and ASHRAE Standard 90.1. The IECC describes benefits of such codes to include “reduced energy bills, occupant comfort, building durability, national security, greenhouse gas emission reductions, and energy resilience.” It should be noted that Pennsylvania now enforces the IECC and Willistown adopted the IECC as part of the PA Uniform Construction Code.

5.3 COMMERCIAL AND OFFICE DEVELOPMENT

5.3.1 Policies

- Willistown shall accommodate future commercial development as permitted along the Route 30 business corridor (including King and Central Avenues east of Malvern), along the Paoli Pike corridor west of Sugartown Road, and the Route 3 planned highway corridor extending along Route 3. The Township will consider opportunities for mixed use, transit-oriented development where appropriate; and, will consider form-based design standards and codes as an additional tool to address physical form, building mass, and the relationship of building facades to public settings.
- To best accommodate commercial uses, the Township will promote green building technologies (including but not limited to LEEDs certification or other green building principles) and green stormwater infrastructure intended to reduce consumption of energy and environmental resources, ameliorate the impacts of climate change, manage runoff with nature-based systems, and encourage future development that is sustainable. The Township will also promote zero net-energy provisions to reduce energy use.

5.3.2 Existing Conditions/ Background

There are essentially two major types of commercial development in Willistown Township: retail establishments and professional offices. Retail establishments are permitted along US Route 30 in the Highway Business district, along Paoli Pike in the Paoli Pike Corridor District, and in the Transportation and Town Center districts. Ancillary commercial uses are permitted along Route 3 when clearly designated as a support service within a planned office park.

Professional Office districts are located along and near the Route 30 transportation corridor, within a Unified Development Area district adjacent to Paoli Pike, and along Route 3 in the Planned Highway Corridor district.

As mentioned above, the Transportation and Town Center Districts provide specific opportunities for compact mixed use and transit-oriented development in and around the Paoli area of the Township (similar standards also exist in the Tredyffrin Township portion of the Paoli area). Development in these areas is intended to incorporate a combination

of existing buildings, adaptively-reused structures and new buildings that mix ground floor retail establishments with office and residential uses above. New construction in this historic area is intended to build upon and enhance the positive attributes of Paoli. As such, recommended uses include mixed-use multi-story buildings, commercial uses interspersed with community uses (day care, senior center, post office, educational center, etc), residential uses within walking distance of services, pedestrian-oriented buildings accessible via sidewalks and designed with appropriate landscaping, lighting and benches. Uses not recommended in these districts include “big-box” retail or office uses, one story single-use retail buildings, large surface parking lots, and sparse or non-existent landscaping.

It should be noted that commercial uses have been evolving since the introduction of online shopping, including, among other things, the reduced need for commercial centers and the often-reduced need for surface parking. COVID-19 also contributed to a change in consumer practices that will continue to have a bearing on commercial uses in the years to come. Such changes also apply to office uses and the increased reliance on remote work options afforded by remote work and meeting computer platforms.

5.3.3 Basis for Policies

The Township’s relative position in proximity to regional commercial and business centers supports the provision of such uses predominately along or adjacent to Route 30, Paoli Pike west of Sugartown Road, and PA Route 3.

5.3.4 Township Planning and Regulation Today

The Township’s Zoning Ordinance, Chapter 139, permits commercial uses along and adjacent to Route 30, Paoli Pike and Route 3 where the existing pattern of land uses and traffic capacities can best accommodate commercial development. The Paoli Pike area contains provisions for mixed use and/or transit-oriented development in and around the Paoli Rail Yard. The intent of these provisions is to provide further opportunities for mixed use development, encourage multi-modal transportation opportunities, improve the walkability and economic viability of the Paoli community, and promote development that is less energy consumptive and more sustainable.

5.3.5 Recommendations for Policy Implementation/ Actions to Implement

- Monitor the districts for which provisions governing commercial uses exist; assess the continuing viability of such uses given factors such as the prevalence of online shopping, consumer preferences, and the reliance on computer-based commerce, among others.
- Monitor the Paoli community for which provisions governing commercial uses exist; assess the continuing viability of such uses as components of mixed-use communities.
- Continue to participate in regional planning activities to promote an appropriate regional distribution of commercial development.
- Review the Zoning Ordinance and building/housing codes to maximize opportunities and incentives for green building technologies and sustainable development. Among the issues to be considered is the desirability of incorporating additional LEED (Leadership in Energy and Environmental Design—a certification program started by the U.S. Green Building Council) or LEED-type standards into the Township code, such as LEED-ND for neighborhood development. In this vein, also consider adding enhanced energy code provisions which set minimum efficiency requirements for new and renovated buildings. Options include EV-capable building standards, zero net-energy building codes, such as the model code provisions of the International Energy Conservation Code (IECC) and ASHRAE Standard 90.1. The IECC describes benefits of such codes to include “reduced energy bills, occupant comfort, building durability, national security, greenhouse gas emission reductions, and energy resilience.” It should be noted that Pennsylvania now enforces the IECC and Willistown adopted the IECC as part of the PA Uniform Construction Code.

5.4 INDUSTRIAL DEVELOPMENT

5.4.1 Policies

- Willistown Township intends to remain consistent with County and regional land use plans in guiding future industrial development along the Route 30 transportation corridor. Future industrial uses within the Township shall be limited to those permitted in Article XV, Restricted Industrial District. Should county or regional studies involving the Township determine

that industrial demand exceeds areas planned for industrial uses, the Township will consider expanding industrial areas within the Township.

- To best accommodate industrial uses, the Township will promote green building technologies (including but not limited to LEEDs certification or other green building principles) and green stormwater infrastructure intended to reduce consumption of energy and environmental resources, ameliorate the impacts of climate change, manage runoff with nature-based systems, and encourage future development that is sustainable.

5.4.2 Existing Conditions/ Background

Industrial development is permitted in Willistown in an industrial district located adjacent to the US Route 30 transportation corridor. The types of industry which characterize the district are generally non-nuisance light manufacturing, research, office, assembly, processing or storage operations and hospital-related facilities.

5.4.3 Basis for Policies

The Township’s proximity to and linkages with important transportation facilities are not as favorable as other municipalities in the region, thereby making the Township less suitable for industrial development than adjoining municipalities.

The Township has been and will continue to be primarily a highly desirable residential community, and most industrial uses are incompatible with Willistown’s residential character. Nevertheless, the Township recognizes the need for appropriate industrial uses and will continue to accommodate them as needs arise.

5.4.4 Township Planning and Regulation Today

The Township’s existing industrial district is properly located in an area which has facilities and services required for industrial use. Inclusion of additional uses in this district has been and will continue to be accommodated over time where clear need exists.

5.4.5 Recommendations for Policy Implementation/ Actions to Implement

- Consider broadening the uses permitted in the Township’s industrial district to further permit and incentivize “green” industries that focus on renewable energy, recycling, and related job growth.

- Continue to monitor demands for and the available supply of industrial land.
- Continue to participate in regional planning activities that promote an appropriate regional distribution of industrial development.
- Review the Zoning Ordinance and building/housing codes to maximize opportunities and incentives for green building technologies and sustainable development. Among the issues to be considered is the desirability of incorporating additional LEED (Leadership in Energy and Environmental Design – a certification program started by the U.S. Green Building Council) or LEED-type standards into the Township code, such as LEED-ND for neighborhood development. In this vein, also consider adding enhanced energy code provisions which set minimum efficiency requirements for new and renovated buildings. Options include EV-capable building standards, zero net-energy building codes, such as the model code provisions of the International Energy Conservation Code (IECC) and ASHRAE Standard 90.1. The IECC describes benefits of such codes to include “reduced energy bills, occupant comfort, building durability, national security, greenhouse gas emission reductions, and energy resilience.” It should be noted that Pennsylvania now enforces the IECC and Willistown adopted the IECC as part of the PA Uniform Construction Code.

5.5 FUTURE LAND USE

In light of the policies contained herein, Map 10 identifies general locations in Willistown Township for future residential, commercial and industrial land uses. Depicted are simplified land use designations only; specific zoning provisions provide land use options for individual sites. While not illustrated here, the protection of natural resources can at times preempt classification for future land use; furthermore, lands classified as protected (through ownership or easement) may have restrictions in place that limit future development.

What is important to note is the Township’s adherence to the sound planning principle that zoning densities should decrease as a function of distance from a populated urban core, in appearance much like the concentric circles that emanate when a stone is thrown into a pond. This principle is the basis for the logical provision of public services and infrastructure and permits the Township to continue

to provide opportunities for development consistent with its vision of a vibrant, dynamic community whose pattern of development accommodates a broad range of land uses consistent with the needs of Township residents.

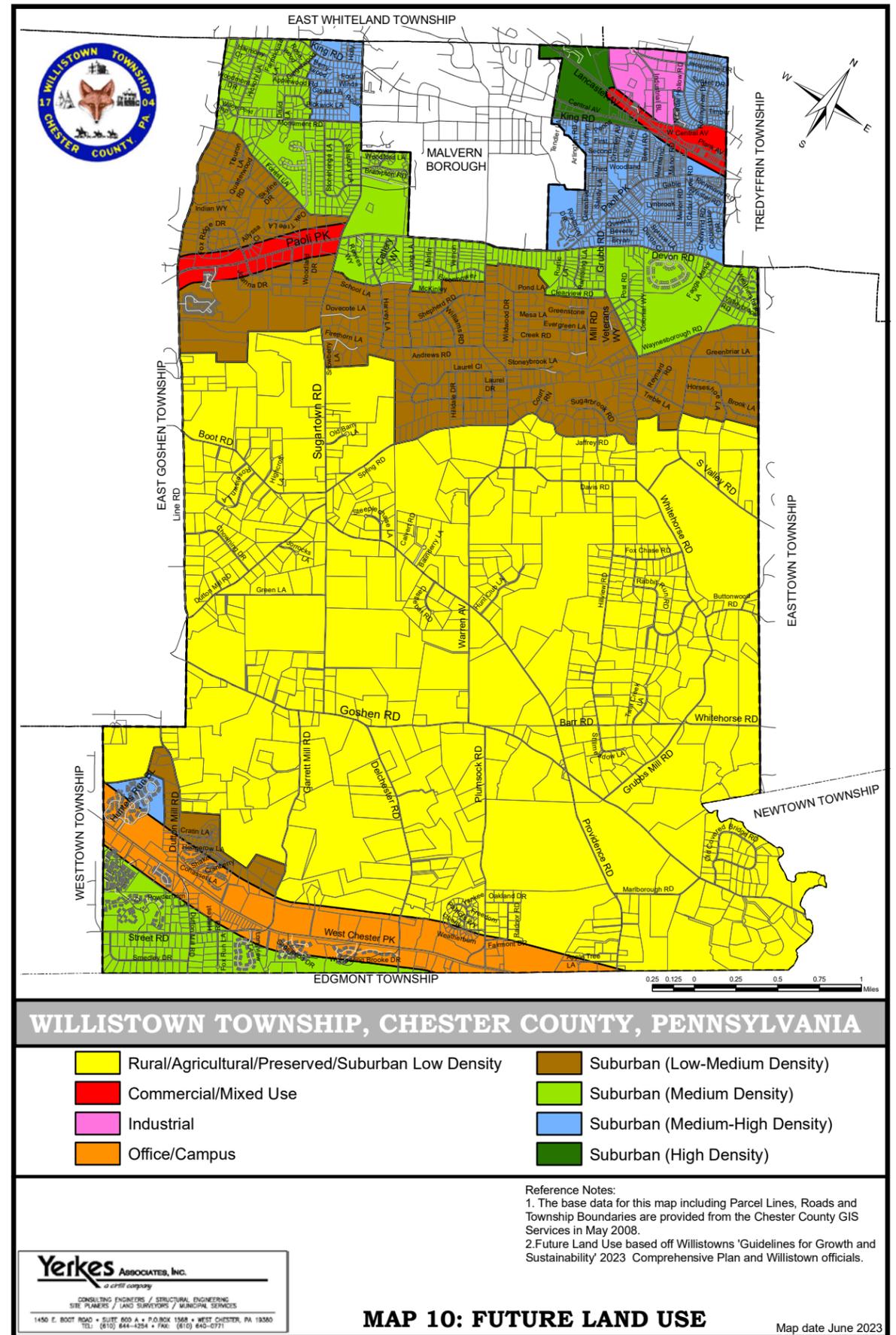
What is important to note is the Township’s adherence to the sound planning principle that zoning densities should decrease as a function of distance from a populated urban core, in appearance much like the concentric circles that emanate when a stone is thrown into a pond. This principle is the basis for the logical provision of public services and infrastructure and permits the Township to continue to provide opportunities for development consistent with its vision of a vibrant, dynamic community whose pattern of development accommodates a broad range of land uses consistent with the needs of Township residents.



Kelly Hughes



Penny Alderson



MAP 10 BACK

The third of Willistown’s fundamental planning goals is to provide those community facilities and services that are appropriate for a second-class township, that meet the needs of current and future residents, and that can be reasonably provided to the extent of the Township’s financial resources. Where such services are provided by others, the Township intends to periodically monitor the quality and cost of such services and intervene to improve such services should the need exist.

The Township has traditionally provided community facilities and services as they have been required or as needs have been anticipated. For example, population growth has been accompanied by the construction of a sewage collection and treatment system in one portion of the Township, the expansion of the Township’s police force and administrative staff, improved and expanded park and recreation opportunities and facilities, and increased financial contributions for fire protection, emergency medical assistance and other services.

General policies for community facilities and services emphasize the need to monitor existing facilities and services and improve, support, and expand such offerings where warranted.

6.1 FIRE PROTECTION

6.1.1 Policy for Fire Protection

- Continue to financially support volunteer fire companies that provide fire protection services to Willistown Township residents.

6.1.2 Existing Conditions/Background

Fire protection is provided to Willistown Township residents by four volunteer fire companies: Malvern, Paoli, Newtown Square, and Goshen Fire Companies. Of these four, Malvern and Paoli cover the majority of the Township. Both Malvern and Paoli Fire Companies also provide emergency ambulance services, although records of these services are separate from fire service records. Medical services are not provided. Fire service boundaries are shown on Map 11: Community Facilities and Services.

Chapter 6

PROVIDING COMMUNITY FACILITIES & SERVICES: GOAL 3

Fire protection facilities in Willistown Township consist of a network of fire hydrants in areas served by Aqua America’s water mains. Willistown Township pays an annual fee to Aqua America for each fire hydrant.

All four fire companies derive funding support from local municipalities and from voluntary donations. Willistown Township provides support to each of these fire companies, at varying levels of support, depending on the assessed valuation of the territory which the Company covers.

Fire service and response time appear to be adequate for current needs. A majority of Township residents support this conclusion based on responses to the Township’s 2020 Comprehensive Plan Update Survey. Because population in Willistown Township is not expected to increase drastically over the next twenty to thirty years, it is unlikely significant changes in service will be required.

6.1.3 Basis for Policy

The Township’s policy is based on the responsibility to provide protection to the residents of and visitors to Willistown Township.

6.1.4 Township Planning and Regulation Today

The Township constantly monitors response times as well as shifts in housing and population. Funding is also reviewed during scheduled budget meetings.

6.1.5 Recommendations for Policy Implementation/ Actions to Implement

- Ensure active and continuing fire service.
- Continue to financially support volunteer fire companies.
- Periodically examine fire response time for each of the four companies to ensure that services are adequate for needs.

6.2 POLICE PROTECTION

6.2.1 Policies for Police Protection

- Continue to operate and fund the Willistown Township Police Department.
- Periodically examine whether protective services are adequate for needs.
- Continue to support the mission of the Department to enhance the safety and security of all the people of Willistown Township and work in partnership with the public to maintain their trust and confidence.

6.2.2 Existing Conditions/Background

Willistown Township provides police services through the Willistown Police Department. The Department serves everyone in Willistown Township. Funding for the Department comes from the Township's general fund.

The Department currently employs nineteen full-time officers. The Township maintains a fleet of patrol, detective, and administrative vehicles for Department operations. The current police building was dedicated in 2014, replacing the old municipal building. The building location is shown on Map 11: Community Facilities and Services. The Department has implemented a Traffic Unit to monitor and address increased traffic flows throughout the Township. The Department continually evaluates current trends, legal requirements, and future needs in order to maintain an adequate level of professional services.

Emergency calls to the Willistown Police Department are dispatched by the Chester County Department of Emergency Services.

Police service appears to be adequate at this time; staffing levels are monitored and constantly reviewed. A majority of Township residents support this conclusion based on responses to the Township's 2020 Comprehensive Plan Update Survey.

6.2.3 Basis for Policy

The Township's policy is based on the responsibility to provide protection to the residents of Willistown Township, as well as visitors.

6.2.4 Township Planning and Regulation Today

Police protection is evaluated by the Chief of Police in consideration of appropriate shifts in crime

trends and deployment of personnel is adjusted to meet problems that arise or may arise in the Township.

6.2.5 Recommendations for Policy Implementation/ Actions to Implement

- Continue to monitor police services to ensure they are adequate and ensure that the Department has funds to provide necessary services.

6.3 EMERGENCY MEDICAL ASSISTANCE

6.3.1 Policy for Emergency Medical Assistance

- Continue to cooperate with Chester County in the provision of '911' services.

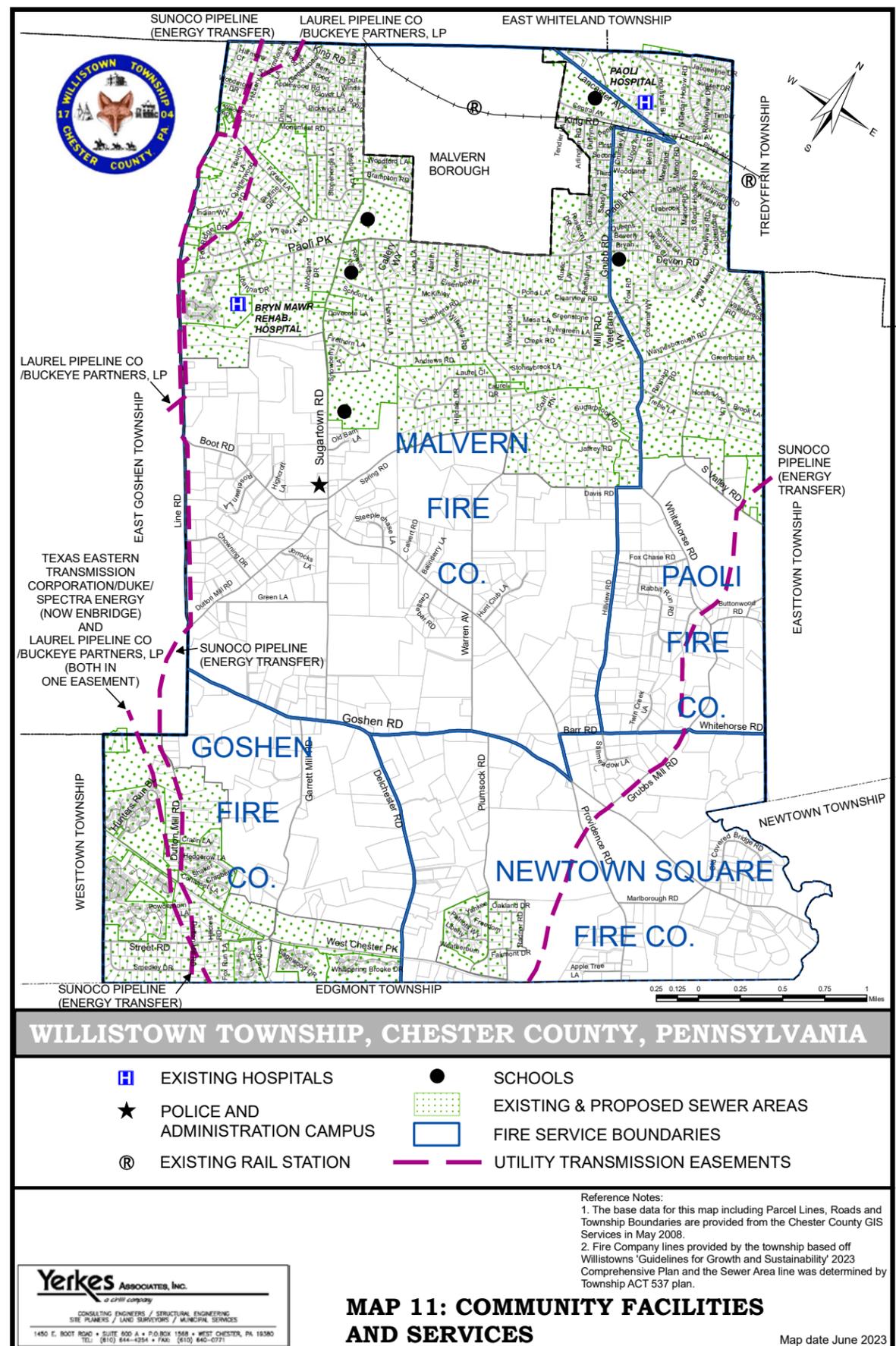
6.3.2 Existing Conditions/Background

Willistown Township residents are provided with emergency response services through cooperative efforts by local hospitals, local fire companies and Chester County's '911' Emergency Network.

Two hospitals are located within Willistown Township. Paoli Hospital is currently the only Trauma Center in Chester County. In addition, Paoli Hospital provides emergency treatment, other medical services, including varying levels of surgery, and has a maternity unit. The hospital is located on Lancaster Avenue in Paoli.

Bryn Mawr Rehabilitation, a 111-bed hospital, provides physical rehabilitation services on both an in- and out-patient basis. Transitional and home rehabilitation services are also provided. Bryn Mawr Rehabilitation Hospital is located on Paoli Pike.

Chester County's Emergency Management Services coordinates disaster and evacuation planning. The County-wide '911' system is completely functional throughout the County. The '911' system allows any person to obtain police, medical and other emergency assistance by dialing or texting one, easy-to-remember phone number. Upon receiving an emergency call, the County '911' dispatcher contacts the appropriate ambulance company, police department, and/or fire company. If an ambulance is dispatched, the user pays for the service, billable by the individual ambulance company. The County's '911' service is funded by a monthly line charge collected through telephone bills. A VOIP (Voice Over Internet Protocol) surcharge of \$1.00 is paid to the state (Pennsylvania Emergency Management Agency or PEMA), through which counties can apply for wireless funds as another source



MAP 11 back

of revenue. Note: The Wireless funds are submitted by the wireless providers to PEMA who disburses the funding to Public Safety Answering Points (PSAPs) (PSAPs are dedicated call centers). Additional funding, as needed, is provided through the Chester County general fund. In calendar year 2021, PEMA funding amounted to \$12.3 million.

Based on responses to the Township's 2020 Comprehensive Plan Update Survey, a majority of Township residents believe Emergency Medical Services are adequate at this time.

6.3.3 Basis for Policy

The Township's policy is based on the responsibility to provide protection to the residents of Willistown Township, as well as visitors.

6.3.4 Township Planning and Regulation Today

EMS response times are periodically monitored through police reporting procedures.

6.3.5 Recommendations for Policy Implementation/ Actions to Implement

- Continue to cooperate with Chester County in the provision of "911" services.
- Routinely monitor response times for ambulance services to ensure that services are adequate for needs.

6.4 ROADS AND GENERAL CIRCULATION

6.4.1 Policies for Roads

- Continue to clarify and plan for those roads intended to transmit through traffic and those roads designed primarily for local traffic. Discourage through traffic on roads not intended for or incapable of such traffic.
- Continue working to improve the regional transportation network to provide for efficient movement of through traffic, including the use of innovative transportation strategies such as roundabouts as alternatives to new signalized intersections. Encourage ride sharing where feasible and appropriate. Both direct municipal action and continuing dialogue with PennDOT are necessary to accomplish the policies contained herein.
- Continue to ensure that new development minimizes impacts to the existing road network. Ensure that

the local road network provides adequate internal circulation to meet the needs of Willistown Township residents. Consider traffic calming strategies as appropriate to ensure safety and promote better circulation.

- Develop strategies to correct any identified circulation and parking problems, and assign priorities to any needed improvements.
- Discourage haphazard development along Route 30 and Route 3. Continue implementation of the mutually acceptable local and regional transportation components of the Paoli Community Master Plan, including its multi-modal transportation center with corresponding circulation improvements (both roads and pedestrian facilities) to improve and enhance transportation choices in and around Paoli.
- Provide regular road maintenance to ensure that local roads are maintained in optimum condition and minimize, as needed, potential safety hazards.
- Consider recognition of and protection for those roads identified by the Township as Scenic Roads. Work to protect the intrinsic natural, scenic and historic qualities of such roads.
- Examine opportunities for safe bicycling along identified roads and road shoulders in the Township. Examine opportunities for safe equestrian passage on bridle paths currently existing along roads and at trail and road crossings. Consider the recommendations and vision statements identified in Chester County's Linking Landscapes Plan.
- Identify Willistown's three dirt roads including the sections of Warren Avenue, Plumsock Road, and Green Lane as mixed use vehicular and recreational corridors and establish protection for these roads and uses.

6.4.2 Existing Conditions/Background

This section addresses the elements of the existing circulation system of Willistown Township. The existing road network guides both circulation and land use patterns in the community. The system is inventoried and analyzed under the following categories:

1. **Functional Classification;**
2. **Road Conditions;**
3. **Traffic Volumes and Capacity; and,**
4. **Access Management.**

As evidenced in the 2020 Comprehensive Plan Update Survey, traffic circulation throughout Willistown Township continues to be an issue of increasing concern. Conditions along the two main highway corridors that traverse parts of the Township – Lancaster Avenue (U.S. Route 30) and West Chester Pike (PA Route 3) -- are well known. These highways exhibit the highest traffic volumes and the highest traffic crash frequencies in the Township. Paoli Pike also carries high traffic volumes for a two-lane highway, and several other roads in the Township have problems with poor road surface, limited sight distance, or awkward alignments.

Significant portions of the local road network are especially scenic, as shown on Map 12: Circulation Plan. The preservation of these scenic resources needs to be balanced against the correction of safety problems. It is desirable to discourage the use of local roads for the movement of through traffic by both supporting the type of improvement projects aimed at maximizing capacity along the major highway corridors in the Township and discouraging improvements that increase capacity and attract through traffic to the local roads. This section documents both road function and conditions as a basis for making such decisions using a logical planning process.

Functional Classification

Willistown Township has a total of 84.26 miles of roads within its boundaries. These roads are owned and maintained both by the Township and by the State. The State owns 27.46 miles, which consists primarily of the highway network of the community. The Township owns 56.80 miles of the network, which is comprised of a combination of rural, scenic, and farm roads and streets within residential neighborhoods. There are fifteen traffic signals within, or on the boundaries of, the Township.

Roadways have been classified according to the function they serve in the overall network. Function is based on volumes of traffic, travel speed, accessibility, relationship to places, and relationship to other roadways. Some carry higher speed through traffic, some carry local traffic between neighborhoods, and some provide access from individual residential driveways. Road function helps to define the character of the road, and ultimately, the design and access treatment. PennDOT provides Federal Functional Classification maps for roadways by County. PennDOT reviews traffic data periodically as part of their functional classification identification and a number of roads have changed classification from the previous 2011 Com-

prehensive Plan.

The PennDOT classifications, including any such changes since 2011, are as follows:

Expressways service the highest volumes for the highest average trip lengths. Expressways are designed to provide access only at interchanges while providing linkages on an interstate or inter-regional basis. Expressways allow the highest level of mobility for trucks and are intended to allow the highest levels of speed for all vehicles.

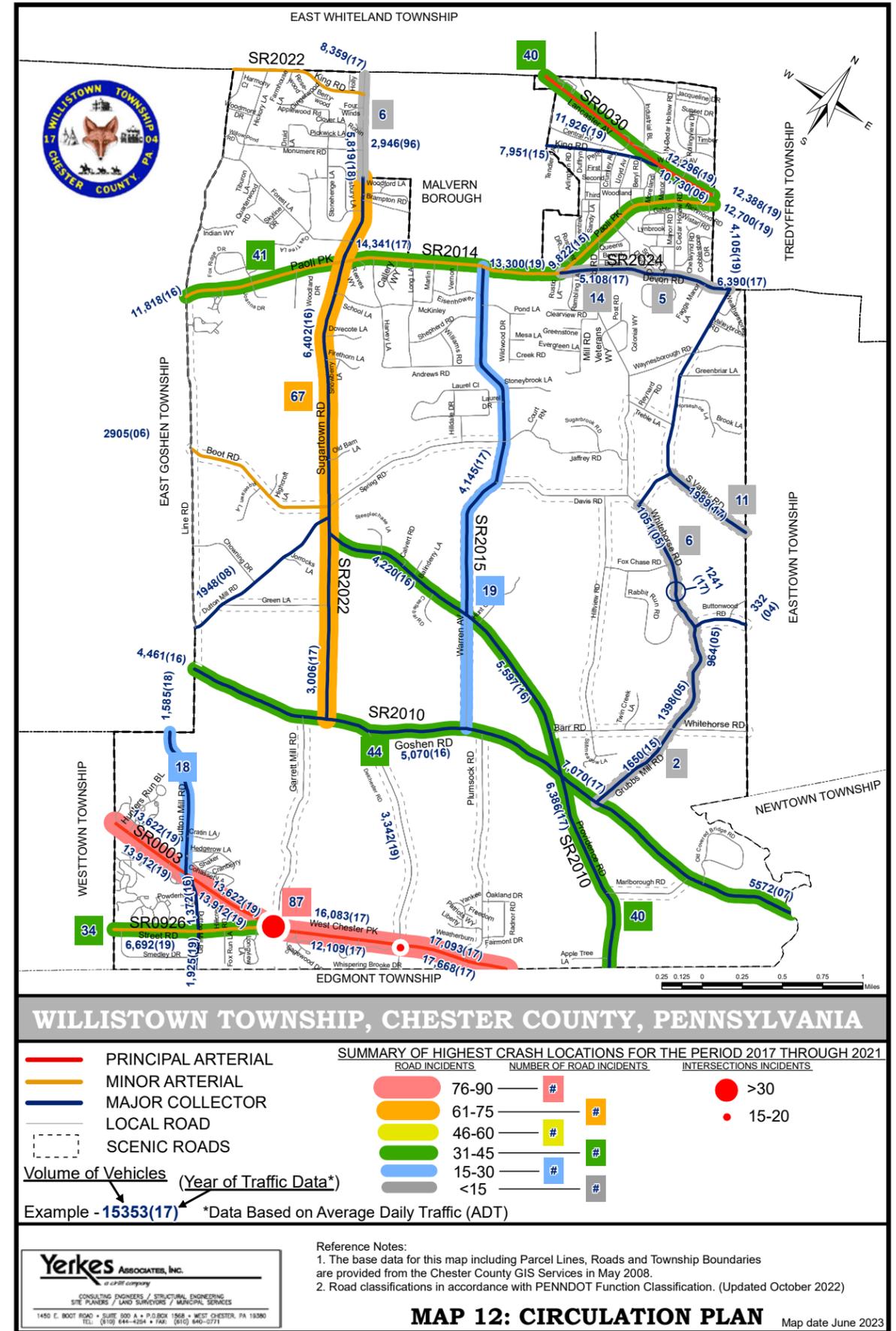
Willistown Township does not contain any expressways. U.S. Route 202 is located to the north and west of the Township with several interchanges accessible from PA Route 29, PA Route 401, U.S. Route 30, Boot Road, Paoli Pike, and PA Route 3.

Principal Arterials have as their major function, the movement of large volumes of traffic at relatively high rates of speed, often at 55 miles per hour. They provide higher types of service and facilitate traffic over longer distances on an intercounty or interstate basis. Access points are generally limited and controlled.

Lancaster Avenue (U.S. Route 30) and West Chester Pike (PA Route 3), both four-lane highways, are considered principal arterials. Access points along segments of Lancaster Avenue (U.S. Route 30) are not as limited as some principal arterials with reduced speed limits, but this pattern has been established over a long period of time which has seen significant changes in land uses abutting the highway. Lancaster Avenue (U.S. Route 30) is an important interstate and intercounty connection which provides a connection to Lancaster and Harrisburg, Pennsylvania, through the Main Line to Philadelphia, and eventually Atlantic City, New Jersey. West Chester Pike (PA Route 3) is a divided highway which retains its limitations on direct access and higher speeds. West Chester Pike (PA Route 3) serves as a connection between the Borough of West Chester in Chester County, through Delaware County to West Philadelphia.

Minor Arterials interconnect with and augment the principal arterial system. These roads provide services for trips of moderate length and have controlled access points. Minor arterials provide greater access to adjacent land than principal arterials.

Paoli Pike (PA Route 104), King Road, Street Road (PA Route 926) are the only minor arterial roadways in Willistown Township.



MAP 12 back

Major Collectors connect municipalities and population centers. These roads are the major contributors to arterial traffic and carry fairly heavy traffic volumes at moderate rates of speed. Access points are somewhat controlled on collector roads. It is not uncommon for major collector roads to span the entire length of a community.

The major collectors in Willistown Township include Dutton Mill Road, Boot Road, Goshen Road, Sugartown Road, Warren Avenue, Devon Road, S Valley Road, Whitehorse Road, Buttonwood Road, Grubbs Mill Road, and Providence Road. The major collector roads make up the second largest road category in the Township.

Minor Collectors facilitate relatively low volumes of traffic at lower speeds. They gather traffic from local roads and direct it to the arterials and major collector road networks. Minor collectors often provide traffic circulation between and within residential neighborhoods.

Currently there are no roads in Willistown Township that are classified as minor collectors. There were several roadways that were classified as minor collectors in the 2011 Plan, however, those roadways have been reclassified as major collectors due in most part to traffic volume increases.

Local Roads provide the greatest access to adjacent land. Local roads provide for short distance, low speed travel, and make up the majority of Township owned roads. The number of access points is greatest on local roads.

The remainder of the roads in the Township may be identified as local roads. They mainly handle local traffic and are primarily used by individuals in the community.

Dirt Roads: Traffic is naturally slowed by a dirt surface and, as a result, many local residents use these roads for recreational purposes including horseback riding, walking, jogging, informal biking and transportation to neighbors and neighboring facilities such as Willistown Friends Meeting, Radnor Hunt, and Radnor Hunt Pony Club. These roads also act as integral components of the equestrian and pedestrian trail network and are vital connections in current trail planning efforts.

Map 12: Circulation Plan identifies the functional classification assigned to each road segment in Willistown Township.

Road Conditions

With few exceptions, the roadway network is sufficient for the current traffic and population of the area. The 2020 Comprehensive Plan Update Survey noted road condition and road maintenance as a top service priority for improvement. Areas of concern are those that pose a threat to the safety of anyone using the roadways. Roadway conditions include:

- **Unimproved surfaces;**
- **Roadway alignment problems;**
- **Sight distance problems;**
- **Dangerous curves; and,**
- **Bridge limitations.**

There are numerous alignment concerns, mostly horizontal alignment in the form of dangerous curves, located primarily in the southern portion of the Township. Horizontal alignment refers to the curves in the road, while vertical alignment refers to the hills in the road. These roadways evolved as linkages along property lines. As development occurs and traffic increases on these roads, alignment correction will become increasingly important.

Sight distance problems are common throughout Willistown Township. Country roads were designed to handle low volumes of traffic, or simply followed the track of farm lanes. With increasing volumes comes the need to maintain safe sight distances. It is necessary to be aware of and control vegetative growth adjacent to intersections. In some instances it may also be necessary to properly grade adjacent land. Grading requirements can be identified during the development review process. The inability to see oncoming traffic at an intersection can be the cause of some crashes.

Bicycle and Pedestrian Circulation

Trails provide sustainable infrastructure for local pedestrians and bicyclists and can also be seen as part of an overall strategy to expand the transportation network. The 2020 Comprehensive Plan Update Survey indicates sidewalk and bike paths as two of the top five most important services to be available for Township residents.

Pedestrian facilities exist throughout the Township; however, the availability of trails and sidewalks is limited, with significant obstacles and network disconnect. The majority of existing sidewalks are located in the northeast section of the Township, whereas trails for pedestrians are sparsely provided through-

out. The Township does not permit bicycle use in its parks and on its trails as dictated by the Parks section of the Township Code. The lack of interconnected sidewalks, on-road bike lanes, and off-road trails limit bike mobility. The existing trail facilities available to bicyclists are very limited and bicyclists are forced to share the roadway network with motorists.

The 2020 Comprehensive Plan Update Survey notes that comments related to bike paths are weighted heavily towards safety issues as opposed to desire for bike paths. Safety is also a concern regarding equestrian circulation alongside increasing motorist traffic and speed.

Accident Reports

A summary of crash data from the Pennsylvania Department of Transportation (PennDOT) was used to identify potential problem areas within the Township. Map 12 shows the location of highest crash rates that occurred for the five-year period from 2017 through 2021. The majority of the reported crashes occurred along the corridors of West Chester Pike (PA Route 3), Sugartown Road, Paoli Pike, Lancaster Avenue (U.S. Route 30), Providence Road and Goshen Road. Crashes occurring along these routes are expected because of the amount of traffic that uses them coupled with the amount of development that is established along the corridors. The single location with the greatest frequency of reported crashes was the intersection of West Chester Pike (PA Route 3) and Street Road (PA Route 926)/Garrett Mill Road.

Traffic Volumes and Capacity

Average Daily Traffic

Average Daily Traffic (ADT) is the total 24-hour traffic volume, in both directions, on a road segment for a typical weekday. Traffic volumes fluctuate throughout the year, with heavier volumes in the summer and lighter volumes in the winter. On average, traffic volumes experienced in the fall and spring are approximately at median levels for the year. Therefore, those times of the year are appropriate times to count traffic volumes.

Daily traffic counts were obtained from the files of the Delaware Valley Regional Planning Commission (DVRPC) and PennDOT. DVRPC and PennDOT consistently update ADT volumes for area roadways through extensive data collection efforts. ADT volumes for Township roadways were identified based on available data and reviewed to ensure the collect-

ed data was not impacted by reduced travel through the COVID pandemic. Map 12 shows the ADT volumes that were compiled for this study. As expected, the traffic counts reveal that West Chester Pike (PA Route 3) and Lancaster Avenue (U.S. Route 30) carry the highest traffic volumes within the Township, ranging from about 22,000 to 34,000 vehicles per day. Paoli Pike west of Devon Road also carries a significant volume of traffic totaling from about 11,000 to 14,000 vehicles per day. Other road segments that carry in excess of 5,000 vehicles per day include Devon Road, King Road, Paoli Pike east of Devon Road, Providence Road north and south of Goshen Road, Goshen Road east and west of Providence Road, Sugartown Road, and Street Road (PA Route 926).

Level of Service

Level of service analysis is used to establish the level of efficiency that is being obtained on a roadway segment, intersection, or roadway interchange. Level of service (LOS) is a comparison between the volumes of traffic that use a road or intersection and the maximum capacity that the same road or intersection is able to handle. The capacity of an intersection or roadway is based on a number of factors:

- the number of lanes;
- the width of the lanes;
- the presence or absence of any turning lanes;
- the percentage of trucks present; and,
- the type of traffic control device(s).

LOS is expressed using the letters A through F. A is considered to be the best possible driving situation in which a driver may move totally independent and without the influence of other motor vehicles. With an LOS of A, a driver feels the least amount of anxiety because of the ability to drive at any desired speed without pressure from outside influences. As the LOS moves closer towards F, driving becomes more difficult. It is necessary to move at the same speed as other vehicles, and it is difficult to maneuver from one lane to another. Driving at LOS B is more difficult than A, C is more difficult than B, and so on until an LOS F is reached. LOS F, considered unacceptable to most drivers, often occurs under oversaturated conditions when the volume of traffic can become too large for the capacity of the road or intersection and heavy traffic backups may result.

Roadways and intersections are generally designed to handle volumes at an LOS C in rural conditions and LOS D in built-up areas. With the excep-

tion of intersections along Lancaster Avenue (U.S. Route 30) and perhaps isolated intersections along Paoli Pike, LOS on the roads and intersections in the Township is generally acceptable due to the limited number of signalized intersections and the rural character along many of the roadways in the Township.

Access Management

Due to the rural character of large areas of Willistown Township, there are several large tracts of land that could be subject to future development pressures. Because of existing development and the potential for increased development, it is essential for the Township to control residential, commercial, and industrial access along the main highway corridors. Too many access points along a busy corridor, as already exists on segments of Lancaster Avenue (U.S. Route 30), will create congestion and safety problems.

The development of commercial and industrial property is of greatest concern. Commercial property depends on large traffic volumes for healthy business while industrial development has the potential to generate large volumes of truck and employee traffic. Both of these generate large traffic volumes entering and exiting the highway. The interaction of traffic entering and exiting needs to be regulated in such a manner as to enable a safe and efficient vehicular flow.

Residential development does not create the same problems as commercial or industrial development because of the extensive difference in trip generation. Nevertheless, when the frontage of a major arterial is stripped out with residential development, each with a separate drive, safety and traffic flow become a concern.

Many existing uses do not utilize proper channelizing techniques. Channelization is essentially the grouping of vehicles in specific patterns for similar movements; among the techniques available are the realigning of access points, the relocation of access points, or the elimination of access points (see 6.4.5 Circulation Recommendations, for additional information). If uses do not currently comply with proper channelizing techniques it may be difficult to make them comply. In most cases, a change in ownership or use of the property will be necessary to gain compliance.

6.4.3 Basis for Policies

Willistown's Policies are aimed at providing adequate, safe and reliable transportation options to

Township residents and those traveling through the Township. With the exception of the Township's principal arterials (Rt. 30 and Rt.3) and minor arterials (Rt. 926, Paoli Pike, and King Road) (and to some degree, its minor collectors), the majority of the Township's roads are local roads; together, the Township's road network provides ample opportunity for both through traffic and internal circulation. Given the character and capacity of the local road system, it remains a priority of the Township to discourage through traffic on such roads. Continuing dialogue with adjacent municipalities and PennDOT is the best approach for providing efficient movement of through traffic. Recognition of scenic quality and maintenance of local road character offer additional opportunities for local road protection. Per the Comprehensive Plan Update Survey of 2020, a top five initiative is a Township-wide trail/sidewalk circulation plan that includes connections to adjacent municipalities.

6.4.4 Township Planning and Regulation Today

The Township's primary regulatory tool regarding transportation is the Traffic Impact Study; major subdivision and land development applications must include a Traffic Impact Study pursuant to Chapter 123, Subdivision and Land Development, §123-30. The study is required to identify the amount of traffic expected to be generated by a development and how the traffic will be distributed over time to the surrounding roads. Furthermore, the study is intended to provide guidance on short- and long-range planning of site access and off-site improvements necessary to permit the affected transportation system, including both on-site circulation facilities and off-site roads and intersections, to satisfactorily accommodate site and total traffic. Included are a collection of existing traffic data and an inventory of the road/intersection physical conditions, a forecast of future traffic volumes for the roads/intersections in the study area, and a comparison of future pre- and post-development conditions. The results of these analyses identify road improvements that are needed to handle the increased traffic volumes. In addition, the study assists in identifying who is responsible for implementation of needed improvements.

Over the last twenty years, the process of evaluating and recommending improvements to state roads has changed considerably. It is now primarily the responsibility of Willistown Township and where warranted, Chester County (which designs improvements

for its own bridges and takes a proactive position in assessing needs and providing support to get projects on the TIP), not PennDOT, to study, recommend and often design needed improvements to state roads (although clearly PennDOT is primarily responsible for project design and construction on state roads). PennDOT no longer has the traffic planning staff to regularly study roads and propose improvements. Consequently, the initiatives of local and county governments are important factors in the State’s decisions supporting road improvement requests. One example of a local initiative is the Paoli Community Master Plan. This planning effort is centered on the planned Paoli Transportation Center (PTC). While the PTC and a portion of the high density mixed-use retail and office core is situated in Tredyffrin Township, the area along the Lancaster Avenue (U.S. Route 30) in Willistown Township is also devoted to high density mixed use retail, office and transportation-related retailing and services anchored by Paoli Hospital and the medium density office and industrial uses adjacent to the hospital campus. The Paoli Community Master Plan also incorporates two important institutions—the Church of the Good Samaritan and the Delaware Valley Friends School.

The objectives of the Paoli Community Master Plan include the encouragement of the general intensification and diversification of development within the impact area of the new PTC, consistent with capacity of the future road system; steps to improve the supply of, and convenient access to, public parking facilities; and, the systematic upgrade and improvement of the pedestrian environment within the Paoli Community. Circulation improvements discussed as part of the implementation activities related to the Plan include possible improvements to Lancaster Avenue (U.S. Route 30); reconstruction of the Lancaster Avenue (U.S. Route 30)/Paoli Pike intersection consistent with their realignment; bridge widenings on Rt. 252, North Valley Road, North Cedar Hollow Road, and Lancaster Avenue; intersection improvements to Rt. 252 and Central Avenue; various signalization/roundabout alternatives for North Valley Road and Central Avenue. In order to facilitate planning efforts, Willistown and Tredyffrin Townships adopted two new zoning districts within the Paoli area; in particular, Willistown amended Chapter 139, Zoning to include Article XXXI, Transportation District (TD), and Article XXXII, Town Center District (TCD). The purpose of both districts is to guide development opportunities within Paoli consistent with Township planning efforts, specifically the Paoli Community Master Plan.

Opportunities exist for mixed use development consistent with the character of Paoli and complimentary to a multi-modal transportation center, and include provisions designed to improve streetscape and pedestrian amenities.

The Paoli Community Master Plan also led to the development of the Paoli Road Improvement Feasibility Study and Public Participation Project of 2012 that furthered the goals of the Master Plan and provided design alternatives.

Recent trail planning by Willistown and the Willistown Conservation Trust addressing the pedestrian and equestrian circulation network brought to light the importance of the Township’s dirt roads for trail and recreation use; in fact, these roads are already in recreational use.

6.4.5 Recommendations for Policy Implementation/ Actions to Implement

Per the Comprehensive Plan Update Survey of 2020, a top five initiative is a Township-wide trail/sidewalk circulation plan that includes connections to adjacent municipalities. The purpose of the Circulation Plan is to create policies that will achieve the circulation goals of Willistown Township. The main circulation goals of Willistown Township are to continue and enhance the efficiency and safety of the current circulation system while better accommodating pedestrian and bicycle traffic and preserving the rural character of the community. A principal means for achieving this will be to encourage through traffic to use highways functionally designed to accommodate through traffic and to identify areas where sidewalks, off-road trails and bike lanes can be accommodated. Conversely, Willistown Township supports the Paoli Community Master Plan and continues to investigate options to advance its implementation. The goals of the Paoli Community Master Plan include evolution to a diversified multi-functional commercial and residential center surrounding a major intermodal transportation hub.

Traffic Calming

Based on resident feedback from the 2020 Comprehensive Plan Update Survey, a specific policy for addressing traffic calming should be implemented. Residents ranked traffic calming and improvement as one of top three initiatives the Township should focus on.

Traffic calming addresses speeding and high cut-through traffic volumes on neighborhood streets.

With increased population density within and around Willistown, there is increased potential for cut-thru traffic. By enhancing safety and mobility for pedestrians, bicyclists, equestrians and residents, traffic calming measures can slow motorists and reduce traffic volumes in the absence of enforcement.

Developing a Traffic Calming Policy will allow the Township to systematically address requests for traffic calming measures through required resident survey and project ranking regulations. Not all locations are appropriate for traffic calming measures. The Policy would set minimum criteria for the traffic calming evaluations to efficiently utilize the Township resources. Traffic data collection associated with traffic calming can be completed by the Willistown Township Police Department. The Department already has a Traffic Safety Officer that could lead the traffic calming efforts. A Traffic Calming Policy should be based on PennDOT Publication 383 (Pennsylvania’s Traffic Calming Handbook). Any policy should also consider cooperative ventures with equestrian groups and the “Slow Down in Willistown” communications program, among others.

Future Functional Road Classification

The future functional classification of the road network is a useful guide for the placement of future

land use. Although Willistown Township wishes to preserve the rural character of the local road network, there are some roads which may not merit the same level of preservation because of the current or future function they serve. Those roads that serve a higher function than the local road network are Lancaster Avenue (U.S. Route 30), West Chester Pike (PA Route 3), Paoli Pike/Devon Road, Street Road (PA Route 926), King Road, and Goshen Road/Providence Road. Indeed, the Lancaster Avenue (U.S. Route 30) Corridor traverses the heart of the Village of Paoli.

The future functional classification of the road network is an important issue because it ties directly to the future land use of a community. Development needs to be guided to areas with collector road access to the arterial network in order to maintain efficient managed access and safety control while preserving the rural character of the local roads. Table 6-1 lists the design guidelines for roads with different classifications recommended by the Chester County Planning Commission.

	Expressway	Principal Arterial	Minor Arterial	Major Collector	Minor Collector	Local Access
Number of lanes	Min. 2 per direction	2-8 lanes	2-4 lanes	2-3 lanes	2-3 lanes	1-2 lanes
Median width	10-100 ft	4-60 ft	4-60 ft	2-40 ft	none	none
Travel lane width	12 ft	12 ft	12 ft	10-12 ft	10-12 ft	9-12 ft
Left turn lane width	NA	10-12 ft	10-12 ft	10-12 ft	10-12 ft	10 ft
Right turn lane width	12-14+ ft	12-14 ft	12-14 ft	10-12 ft	10-12 ft	9-12 ft
Shoulder width	10-12 ft	8-10 ft	8-10 ft	2-8 ft	4-8 ft	4-8 ft
Parking lane width	NA	8-12 ft	8-12 ft	8-11 ft	7-11 ft	7-10 ft
Buffer width	25-50 ft	15-20 ft	15-20 ft	10-15 ft	10-15 ft	10-15 ft
Sidewalk width	NA	4-8 ft	4-8 ft	4-8 ft	4-8 ft	4-8 ft
Right-of-way width	150-300 ft	100-150 ft	80-120 ft	60-80 ft	60-80 ft	33-50 ft
Design speed	50-70 mph	30-70 mph	30-70 mph	20-60 mph	20-60 mph	20-30 mph
Percent grade (max)	3-5%	3-9%	3-9%	5-12%	5-12%	5-12%

Source: Chester County Planning Commission, 2004

Table 6-1: Design Guidelines for Roads

Preservation of Local Road Character

The rural character of Willistown Township is, in part, defined by the local road network. Several reasons support the need for preservation. First, the local road network helps define the settlement history of the area. The roads follow original property lines and trails. Second, the local roads provide a direct link to many of the scenic views of the Township. These roads are often a part of the scenic quality of the Community. Expansion of the cartways to allow increased traffic volumes can only reduce the current aesthetic appeal of these rural roads. The physical limitations of the local roads are a factor in keeping large volume and high speed traffic off these roads. This is a concern from a safety standpoint. If the local roads are widened, however, the speed and volume of traffic will likely increase. Preserving the character of the local roadway network will have to be balanced when improvements are considered to accommodate equestrian, bicycle, and pedestrian circulation.

As Willistown Township and surrounding communities experience development, it may be necessary for safety reasons to widen the more heavily traveled roads. This is one reason why development should be directed to areas that are the most suitable for increased traffic. Suitable areas include lands along collector roads, with managed access to Lancaster Avenue (U.S. Route 30) and Paoli Pike, with a focus on the commercial and residential development opportunities to support the Paoli Community, as well as along West Chester Pike (PA Route 3) and Street Road (PA Route 926) from the collector roads. This would permit traffic easy access to the major routes, allowing the local road network to remain less traveled. If development is limited along local roads, and safety and mobility do not become a problem, the local roads should remain as they are. Keeping the cartways narrow, with characteristic bends and grades, will hinder increased volumes and speeds while helping preserve this cultural resource in the future.

To maintain and enhance the qualities of the Township's scenic roads, as well as all other roads running through the Township, effort must be given to keeping them as attractive as possible. Garrett Mill Road, located in the southwestern portion of the Township, represents a successful venture in preserving the scenic quality of a local road. Other roads to be considered include Delchester Road, Plumsock Road, Providence Road, Goshen Road, Sugartown Road, Warren Avenue, Boot Road, Spring Road, Davis Road, South Valley Road, Grubbs Mill Road, White Horse Road, Hillview Road, and portions of Line Road

and Barr Road. Willistown Township should consider establishing a program similar to the PennDOT "ADOPT-A-HIGHWAY" program to increase the aesthetic quality of local roads in the Township. Under such a program, roads are adopted by local citizens who agree to monitor them periodically and keep them clean of litter. This type of program can help ensure that the scenic quality of the roadways and adjacent scenic views remain intact. It will also help to build public support for preservation by including individuals and groups directly. Formal scenic road designation, either through local efforts or through the state scenic byway program, also provides opportunities for protection through community outreach and regulation (see Chapter 4 for a full discussion).

Circulation Funding Opportunities

To implement roadway improvements, it is necessary to have appropriate funding. The funding source for circulation-related projects depends on such factors as: ownership of the road (state or municipally owned); the type of project, whether it is a road or bridge project; and the magnitude of the project, whether it is a resurfacing, widening, or a road relocation project.

Municipalities receive funds directly from the State under the Liquid Fuels Fund program. These funds are acquired by the State through taxes received through the purchase of fuel. The funds are allocated according to a legislative formula which takes into consideration mileage of municipal roads and municipal population. Liquid Fuel Funds are used by municipalities to maintain roads and make minor improvements.

Improvements to State owned roads, if Federal or State funds are used, are accomplished through the PennDOT 12-Year Program and the DVRPC Transportation Improvement Program (TIP). The TIP is approved by the Pennsylvania legislature and Federal Highway Administration every other year. Although financial responsibility for maintaining or improving State owned roads is placed on PennDOT and the State, local municipalities are responsible for alerting the proper authorities about safety conditions and needed improvements. The Chester County Planning Commission (CCPC) Transportation Improvements Inventory (TII) is an inventory of proposed improvements submitted by municipalities to the CCPC, combined into a single report and updated every two years (see chesco.org/planning for the most recent TII); the TII is the first step for a project to become listed in the Delaware Valley Regional Planning Com-

mission (DVRPC) Transportation Improvements Program (TIP) to receive federal and/or state funding for implementation. For projects that require PennDOT attention, Willistown Township should also submit documentation of concerns and possible improvements to PennDOT directly. In turn, PennDOT will identify the timing and proper funding program for the project.

All Federal funds become available through the PennDOT 12-year program and the DVRPC TIP. The availability of Federal or State funds depends on the necessity of improvements. It is imperative that traffic conditions be documented in Willistown Township so that the need for improvements can be exhibited to PennDOT and the County. While the Paoli Community Master Plan (and related implementation activities) addresses a portion of the traffic conditions present and in need of improvements, the Township should continue giving attention to other portions of the community as well.

Circulation Recommendations

Measures need to be developed to limit direct access to major roads and guide development access towards interior circulation roads. Doing this will help to ensure that multiple access points do not become a problem in the future and roads will not be stripped out with development.

There are many ways to achieve an efficient and safe network. The most appropriate way is to channelize traffic. As referenced above, this means the grouping of vehicles in specific patterns for similar movements. The densely developed segment of Lancaster Avenue (U.S. Route 30) east of the Paoli Memorial Hospital access is an example of multiple, closely spaced intersecting side streets and driveways resulting in a clutter of conflicting turning movements to, from, and across the highway. Proper access management for potential future development in other areas of the Township is critical to avoid reoccurrence of this pattern along West Chester Pike (PA Route 3), as well as along Paoli Pike, Devon Road, Street Road (PA Route 926), King Road, Goshen Road and Providence Road.

There are many ways to channelize traffic, ranging from simple methods involving a single parcel or lot, to creating a plan for future development of an area. Some of the simpler ways for channelizing traffic include:

- Relocate access;
- Realign access points;
- Eliminate access points;

- One-way patterns;
- Side access;
- Acceleration and deceleration lanes;
- Combine access points;
- Reverse frontage.

The Township should pursue the creation of an Access Management Plan. This plan could be created for the entire roadway corridors of the Township such as Lancaster Avenue (U.S. Route 30) and West Chester Pike (PA Route 3). In the Access Management Plan, the Township could designate areas that are most suitable for access points and locations where access should be limited or avoided. The plan will also identify more extensive ways of achieving controlled access along highways.

The Township should also monitor existing signalized intersections in the Township and consider advances in signal control technology, including but not limited to traffic adaptive tools, to improve vehicle detection and intersection signaling; in addition, the Township should monitor existing signal control settings periodically to ensure proper functioning. Funding programs, such as PennDOT's "Green Light Go" program, can be used to assist with signalization upgrades and monitoring.

6.5 PUBLIC TRANSPORTATION

6.5.1 Policies for Public Transportation

- Encourage any new development constructed within ½ mile of public transportation centers to establish pedestrian linkages on those parcels undergoing development.
- Encourage pedestrian linkages throughout the Township as appropriate to access public transportation and reduce reliance on automobiles.
- Encourage land use patterns that increase choices for residents and accommodate but do not require private automobiles for all trips.
- Promote the expansion of public transportation and pedestrian environment improvements including continued support for and implementation of the Paoli Community Master Plan.

6.5.2 Existing Conditions/Background

Two train stations are located within easy commute for Willistown Township residents: 1) the Paoli station, located in Tredyffrin Township, and 2) the

Malvern station, located in the Borough of Malvern. These two stations helped shape Willistown's current land use pattern, with those areas of the Township closest to the stations developing more densely. Their nearness represents a genuine opportunity for Willistown Township residents. Many communities in Chester County do not have good access to public transportation; and, very few have such close access while also retaining significant acreage in open, rural land uses.

The Paoli Station has the highest volume of boarding passengers of any rail station in SEPTA's Regional Rail system outside of Center City, Philadelphia. SEPTA operates the Paoli/Thorndale Line (previously referred to the R5 Regional rail line) through the Paoli and Malvern stations with almost 60 trains per day and very active morning and evening commuter activity. In addition, AMTRAK operates intercity service as part of its Keystone Service and Pennsylvanian Service operating with almost 50 additional trains per day between New York City, Philadelphia, Harrisburg and Pittsburgh. The Paoli station provides parking for a total of almost 500 vehicles (about 180 daily parking spaces and about 310 permit parking spaces) in lots owned separately by SEPTA and AMTRAK. The Malvern station provides daily parking for a total of about 320 vehicles in lots owned by SEPTA.

The newly constructed Wawa Train Station, located on Baltimore Pike (Rt. 1) in Middletown Township, is SEPTA's newest regional rail station and began operation in August of 2022. The Wawa Station operates the Media/Elwyn Line with about 40 accessible trains per day between the station and the City of Philadelphia. In addition, the Wawa Station provides parking for approximately 600 vehicles and lies to the south, in driving proximity of Willistown Township. The Wawa Station provides an additional rail line option for public transportation.

Five SEPTA bus lines (Routes 92, 105, 106, 204, 205 and 206) also operate out of, or through, the Paoli station; and, one SEPTA bus line (Route 92) operates through the Malvern station. These routes provide various connections to suburban locations throughout Chester County and beyond, including the Borough of West Chester, Exton, King of Prussia, Paoli Hospital, 69th Street Terminal, Lionville, and the Great Valley Corporate Center. SEPTA also operates two bus lines along West Chester Pike (PA Route 3) (Routes 104 and 120) connecting out of the 69th Street Terminal to the Borough of West Chester and Cheyney University.

The Paoli station has been the focus of major improvements to create a Transportation Center as

part of the Paoli Community Master Plan. To date, Willistown Township and Tredyffrin Township have enacted new zoning provisions to permit an intermodal transportation center surrounded by higher density transit-oriented commercial and residential development. A major focus of the Paoli Community Master Plan includes pedestrian environment improvements. Completed in September 2001, the Plan was prepared by the Joint Paoli Community Master Plan Steering Committee representing Willistown Township and Tredyffrin Township, with funding provided by the Chester County Landscapes Vision Partnership Program. Implementation activities and design concept revisions have been ongoing since, including the development of the Paoli Road Improvement Feasibility Study and Public Participation Project completed by Tredyffrin Township in 2015. The study laid out improvement concepts and has led to the Paoli Intermodal Transportation Center Project, involving SEPTA, Amtrak, PennDOT, DVRPC, Chester County, and Tredyffrin Township. The project included the reconstruction of the train station to include a new platform, elevators, a pedestrian overpass, ADA improvements, and upgrades to the rail infrastructure. These improvements brought the station into compliance and were completed in September of 2019. Continuation of the project is anticipated to include replacing the existing bridge carrying N. Valley Road over the rail line and additional new features to the station such as expanded parking facilities.

The intermodal center incorporates several innovations in transportation planning. "Intermodal" refers to including various forms of transportation (pedestrian, bus, rail, and private automobile) at a single connecting point. Intermodal connections are viewed as a necessary characteristic in transit facilities. They allow people to live in lower density communities, drive their cars to a center, and use mass transit to work in urban centers. Indeed, intermodal centers are frequently surrounded by higher density transit-oriented commercial and residential development to extend and maintain the area's vibrancy beyond the typical weekday commuter rush hours.

Transportation planners estimate that people are willing to walk roughly one-quarter to one-half mile to utilize public transportation. The Malvern Station and the Paoli Station are located within one-half mile and one-quarter mile, respectively, of Willistown Township's borders. Most of Willistown Township's residents are also within a 5-minute drive of at least one of these two stations. Historically, this access has made it possible for many residents in the northeastern portion

of the Township to frequent the two rail stations.

It should be noted that despite this access, many residents continue to rely on their private automobiles for commuting and shopping trips. As concerns about climate change and oil dependence rise, awareness of the environmental costs of private automobiles increases, and the population ages (making automobile travel more difficult for more and more people), the value of these stations to Willistown Township residents will likely increase. Hence, it is incumbent upon the Township to consider how land use changes will affect resident's mobility over time. The location of these stations represents a genuine opportunity for the Township and suggests that the Township could capitalize on their close proximity.

6.5.3 Basis for Policy

Willistown's Policies are aimed at providing and expanding adequate, safe and reliable access to/from public transportation, including enhancements to the pedestrian environment. The proximity of the Paoli and Malvern rail stations and connecting bus routes provides ample opportunity for the use of public transportation. It remains a priority of the Township to encourage programs that expand public transportation for the area, including both vehicular and pedestrian access to/from public transit nodes.

6.5.4 Township Planning and Regulation Today

The Township maintains an ongoing dialogue with adjacent municipalities, the Chester County Planning Commission, SEPTA and PennDOT (such as is occurring with the Paoli Community Master Plan) and believes this is the best approach for enhancement and continued viability of public transportation.

6.5.5 Recommendations for Policy Implementation/Actions to Implement

- Promote pedestrian linkages between the residential neighborhoods and the mixed use areas around Malvern and Paoli. Require development within the upper third of the Township to provide sidewalks and/or other pedestrian linkages on lands undergoing new or re-development. As a pedestrian system is developed over time, seek federal, state and county funds to complete missing links. Coordinate pedestrian opportunities for access to public

transportation with recreational trail development described in Section 6.13.

- Continue to work with local public transportation providers to ensure public transit is available to those who wish to use it. Furthermore, continue support for the Paoli Community Master Plan and investigate options to advance its implementation.
- Examine zoning and development regulations in place in the northern sections of the Township, particularly as the Paoli Community Master Plan progresses. Consider redevelopment opportunities for specific locations (such as the vicinity of the Paoli Hospital). Increase mixed-use opportunities. Increase opportunities for retirement communities, particularly in close proximity to public transportation.

6.6 MUNICIPAL SERVICES AND FACILITIES

6.6.1 Policy for Municipal Services and Facilities

- Monitor municipal administrative needs to provide services in the most efficient manner possible. Consider incorporating sustainable municipal practices into municipal decision-making, including such things as auditing energy use in government buildings, incorporating energy efficiency and green building technologies into government buildings, using retrofit LED lighting, and undertaking vehicle replacement (as needed over time to improve efficiency and introduce hybrids and electric vehicles).

6.6.2 Existing Conditions/Background

Willistown Township is incorporated as a Township of the Second Class and is governed by the Pennsylvania Second Class Township Code.¹ The principal governing body consists of three elected municipal supervisors, elected for a term of six years, with one term expiring every two years, thus providing continuity of experience. Five-person boards are also permitted under Pennsylvania law. Members of the Board may receive a nominal salary (\$2,500 per year).

The Board of Supervisors has authority and responsibility in three major areas:

- managing municipal finances, including setting the municipal budget, incurring expenses, paying employees, and increasing or decreasing taxes and fees to pay for operations and services;

1. The distinction between townships of the first class and second class is based on density. Upon attaining a density of at least three hundred persons per square mile, a Township of the Second Class may become a Township of the First Class. As first reported by the 1990 U.S. Census, Willistown Township has attained that density and so could, if it wished, become a Township of the First Class.

- establishing and operating municipal offices; and,
- establishing and enforcing township policy in land use and land development.

These areas of responsibility are elaborated below.

Municipal Finances

Townships of the Second Class have several options for collecting revenues to support needed services. These are authorized by the State legislature through the Second Class Township Code. (Similar enabling legislation exists for all municipal classes, including boroughs, township of the first class, cities, and towns.) Willistown Township utilizes the full diversity of potential revenue sources, to a greater or lesser degree. It receives revenue from real estate transfer taxes, real property taxes, earned income taxes, licensing fees, fines, and user charges for services.

The real estate transfer tax is collected by the County and shared equally by the municipality in which the real estate is located, the County, and the local school district. The revenue generated by this tax varies from year to year in response to sales activity.

The real property tax is collected yearly. For townships of the second class the rate may be as high as 14 mills. Willistown Township is currently collecting at .28 mills. Short of a county-wide reassessment, revenues from the real estate tax should remain relatively constant. The value of the real estate tax is notably reduced in Willistown however, due to the extensive acreage in the Township affected by Act 515 and Act 319. These Acts reduce property taxes for those persons who agree to place open space restrictions on their land.

The earned income tax is the largest single revenue source for Willistown Township, authorized by law up to 1% of earned income. Pennsylvania requires this tax be shared equally with the local school district should they also levy the tax. Presently the Great Valley School District does not levy the tax. Willistown Township collects at .875%. In addition, the Township collects an open space tax at the rate of .125%

Willistown Township also receives funds from the state’s liquid fuels fund for road maintenance and improvements. The amount received is based on census figures and the number of miles of roads in the Township. These funds must be used for specific activities.

Licensing fees, fines, and charges for services make up the bulk of the remaining revenues. Among these are the cable television franchise fee and vehicle code violations.

Year	Revenues	Expenditures
2014	\$8,121,000	\$6,686,410
2015	\$9,049,624	\$7,469,780
2016	\$8,967,426	\$10,425,817
2017	\$9,283,739	\$8,296,114
2018	\$9,264,804	\$8,185,579
2019	\$9,938,901	\$8,379,285
2020	\$10,107,660	\$8,626,648
2021	\$12,798,237	\$9,087,747

Table 6-2: Township General Fund Revenues and Expenditures, 2014-2021

On a comparative basis, real estate taxes tend to impact owners of large parcels of land to a greater degree than owners of smaller parcels. Real estate taxes do not accurately reflect a resident’s ability to pay. Nor do they reflect the demand on services created by a property and land use. As such, owners of large parcels often pay significantly greater amounts than owners of smaller parcels, even if such owners have less wealth and burden municipal services to a lesser degree. Reliance on the property tax can discourage retention of large land parcels. For this reason, Willistown Township relies more heavily on other forms of tax revenue to keep this tax low.

Yet the option of relying more on earned income tax presents its own unique challenges. Earned income fluctuates more than assessed property values. It is more affected by state and national economic trends that can weigh heavily on levels of employment and wages. It should also be noted that the earned income tax is not paid on investment income, and as such, numerous residents are partially or fully exempt, in particular the elderly.

As shown in Table 6-2, Willistown Township financial patterns have not fluctuated wildly but have demonstrated a gradual upward trend. The Township must work within a balanced budget (see Figures 6-1 and 6-2 for 2022 Revenue and Expense Budgets). In the face of diminished revenues, it must either increase tax rates or decrease expenses. Historically, the Supervisors have elected the latter option to avoid increasing taxes.

Municipal expenditures fall in the following categories: legislative (Supervisors salaries, etc.), executive (salaries, benefits, etc. for Township staff), tax collection (office supplies, etc.), general government buildings and plant operations (salaries for maintenance staff, machinery, etc.), police (salaries, benefits, equipment, etc.), fire (firemen’s relief association, local

volunteer fire company contributions, etc.), planning and zoning (salaries, consultant services, etc.), health (neighborhood league), highway maintenance (general services, snow and ice removal, signs, tool and machinery repairs, highway and bridge maintenance), libraries (contributions), workers compensation contributions, insurance premiums, and inter-fund operating transfers.

The Willistown Township Administrative staff currently consists of seven full-time and one part-time employee, most of whom hold multiple titles and multiple responsibilities. They all answer to the Township Manager who oversees daily operations and works closely with the Board of Supervisors. The Pub-

lic Works Director, who also reports to the Township Manager, supervises the road crew and oversees other outside work, including maintenance of the Township’s buildings. The total Public Works Department staff currently consists of eight full-time employees.

The Township contracts on a yearly basis for engineering, planning, and legal services.

Township operations are managed primarily at the Township’s municipal campus located in the Village of Sugartown. The Township building houses administrative offices, storage facilities, and a meeting room suitable for most public meetings held by the Township. Adjacent to the Township building is the Township Police Department building.

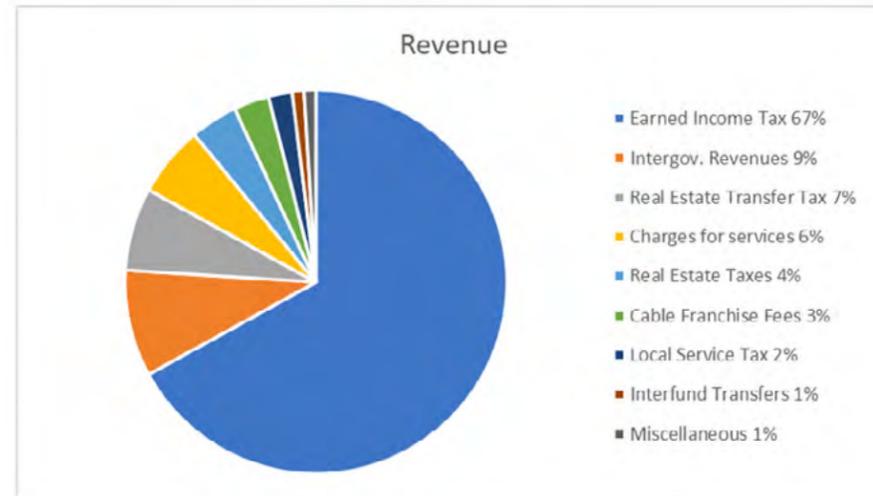


Figure 6-1: Revenue Budget, 2022

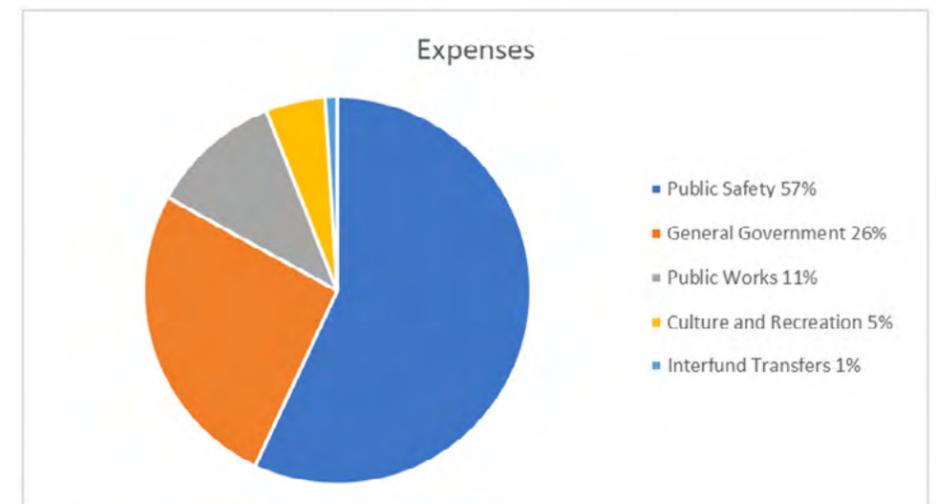


Figure 6-2: Expense Budget, 2022

- Partner with Chester County to implement the community-wide objectives of the County’s Climate Action Plan, adopted in 2021. Consider drafting a climate action policy for the Township that addresses buildings and energy, transportation and land use, waste management, and agriculture, food, and forestry. Consider participating in the Local Climate Action Program, a training program provided by the PA Department of Environmental Protection PA municipalities.

6.7 WATER SUPPLY

6.7.1 Policies for Water Supply

- Protect and safeguard sources of water supply in order to ensure that an adequate supply of potable water is available for domestic use and fire protection.
- Promote the protection of ground water quality and emphasize ground water recharge to meet water supply needs.
- Monitor regional river basin commission activities pursuant to monthly notifications and ensure that water withdrawal permits do not negatively impact local supplies.
- Promote watershed protection consistent with Chester County’s integrated water resources plan *Watersheds*, as updated and amended, and the PA State Water Plan.

6.7.2 Existing Conditions/Background

For the most part, ground water withdrawal regulation is preempted from local control by county, state, and federal authority. Willistown Township is situated within the Delaware River Watershed. The Delaware River stretches 330 miles from the headwaters near Hancock, New York to the mouth of the Delaware Bay. In 1961 the federal government as well as the states of Delaware, New Jersey, New York, and Pennsylvania created the Delaware River Basin Commission (DRBC) with the goal of establishing a regional governing body to manage the river system without regard to political boundaries. Commission programs include water quality protection, water supply allocation, regulatory permitting, water conservation initiatives, watershed planning, drought management, flood loss reduction, and recreation. DRBC regulates all stream withdrawals and ground water withdrawals which exceed a certain vol-

6.6.4 Township Planning and Regulation Today

Willistown Township maintains a Township Code comprised of all currently effective legislation (ordinances) of a general and permanent nature enacted by the Township Board of Supervisors.

The Code is divided into two parts. Part I, Administrative Legislation, contains all Township legislation of an administrative nature, namely, that dealing with the administration of government, that establishing or regulating municipal departments and that affecting officers and employees of the municipal government and its departments. Part II, General Legislation, contains all other Township legislation of a regulatory nature. Items of legislation in this part generally impose penalties for violation of their provisions, whereas those in Part I do not. Among those items included in Part 1 is the Township’s legislative authority to form various boards and commissions, the Township’s ethics code, salaries and compensation, and the scheduling of meetings. Among those items contained in Part 2 are regulations regarding construction standards and fire prevention, outdoor burning, refuse disposal, nuisances, sewers, and taxation, among others. Part II also contains the Township’s land use regulatory controls, including Chapter 73, Environmental Protection, Chapter 123, Subdivision and Land Development, and Chapter 139, Zoning.

The Township’s authority for land use planning and regulation comes from Pennsylvania’s Act 247 of 1968, (the Municipalities Planning Code, or MPC). The land use regulations referenced throughout this plan are a direct outgrowth of the legislative authority granted under the MPC, as is the comprehensive planning process under which this plan was prepared.

6.6.5 Recommendations for Policy Implementation/Actions to Implement

- Continue to provide those municipal services and functions currently provided. Continue to rely on voluntary boards and commissions, delegating planning and advisory responsibility to those bodies.
- Incorporate sustainable municipal practices into municipal decision-making, including such things as auditing energy use in government buildings, incorporating energy efficiency and green building technologies into government buildings, using retrofit LED lighting, and undertaking vehicle replacement (as needed over time to improve efficiency and introduce hybrids and electric vehicles).

matters dealing with the protection, conservation, management, promotion and use of natural resources within the municipality. Recycling Commissions are also common in Pennsylvania; their role typically involves holding periodic general recycling events or specific events for the collection of electronic equipment, yard waste, metal, tires, recyclable batteries, propane tanks, cell phones and small appliances. In recent years the Willistown Recycling Commission was renamed the Environmental Sustainability Commission and its seven-member board has taken on the responsibilities of the EAC and the Recycling Commission.

The Zoning Hearing Board is the judicial arm of township government on zoning issues. It hears appeals from decisions made by the zoning officer, grants special exceptions and variances, and hears challenges to the validity of the zoning ordinance and map. By law the Zoning Hearing Board must maintain autonomy from the governing body. Therefore, it employs its own solicitor who may not also represent the governing body. Members of the Zoning Hearing Board are, however, appointed by the governing body. The Willistown Township Zoning Hearing Board consists of three members.

The Township benefits greatly from its voluntary boards and commissions. Not only do these bodies bring a variety of perspectives to the workings of township government, they give Township residents an opportunity to get more involved in their community and understand how local government works in Pennsylvania.

6.6.3 Basis for Policy

As a Second Class Township, Willistown is obligated to provide needed services to municipal residents in an efficient and effective manner. Furthermore, the Municipalities Planning Code, or MPC, empowers municipalities in the Commonwealth of Pennsylvania to plan and govern development by tools such as zoning, subdivision and land development ordinances, official maps, and the establishment of planning commissions and departments. Willistown Township has adopted a Zoning Ordinance, a Subdivision and Land Development Ordinance, an Environmental Protection Ordinance, and an Official Map. In addition, the Township has established a Planning Commission and employs a Planning Director. Proper, thorough, and consistent review of all proposed development is a top priority, and Willistown takes pride in both the thoughtful growth and intentional conservation of land throughout the Township.

Land Use Policy

Pennsylvania local governments are responsible for adopting and enforcing land use policy. While the Board of Supervisors (the governing body) is the ultimate decision maker for municipal land use policy, including the approval of subdivision and/or land development proposals, it appoints various commissions and committees to help guide Township decisions. Among Willistown Township’s boards and commissions are the Planning Commission, Zoning Hearing Board, Historical Commission, Parks and Recreation Board, Environmental Sustainability Commission, Open Space Review Board, Agricultural Security Area Advisory Committee, and Land Conservation Authority Board. To various extents, these volunteer boards and committees are involved in review and recommendations of plans and ordinances to the Board of Supervisors.

A description of the boards and commissions most involved in land use policy follow.

Voluntary planning commissions are authorized by Pennsylvania’s Act 247 of 1968, (the Municipalities Planning Code, or MPC). A planning commission may have not less than three and not more than nine members. Willistown Township’s planning commission is composed of seven persons. The planning commission’s responsibilities are to prepare the comprehensive plan, make recommendations related to official maps, zoning ordinances, subdivision/land development ordinances, building codes, environmental studies, water surveys, and capital improvements programs, as well as to review subdivision/land development applications and make recommendations to the Board of Supervisors on their approval or disapproval.

The Willistown Township Historical Commission has nine members. It has completed several detailed inventories and maps of historical resources within Willistown Township which are filed in the Township building. The Commission was also involved in the research and planning that led to the successful nomination of Willistown’s three National Historic Register Districts, Sugartown, Okehocking, and Whitehorse. The Historical Commission reviews applications for the rehabilitation, enlargement or alteration of historic buildings and advises the Planning Commission, Board of Supervisors and Zoning Hearing Board on all requests for conditional uses, special exceptions, or variances affecting historic resources.

Environmental Advisory Councils (EAC) were authorized by Pennsylvania’s Act 148 of 1973. The role of an EAC is to advise the local planning commission, park and recreation board, and elected officials on

system. All such systems must be municipally owned or be under the regulations of the Pennsylvania Public Utilities Commission.

In keeping with the adoption of the County's "Landscapes3 Comprehensive Policy Plan" approach to development and preservation of open space, the Township adopted open space conservation ordinance provisions. Open space development reduces the potential for downstream flooding, reduces water quality degradation of receiving streams/water bodies, increases (and sustains) ground water recharge, and provides more stable base flows in receiving streams. Willistown encourages open space preservation throughout the Township.

6.7.5 Recommendations for Policy Implementation/ Actions to Implement

Although much of the responsibility for protecting water resources exists with other agencies, water quality protection remains a critical issue. As such, Willistown should monitor potential changes in regulations and other governmental actions that affect water resources and act to influence positive change when appropriate. In addition, climate change may begin to affect the water cycle and supply in this region. Consequently, due diligence will be essential in monitoring ground water supplies in the future. While at this time there are no known areas where water quality and quantity issues require special monitoring or study, Willistown should continue to:

- Protect the quality and quantity of available ground water for future generations.
- Prevent excessive development from negatively impacting the performance of existing wells where ground water testing has shown that limited supplies of ground water exist.
- Utilize data from Chester County's *Watersheds* Plan and the PA State Water Plan to assist in managing and promoting the conservation of water resources.
- Follow the ground water protection guidelines outlined in the PA State Water Plan in accordance with the Water Resources Planning Act.
- Monitor for any changes in ground water supply due to climate change.
- Continue to use Township-owned lands for demonstration projects for improved water quality, storm-water management, and riparian buffer planting. Use such projects to educate the public about water quality issues. Continue working with conservation

ume. Surface water withdrawals are also regulated by DRBC in accordance with the Pennsylvania Water Plan and Fish Commission "pass-by" requirements, which are the minimum flows required to support aquatic life downstream. Each permit requires some study of the river system and a review of the population projection to make sure the withdrawal is warranted. The DRBC also ensures that states release sufficient water from dams and reservoirs to ensure downstream supplies and grants franchises to public utilities operating public water supply systems.

DRBC requires a permit for ground water withdrawals that exceed 100,000 gallons per day (gpd) during any consecutive 30-day period, and also for withdrawals of more than 10,000 gpd during any consecutive 30-day period, within "ground water protection areas." "Ground water Protection Areas" are areas where ground water is in danger of being overused. These areas are identified by the Chester County Water Resources Authority (CCWRA) based on information derived from observation wells. Willistown Township is within the Southeastern Pennsylvania Ground Water Protection Area of the DRBC.

Pennsylvania State Water Plan

In accordance with the State of Pennsylvania's Water Resources Planning Act 220 of 2002 or State Water Plan (replacing the prior PA State Water Plan which expired in 1983) PADEP is required to, "...produce and regularly update a State Water Plan that includes information on the quality of the state's water resources and quantifies the amount of water that is: (1) available in Pennsylvania; (2) used by various sectors; and (3) needed to meet current and projected demands." Additionally, PADEP is required to provide updated information regarding water quality and quantity based on both consumptive and non-consumptive water uses. This ongoing and continuously updated source of information is to be made available to assist in managing water resources.

Willistown Township is situated within the Lower Schuylkill and Darby-Crum Creek Watershed areas of the Lower Delaware River Subbasin. The basin and watershed boundaries are shown on the Map 2: Water Resources.

Watersheds—An Integrated Water Resources Management Plan for Chester County, PA and its Watersheds

Watersheds was developed as a component of Chester County's comprehensive plan *Landscapes*. *Watersheds* outlines seven Goals and Objectives that,

"...represent the guiding principles and philosophy for the activities and decisions of the communities of Chester County's watersheds.", and "...are designed to accommodate existing land uses and planned growth in a manner that is consistent with the natural characteristics of the receiving watershed systems...". The seven objectives generally include: education, enhancement, preservation, improvements, reducing stormwater impacts, protection, and integration of water resources to meet the present and future needs of Chester County. Public outreach is also an essential element of the plan. While *Watersheds* is consistent with the PA State Water Plan and works to implement its goals and objectives, the County's plan and associated Water Resources Compendium provide significant detail for managing local water resources.

As of the beginning of 2023, Chester County is working to review and update the *Watersheds* integrated water resources plan to ensure continuing timely and relevant guidance on current and future water resource issues. Willistown Township can utilize *Watersheds* and any updates, as well as the PA State Water Plan data for this area of the Delaware River Basin (and other documentation prepared by PADEP), to manage and promote the conservation of water resources.

6.7.3 Basis for Policy

Because most ground water withdrawals occur in increments smaller than 10,000 gpd, the majority of Pennsylvania's ground water withdrawals are not effectively protected from overuse. Cumulative impacts of ground water withdrawals are not managed.

Ground water withdrawals not regulated by DRBC, such as domestic wells, are permitted through the Chester County Health Department. The Health Department requires pump tests to ensure that the quantity available is sufficient for the purpose intended.

DRBC has granted franchise license for providing public water in Willistown Township to AQUA PA. This is the sole public water supplier authorized by DRBC to operate within Willistown Township. Most (approximately 80%) of AQUA PA water comes from Pickering Creek Reservoir. In the Willistown region, Springton Reservoir also provides some limited amounts of water. The northern portions of the Township, as well as areas along West Chester Pike and along Street Road (Route 926) are served by AQUA PA. Developers or individual landowners wishing to connect to AQUA

PA's network must request a line extension and pay for the cost of the connection.

Where public water supplies are not available, residents rely on private wells.

Whether total ground water withdrawals exceed total ground water recharge in Willistown Township is difficult to determine. In the northern portion of the Township, where water is imported by AQUA PA and exported to the Valley Forge Sewer Authority, the small number of direct ground water withdrawals probably exceeds recharge (local withdrawals being exported out of the Township). In the less developed sections of Willistown that rely on wells, ground water recharge likely exceeds withdrawals. Future growth in those portions of the Township currently served by public water will most likely continue to be serviced accordingly; however, should future growth pressures begin to affect those portions of the Township not served, greater emphases will need to be placed on the wise use of water resources, including water conservation, so as to sustain ground water yields in the future.

6.7.4 Township Planning and Regulation Today

The Subdivision & Land Development Ordinance, Chapter 123, documents that the State Department of Environmental Protection (DEP) regulations pursuant to development are the minimum standards that must be met for potable water supply. Emphasis is placed on the requirement for adequate fire protection where public water systems are proposed.

Where individual on-site water supply systems are proposed, the Ordinance requires that applicants install such facilities or guarantee that purchasers can install the facilities as a condition of sale of the lot. Well permits are required to be obtained from the Chester County Health Department prior to installation of any well.

Chapter 123 also contains specific testing procedures for both central water supply systems and communities proposed to be served by individual wells. The test results must show that there is sufficient ground water to serve the proposed development without any negative impacts on the existing wells of surrounding properties. Public Water Studies are required in accordance with the PADEP Public Water Supply Manual for any proposed subdivision to be served by a central water supply system.

Provisions for adequate maintenance of the system must be demonstrated prior to an applicant's receipt of approval for a community water supply

space (the historically rural Willistown landscape character) is preserved. On the other hand, developers often argue that community systems make it feasible to develop land more intensely than anticipated in the community’s comprehensive plan. In addition, management, operation, and ownership issues for community systems can be troublesome since the Township may be expected to assume responsibility for systems in the event they fail. In spite of potential concerns about community sewer systems, their benefits can be substantial if designed and constructed properly, managed appropriately, and operated safely.

Community systems will be permitted only where it can be shown that such systems are consistent with the Township’s policies regarding the preservation of open space and rural landscape character, are consistent with the policies of the Act 537 Plan and adhere to the Township’s zoning and land development regulations.

• On-Lot Disposal Areas

The remainder of the Township relies on on-lot systems (OLDS). In December 2018, a questionnaire was sent to property owners in the northwest quadrant of the Township. This is a medium-high density residential area with lot sizes between 1/2 and 2 acres. The purpose of the study was to assess the condition of on-lot disposal systems. Approximately 52% or 246 property owners of those invited chose to participate in the study. The Township concluded from analyzing the responses and mapping the response categories that there are currently no OLDS issues in the northwest quadrant that warrant further sewage facilities planning or construction of public sewers. This analysis also suggests these systems are operating properly.

It is difficult to determine cumulatively whether Willistown is recharging, having little influence on, or depleting its ground water supplies. While the Township imports water (from AQUA PA) and exports water (via Valley Forge Sewer Authority), much of the Township relies on the use of groundwater from private wells that is recharged through individual on-lot disposal systems. Evidence to the contrary, the Township will continue to emphasize treatment and disposal methodologies that recharge ground water supplies with clean water.

6.8.4 Township Planning and Regulation Today

Willistown is responsible for properly managing wastewater systems. Pa Code Title 25§71.71 statutorily

Tredyffrin Township, Malvern Borough, and generally east of Sugartown Road to the Easttown Township border. In addition, a small portion of the service area along the East Goshen Township Boundary straddles Paoli Pike. Wastewater generated in the public sewer service area is conveyed via the Valley Creek Trunk Sewer (VCTS) to Valley Forge Sewer Authority (VFSA) for treatment.

The Penn’s Preserve area consists of two developments off West Chester Pike. Wastewater is pumped to a spray irrigation treatment plant at the Okehocking Preserve.

The Valley Forge Sewer Authority (VFSA) facility has a rated capacity of 9.2 million gallons per day (MGD). Willistown Township owns 1.438 MGD of capacity in VFSA’s treatment plant. In 2021, Willistown’s annual average daily flow was 1.28 MGD.

Growth in Willistown over the preceding 10 years has been modest, with 260 equivalent dwelling units (EDUs) connected. A lower growth level is expected over the next decade, resulting in a small projected increase in the average daily flow rate of 13,750 GPD.

The Township has adequate capacity for projected future growth.

• Private or Community Treatment Facilities

A variety of private treatment facilities are in operation in Willistown Township. These include:

The Plumsock Sewage Treatment Plant is located on Plumsock Road in the southwest corner of the Township. The Plumsock Plant serves 38 homes.

Ivy Hill is a privately owned system and treatment plant that serves properties on Cratin Lane.

The Deerfield Knoll sewer system and treatment plant are in the southwest corner of the Township. The sewer system and treatment plant are owned by AQUA Wastewater.

The Willistown Woods Sewage Treatment Plant is located on West Chester Pike in the southwest corner of the Township. The Willistown Woods Plant serves 235 homes in Willistown Woods, 201 homes in Willistown Knoll, 46 homes in Hunter’s Run, 39 homes in the Preserve at Willistown, 58 homes in Worthington Commons, and 98 homes in Willistown Hunt developments, as well as Arbor Terrace, a retirement community. The Willistown Woods Plant is owned and operated by AQUA Wastewater.

The Township believes community sewer systems warrant careful consideration and scrutiny. Community systems have the potential to encourage compact siting of development on a parcel, making it possible to create more attractive development in which open

of land use. Gravity and pressure sanitary sewer collection systems and Community On-Lot Disposal Systems (COLDS) are sewage conveyance and treatment methods that make higher-density land uses possible. Historically, communities have been concerned that “central” sewage systems will encourage unwanted growth. Conversely, total reliance on individual septic or community systems requires larger amounts of land and can spread development over much larger land areas than necessary. Willistown Township seeks to control land use and plan for sewage treatment in a coordinated fashion so that the objectives of this comprehensive plan—guiding growth, protecting community values, and providing adequate community facilities and services—are achieved.

Willistown’s coordination of sewage treatment and disposal with land use planning is supported by the Township’s Subdivision and Land Development Ordinance, Zoning Ordinance, Act 537 Plan, and County, State and Federal regulations.

6.8.3 Basis for Policy

Pennsylvania’s Sewage Facilities Planning Act (Act 537) requires that all Commonwealth municipalities develop and implement comprehensive official plans, provide for the resolution of existing sewage disposal problems, provide for the future sewage disposal needs of new land development, and provide for the future sewage disposal needs of the overall municipality. An “Act 537 Plan” establishes official municipal policy on preferred means of sewage treatment and disposal. These policies can include, for example, establishing a municipal authority to own and operate community systems, instituting a formal septic system pumping program to ensure that septic systems function properly, and promoting drip field distribution or spray irrigation as the preferred means of treatment. The “Act 537 Plan” is finalized when approved by the Pennsylvania Department of Environmental Protection (PADEP).

Willistown’s Act 537 Plan consists of a number of documents prepared over the past twenty years, including the 2001 Act 537 Plan update; Act 537 Plan Special Studies for the Valley Creek Trunk Sewer, Valley Forge Sewer Authority, and specific areas in the Township; and Sewage Facilities Planning Modules for new land development projects.

• Public Sewered Areas

The public sewer service area in Willistown Township covers the northern third of the Township adjacent to

groups, such as the Chester Ridley Crum Watersheds Association, to educate and improve watershed resources.

6.8 SEWAGE DISPOSAL

6.8.1 Policies for Sewage Disposal

- Coordinate land use planning with sewage facilities (Act 537) planning.
- Coordinate the extension of public sewer service to existing developed areas of the Township where existing needs have been documented.
- Continue to coordinate development activity with existing sewage facilities where capacity exists, and growth is appropriate; restrict the extension of public facilities in those areas identified for preservation.

In addition, the Township believes the following policies should guide future actions:

- Sewage facilities should use the best available technology at the time of installation and should be properly operated and maintained. The Township recognizes that innovative technology is constantly being developed in the field of wastewater treatment and will consider incorporating newly developed types of treatment facilities when there is sufficient evidence presented to the satisfaction of the Township to support the use of such new technology.
- Treated wastewater shall be disposed as close to its generation source as practicable. Ground water recharge shall be promoted to the greatest degree possible, and the beneficial reuse of treated wastewater shall be investigated and implemented where practical.
- Individual residential onsite sewage disposal systems shall be operated and maintained by the property owner using best management practices for the system in place.
- All non-residential and community sewerage systems shall be operated and maintained by a responsible management entity.

6.8.2 Existing Conditions/Background

Proper treatment and disposal of sewage is necessary to protect public health, welfare, and the local environment. The chosen sewage treatment and disposal methods are also important determinants

mandates that the local municipality be responsible for ensuring the proper operation and maintenance of sewage facilities within its borders. The overall development and management of sewage treatment facilities in Willistown Township follows these goals and polices.

The Pennsylvania Code does not presently provide for the registration, certification, or licensure of service and maintenance providers of Individual and Community on-lot sewage systems permitted by the “Local Agency” —e.g., the Chester County Health Department (CCHD). However, the CCHD does license Liquid Waste Haulers and requires reporting of pumping and disposal of liquid waste from treatment tanks and grease traps; as such, the CCHD maintains an electronic database.

Chester County’s Landscapes3 Comprehensive Policy Plan, adopted in 2018, lists recommendations for attaining the goals set forth in the Plan. The recommendation stated in Chapter 9—How We Connect, is to “integrate water, sewer, and land use planning.” The sewage disposal efforts of Willistown Township meet the goals and recommendations set forth in Landscapes3.

The subdivision and land development ordinance requires that all lots which cannot be connected to a public or community sanitary sewage disposal system in operation at the time of construction of a principal building be provided with an on-site sanitary sewage disposal system meeting the design standards of Title 25, Chapter 73, Rules and Regulations of the Pennsylvania Department of Environmental Protection, the Chester County Health Department, and Willistown Township.

6.8.5 Recommendations for Policy Implementation/Actions to Implement

Willistown Township should continue to periodically review and update its sewage disposal policies by:

- Following the recommendations of the Act 537 plan.
- Ensuring that land use policies and regulations as provided in the Comprehensive Plan, the Subdivision and Land Development Ordinance, and the Zoning Ordinance are addressed in sewage policies.
- Adopting any sewerage policy changes in federal, state or other authorities’ regulations or guidelines, including any registration, certification and/or licensure of Responsible Management Entities (RME’s).

6.9 STORMWATER MANAGEMENT

6.9.1 Policies for Stormwater Management

- Encourage and maximize storage of rainfall and ground water recharge in order to sustain ground water supplies and stream base flow.
- Minimize increases in surface water runoff volumes that contribute to downstream flooding, additional submerged land, eroded stream banks, and other flood related health-welfare-property losses.
- Encourage utilization of ecologically sound stormwater management facilities through the implementation of Best Management Practices and Green Stormwater Infrastructure (GSI).
- Implement the requirements of the Pennsylvania Act 167 Stormwater Management Plans for the Crum Creek, Ridley Creek, and Little Valley Creek Watersheds, as available; continue to cooperate work with Chester County as it updates Watersheds (as well as its county-wide Act 167 Plan and model ordinances); implement the requirements of the National Pollutant Discharge Elimination System Phase II (NPDES II) program.

6.9.2 Existing Conditions/Background

Stormwater quantity is generally controlled by stormwater facilities such as storm sewer conveyance, retention/detention basins and infiltration systems. Stormwater quality control is generally maintained through Best Management Practices (BMPs) such as preserving and protecting sensitive environmental resources, reducing impervious cover, installing open vegetated swales, planting vegetated stream bank buffers, providing infiltration facilities, and other techniques described in the Pennsylvania Stormwater BMP Manual and Handbook.

In accordance with the State of Pennsylvania’s Act 167 Stormwater Management Act of October 4, 1978, provisions are to be implemented for the control of stormwater management on a watershed basis as determined by PADEP. Each County in the Commonwealth of Pennsylvania is required to prepare and adopt Act 167 Watershed Plans for Stormwater Management. Likewise, each municipality within each County is to adopt an Act 167 Stormwater Ordinance in accordance with the plans.

The Crum Creek, Ridley Creek, and Little Valley Creek Watersheds within Willistown Township were studied as part of *Watersheds*, Chester County’s Inte-

grated Water Resources Management Plan adopted on September 17, 2002. *Watersheds’* purpose is to serve as a guide for the municipalities within Chester County and help them regulate and control stormwater quantity and quantity runoff; reduce pollution and other environmental impacts; and protect and conserve water resources more effectively. *Watersheds* compliments the PADEP NPDES II and MS4 Stormwater Programs. Crum Creek, Ridley Creek, and Little Valley Creek Watersheds within Willistown Township represent 3 of the 21 watersheds of Chester County discussed in the plan.

The Crum Creek watershed encompasses a majority of Willistown Township, from the central northwest to the southeast boundary corner. Ridley Creek watershed occupies the western area of Willistown Township and Little Valley Creek watershed occupies the remainder of the Township along the northern boundary. Watershed boundaries are shown on the Map 2: Water Resources. The overall Crum Creek, Ridley Creek, and Valley Creek Watersheds are fully described in the Crum Creek Watershed Action Plan of 2002, prepared by the Chester County Water Resources Authority.

Pursuant to Act 167, integrated stormwater management plans are required for the Crum Creek, Ridley Creek, and Little Valley Creek Watersheds. Each Act 167 Stormwater Management Plan is to involve a technical study upon which management strategies and protection actions are developed. Regardless of the plan adopted, municipalities are required to revise and adopt stormwater management ordinances consistent with the Act 167 plans. Chester County, in conformance with PADEP requirements, adopted a new County-wide Stormwater Management Model Ordinance in the Fall of 2022; Willistown revised its ordinance requirements for consistency.

The Township Code effectively regulates all land disturbances that impact surface water runoff peak discharge rates and volume. The Environmental Protection Ordinance (EPO) also includes provisions for future implementation of the Pennsylvania Act 167 Stormwater Management Plan for the Crum Creek, Ridley Creek, and Valley Creek Watersheds once plans for the individual watersheds are developed and finalized.

The MS4 Stormwater Program

Untreated or uncontrolled stormwater runoff is the primary cause of pollution in local waterways. Stormwater runoff, polluted or otherwise, is often transported through municipal stormwater collection

systems where it is eventually discharged into streams or other waterways without any treatment. As a result of the increasing amounts of pollution entering waterways, the Environmental Protection Agency (EPA) established a municipal stormwater management program known as the **MS4 Program** (Municipal Separate Storm Sewer System). The program is intended to improve the nation’s waters by reducing the quantities of pollutants that stormwater transports during and after storm events.

Municipalities such as Willistown that are designated as MS4 municipalities are required to hold a permit to discharge their stormwater into local waterways. This permit requires the municipality to design and implement a stormwater management program that manages and ideally reduces the discharge of pollutants to the maximum extent possible and satisfies the water quality requirements of the Clean Water Act. In Pennsylvania, the MS4 program is administered by the PA Department of Environmental Protection (DEP). In recent years, PA DEP has been revising its permit requirements under the MS4 program. Willistown Township’s current 5-year permit requires installing Best Management Practices (BMP’s) that reduce the discharge of pollutants. The Township submits an Annual Municipal Separate Storm Sewer System (MS4) Status Report to PADEP that outlines its compliance with the MS4 program. Permitting requirements also include educating the public about stormwater management and the importance of reducing impacts.

6.9.3 Basis for Policy

Willistown Township policy has been to regulate land use activities that affect runoff and surface water and ground water quality and quantity by conforming to the NPDES Phase II program and the EPA’s MS4 program. The Township believes it can best regulate stormwater runoff generated from land use activities through application and enforcement of its codes and ordinances. Controlling the quantity and quality of runoff generated by storm events is extremely important in minimizing property damage and detrimental impacts to the environment. This policy aims to reduce damage from excessive amounts of water inundating sensitive properties around streams and in susceptible upstream watershed areas, as well as to reduce pollutants that are carried by stormwater runoff from parking areas, streets, industrial complexes and cultivated farm fields that can degrade stream environments throughout the region.

6.9.4 Township Planning and Regulation Today

Willistown Township regulates stormwater management through Chapter 73, Article VIII of the Environmental Protection Ordinance (EPO). The EPO also regulates other land use activities which indirectly affect storm water management, such as the removal of top soil and vegetation, construction within the flood plain, soil erosion and sediment pollution control, steep slopes, and riparian buffer areas. In addition to the EPO, other sections of the Township Code support or provide additional regulations regarding stormwater management, including Chapter 123, Subdivision and Land Development, Chapter 109, Soil Erosion and Sediment Control, and Chapter 139, Zoning.

With climate change creating more adverse weather conditions, Willistown Township is becoming increasingly sensitive to areas of the Township that are being affected, and is taking measures to remediate the conditions with stormwater management practices and solutions.

6.9.5 Recommendations for Policy Implementation/ Actions to Implement

A majority of the recommendations in the Township's 2011 Comprehensive Plan regarding stormwater management have been successfully implemented. Additional measures, mentioned above, have also begun to be implemented. The following recommendations should be continued or implemented:

- Ensure that ultimate responsibility for storm water management facilities is clearly defined during the subdivision/land development process.
- Continue to seek ways to minimize the creation of impervious surfaces and improve overall stormwater management quantity and quality control measures.
- Continue to enforce the Township Environmental Protection Ordinance and other Township Code stormwater management regulations. Review all stormwater management ordinance requirements and modify as appropriate to be compliant with County, State and Federal programs and regulations regarding quantity and quality control.
- Continue to enforce the highest standards for construction of such systems so that residents are not forced to pay for system failures over time.
- Continue to participate in regional planning activities with regard to watershed management.

- Monitor existing regulatory provisions to ensure stormwater management is adequate. Revise as needed.
- Minimize downstream flooding by requiring new development to control runoff volume so that post development runoff rates do not exceed pre-development runoff rates.
- Encourage the use of Best Management Practices/ Green Stormwater Infrastructure that eliminate or minimize disturbance to areas with sensitive natural resources. Encourage infiltration of stormwater to achieve ground water recharge and reduce flooding. Ensure that riparian buffers are established and/or enhanced for all projects that involve streams and wetlands. Encourage the use of Best Management Practices/ Green Stormwater Infrastructure that enhance the overall quality of the streams in the Township.
- Implement the requirements of the Pennsylvania Stormwater Management Act for the Crum Creek, Ridley Creek, and Little Valley Creek Watersheds pursuant to individual watershed plans and Chester County's County-wide Act 167 Plan.
- Enforce the regulations of the National Pollutant Discharge Elimination System Phase II (NPDES II) program and PADEP's Chapter 102 Erosion and Sedimentation Control Program.
- Resolve adverse stormwater runoff conditions due to climate change.
- Install BMPs/ GSI pursuant to the Township's MS4 Program Permit.
- Continue executing stormwater management projects and education in Township parks and open space and partner as possible with local environmental organizations such as Chester-Ridley-Crum Watersheds Association and Willistown Conservation Trust.
- Continue to implement the MS4 Stormwater Management Program's six "minimum control measures" which are intended to reduce pollutants discharged into local streams. These elements are:

1. Public Education and Outreach on Stormwater Impacts

Distribute educational materials and conduct outreach to inform citizens about the impacts that stormwater runoff has on water quality.

2. Public Involvement/Participation

Provide opportunities for citizens to participate in the stormwater management program or other programs which improve water quality.

3. Illicit Discharge Detection and Elimination

Develop and implement a plan to detect and eliminate non-stormwater discharges into the stormwater system.

4. Construction Site Stormwater Runoff Control

Develop, implement and enforce an erosion and sediment control program for construction site activities that disturb one acre or greater of land area.

5. Post-Construction Stormwater Management in New Development and Redevelopment

Develop, implement and enforce a program to address discharges of post-construction stormwater runoff from new development or redevelopment areas.

6. Pollution Prevention/Good Housekeeping

Develop and implement a program that reduces or prevents pollutant runoff from municipal operations.

Willistown Township is committed to improving water quality in its watersheds through better management of stormwater runoff. Every resident and business owner is encouraged to participate in the municipal stormwater program by reducing or preventing pollutant runoff from their own property and by reporting any non-stormwater discharges into their local waterways.

6.10 SOLID WASTE COLLECTION, DISPOSAL AND RECYCLING

6.10.1 Policy for Solid Waste Collection, Disposal, and Recycling

- Monitor cost and quality of privately provided trash collection services to ensure residents' needs are met; regulate accordingly pursuant to the authority granted under the "Municipal Waste Planning, Recycling, and Waste Reduction Act" (Act 101).

6.10.2 Existing Conditions/Background

Solid waste collection and disposal is regulated in Pennsylvania by the "Municipal Waste Planning, Recycling, and Waste Reduction Act" (Act 101), which largely vests regulatory control to the counties. Chester County's flow control ordinance dictates where

trash collected within the County must be landfilled. Local municipalities can, if they so choose, contract with private haulers to remove trash. Like most municipalities however, Willistown Township allows each resident to make his/her own trash removal and recycling arrangements with licensed collectors.

6.10.3 Basis for Policy

The Township believes its role with regard to trash removal and recycling is to monitor the cost and quality of private sector services, regulate pursuant to Act 101, and respond to citizen concerns regarding such services. It is generally agreed that the continued fostering of competitive services will keep costs reasonable and provide high quality opportunities for trash removal and recycling.

6.10.4 Township Planning and Regulation Today

The Township continues to monitor and regulate trash hauling services pursuant to Chapter 87, Garbage, Rubbish and Refuse. This chapter contains four articles: Article I, Disposal, Article II, Municipal Waste Collectors, Article III, Recycling, and Article IV, Dumpsters and Storage Containers. Among the issues addressed are licensing and disposal, violations and penalties, prohibitions, spillage, and collection of recyclable materials and leaf waste.

As mentioned above, Willistown also has an Environmental Sustainability Commission (formally its Recycling Commission) with a membership of seven dedicated volunteers. Periodic recycling events are held for the collection of electronics (e-waste), tree branches and yard waste (chipping events), and paper collection (shedding events for sensitive paper documents). As an ongoing program, the Commission maintains a container at the Township Building for the recycling of video and audio tapes, as well as DVDs and CDs. It also collects batteries, smoke detectors, and prescription medications. The Commission is also responsible for piloting new programs to enhance environmental sustainability within the Township.

6.10.5 Recommendations for Policy Implementation/ Actions to Implement

- Continue to monitor services provided by private contractors, ensuring trash removal and recycling efforts are undertaken in a safe, environmentally appropriate fashion.

- Solicit appropriate grants for recycling events and public education initiatives, including composting initiatives.
- Consider adopting a single-use waste ordinance banning the use of plastic bags, cutlery, straws, and Styrofoam in commercial establishments.
- Work with Chester County to implement waste reduction/ zero waste initiatives for the Township.
- Investigate the cost efficiencies (or not) of using a dedicated Township-wide hauler for trash and recyclables. While historically the Township relied on competitive services to provide high-quality, cost-effective services, there may be value in exploring alternatives to this approach, including whether a dedicated hauler could provide improved customer service, reduced wear and tear on roads, control over recycled materials, and the provision of yard waste pickups.
- Consider developing a Township-wide composting program that begins as a voluntary effort with the possibility of its transitioning to a mandatory program.

6.11 EDUCATION

While education is not directly provided by the Township, school district decisions can greatly influence municipal plans and actions. School taxes and the location of new schools are examples of issues relevant to Township residents and local land use planning.

6.11.1 Policy for Education

- Monitor Great Valley School District plans which might affect local land use planning.

6.11.2 Existing Conditions/Background

Willistown Township is part of the Great Valley School District. In addition to Willistown the school district serves the Borough of Malvern, and Charlestown and East Whiteland Townships. Of the six school buildings in the District, two are located in Willistown Township - Sugartown Elementary School and General Wayne Elementary School. The four Great Valley School District schools not located within Willistown Township are Great Valley High School, Great Valley Middle School, the Kathryn D. Markley Elementary School and Charlestown Elementary School.

6.11.3 Basis for Policy

The Township recognizes the interconnection between development and school capacity, particularly the pressure additional development places on the school district. Conversely, school district plans can and do affect land use decision making and can lead to a variety of concerns, among them increased taxes, traffic, and development pressure.

6.11.4 Township Planning and Regulation Today

The Township’s planning efforts consider the activities of the Great Valley School District; the Township takes seriously the need to monitor such activities and comment appropriately on behalf of Township residents, particularly with regards to land use planning issues.

6.11.5 Recommendations for Policy Implementation/ Actions to Implement

- Ensure that any plans for new construction are consistent with this Comprehensive Plan’s recommendations related to land use. Continue meeting quarterly with the school district to discuss student growth and enrollment, as well as proposed Township housing development.
- Monitor school budgets and periodically examine their impacts on property taxes.

6.12 LIBRARY SERVICES

6.12.1 Policy for Library Services

- Continue to financially support local public library services.

6.12.2 Existing Conditions/Background

Willistown Township residents are well served by the Chester County Library System. Eighteen libraries make up the system and two, the Malvern Public Library and Paoli Library are within easy commuting distance to Willistown residents. The Malvern Public Library is located at First and Warren Avenues in Malvern and is open six days per week; the Paoli Library is located on Darby Road in Paoli and is also open six days per week. The Malvern Public Library has a director and staff librarian, as well as several part time staff. The Paoli Library is a branch of the Tredyffrin Township Library and has a full-time branch manager and several full-time librarians and part time staff.

Each library is also supported by several volunteers. A library card from any individual library entitles the owner to use all the libraries within the County’s system.

Chester County libraries are funded by the County and also receive funding from the State. However, funding is not guaranteed from any source, nor can a local municipality be forced to support a library. To obtain funding support, each library claims a ‘service area,’ based on the population within that area. Libraries also receive funds from book sales and other fund-raisers, and from fines and fees for use. Willistown Township falls within the service area of both the Malvern Public Library and Paoli Library. The Township supports both libraries annually, although funding is not guaranteed. Funding support for libraries by Willistown Township in 2022 totaled just over \$92,000. The decision to fund, and the funding amount, is made each year as budgets are drafted.

6.12.3 Basis for Policy

The Township recognizes the importance of local library services to the residents of the Township. Furthermore, Township residents have indicated strong support for using local tax dollars to support local libraries.

6.12.4 Township Planning and Regulation Today

The Township funds local libraries on an annual basis pursuant to an analysis of local requests and funding availability.

6.12.5 Recommendations for Policy Implementation/ Actions to Implement

- Continue to provide financial support to the Malvern and Paoli libraries in the Willistown service area.

6.13 PARKS AND RECREATION

The parks and recreation system in Willistown Township consists of two main components:

- **Facilities & Infrastructure** – playing fields, playground equipment, picnic areas, pavilions, restrooms, parking, trails, signage and other amenities available at parks, and park lands (property owned by the Township and other sites in Willistown set aside for recreation and environmental protection).
- **Services** – composed of:
 - Programming: organized recreation and education activities including community events and

programs, camps, self-serve facility rentals, and passive recreation opportunities such as trails available for the use and enjoyment of Willistown residents and others; and

- Administration: how Willistown manages, funds and operates its recreation land, facilities and programming services, maintenance and security, and public communications.

6.13.1 Policies for Parks and Recreation

- Ensure Willistown is an attractive and desirable place to live, work and visit through the provision of parkland and recreational infrastructure, as well as administrative and programming services that encourage the use of and highlight Willistown’s park and recreation assets.
- Provide parks, preserves and recreation facilities and programming for the benefit of the physical, social, and mental health and wellbeing of the Willistown community.
- Provide well maintained, safe, and updated parks, preserves, recreation facilities and services within an effective budgetary and fiscal planning program, as outlined in the Township budget for parks and recreation. Create and update plans for current and future park maintenance, facilities, and programs.
- Continue leading, coordinating and partnering with other Township Boards and Commissions, local municipalities, and other organizations on park, preserve, and trail planning, maintenance, protection, and programs.
- Continue partnering with local environmental and conservation organizations such as Chester-Ridley-Crum Watersheds Association and Willistown Conservation Trust on habitat improvement and ecological stewardship projects and programs.
- Continue outreach to and solicit feedback from Township residents about their park and recreation system and program offerings.
- Manage the ecological assets and systems of the Township’s parks and preserves while accommodating public access and recreational opportunities. Educate the public about the importance and methodology of ecological management of Township lands and relay what they can do at home through events, communications, and interpretive signage.
- Maintain, plan, and expand the open space and recreational network and infrastructure of Willistown.

- Implement the Okehocking Preserve Management Plan and revise and update the plan as necessary over time.
- Establish trail and recreation interconnections throughout the Township and identify likely interconnections to adjoining municipalities.
- Work toward providing every resident in the Township access to a park and/or recreation facility within one half mile of their home.

6.13.2 Existing Conditions/Background

Facilities

The Chester County Planning Commission and the County Parks Department developed a system for classifying each recreational park within the County (referred to as the 2002 Chester County Recreational Park Standards, which continue to be the standard used today). The types of parks facilities identified are Regional, Sub-regional, Community, Neighborhood and Mini parks. The County's standards are population and distance-to-park based (see Appendix 7 for a description of the County's standards and their applicability to Willistown Township).

Willistown residents are served, to some extent and to varying degrees, by several regional parks including: Marsh Creek State Park, Chester County; White Clay Creek State Park, Chester County; Ridley Creek State Park, Delaware County; French Creek State Park, Chester County.

At the sub-regional park level, none of the Chester County or neighboring county park facilities currently serve Willistown residents.

Willistown Township residents are served by a variety of park facilities meeting community and neighborhood park needs. Parks within Willistown include significant public and quasi-public facilities, identified on Map 6: Existing Recreation Sites, Publicly Accessible Open Space and Trails, with most sites detailed in Appendix 6: Park and Recreational Resources in Willistown Township. The community parks within Willistown include Okehocking Preserve, Serpentine Preserve, Rita Reves Park, Kirkwood Preserve, Rushton Woods Preserve, and Willisbrook Preserve. Community park and recreation facilities that serve Willistown but are not located in the Township include Paoli Memorial Grounds, Randolph Woods, East Goshen Park, Ashbridge Preserve, and the Upper Main Line YMCA. Neighborhood parks located in Willistown include Greentree Park, Mill Park, Sugartown Preserve, Fox Hollow Trail, Sugartown Elementary

School, and General Wayne Elementary School Neighborhood parks located in Malvern Borough that serve Willistown residents include Burke Park and Horace J. Quann Memorial Park.

The Duffryn Trail corridor is the only mini park located in Willistown Township. Malvern Borough's Rubino Park is identified as a mini park and serves Willistown residents.

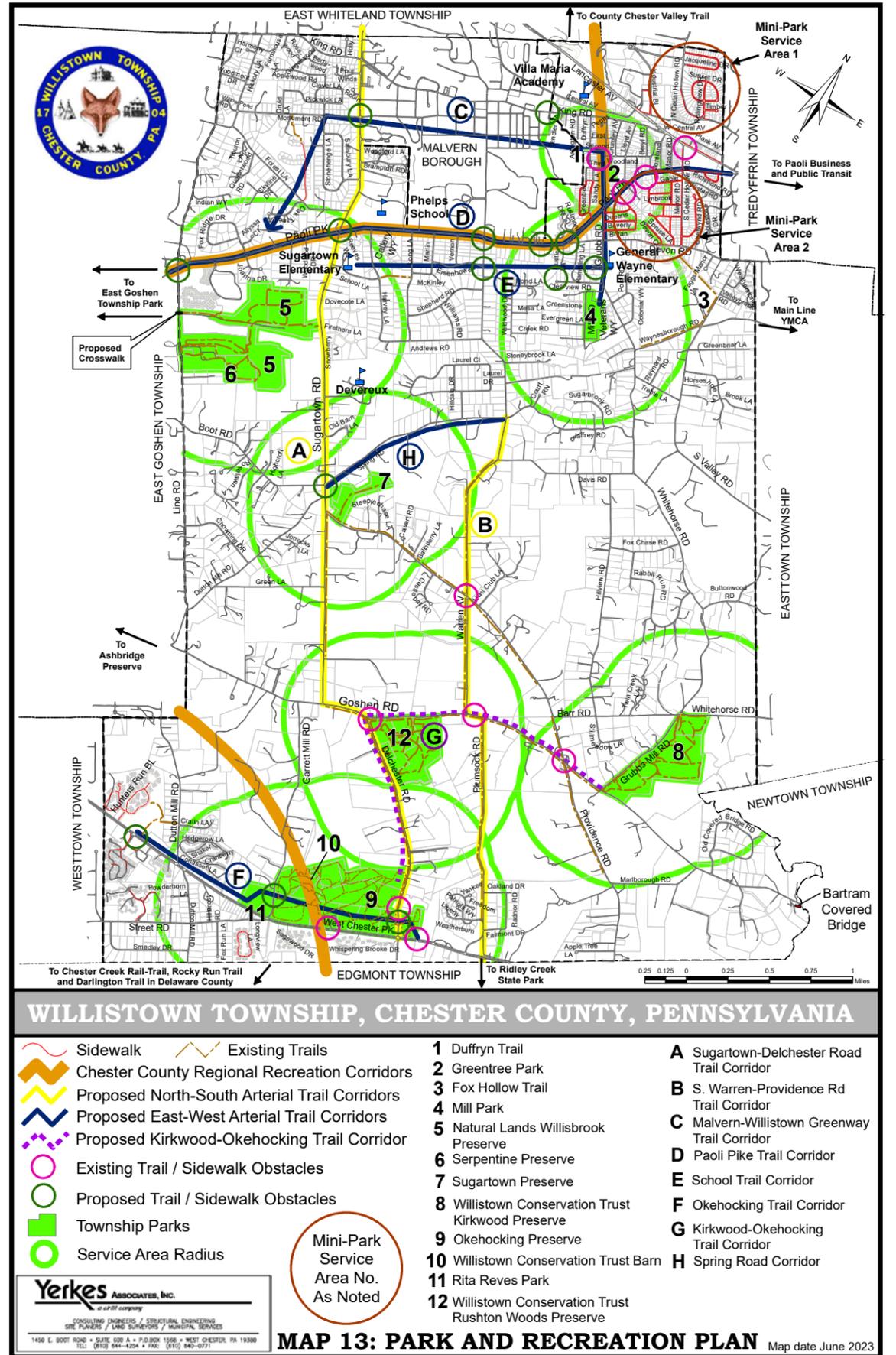
Significant other private open space and recreation facilities that do not permit community access are also found throughout the Township and in the immediate region, including Devereux's Mapleton Campus, Bryn Mawr Rehabilitation Hospital grounds, Phelps School, Villa Maria Academy, Radnor Hunt Club, Radnor Pony Club, and White Manor Country Club.

Trails

Trails form a multi-use component to recreation for pedestrians, as well as provide opportunities for pedestrian circulation beyond recreation throughout the Township. Recreation features including trails should create an interconnected network to link land uses. At this time, Willistown does not provide for safe or sufficient bicycle paths.

The Comprehensive Plan Update Survey of 2020 indicates a supportive response from residents to provide trails throughout the Township. Trails, bike paths, and sidewalks were the top three items residents request more of when it comes to circulation, recreation, and transportation. Hiking/nature walking was the overwhelming favorite activity noted by residents. A top five initiative regarding circulation is a Township-wide trail/sidewalk circulation plan that includes connections to adjacent municipalities. Notable increases in traffic traveling at higher speeds argues for safe and accessible pedestrian and bicycle trails. Although trails are designed to conform with the area in which they are located, it is important to recognize that accessibility is not possible everywhere and should be provided to the best extent possible despite limitations. Obstacles such as narrow roads, restricted right-of-way, higher speed roadways, and traffic intersections can block potential paths. Additional trail planning, including the feasibility of Township-wide interconnections, should be undertaken as part of a Township-wide trail/sidewalk circulation plan that incorporates opportunities for pedestrians and bicycles.

Map 6 also identifies the publicly accessible trails in Willistown Township (most of which are unimproved equestrian trails located along road sides). It should be noted that currently those trails located



MAP 13 back

along road right-of-way provide for light use as unimproved pedestrian trails. The Township's three dirt roads, Plumsock Road, Warren Avenue, and Green Lane, are recreational assets and used as equestrian, pedestrian, and bicycling facilities, as well as circulation infrastructure.

Map 6 also identifies the location of approximately seven (7) miles of loop trails at Willistown's Okehocking Preserve (used primarily by pedestrians with light equestrian use; including a nearby foot path along Weatherburn Way and Plumsock Road), trails at Sugartown Preserve (including light equestrian uses), the Duffryn Trail, an east-west trail by Sugartown School from School Lane to McKinley Avenue, Greentree Park, Serpentine Preserve, Willisbrook Preserve, Rushton Woods Preserve, and Kirkwood Preserve. These trails are natural surface with the exception of Fox Hollow Trail, which is pervious paving. The preserve trails are primarily pedestrian use with light equestrian use with the exception of Sugartown Preserve which is primarily light equestrian use and light pedestrian use from adjacent residents.

Also identified are trail accesses in several developments: the Hunter's Run development in southern Willistown, the Troutbeck Farm development in northwestern Willistown (from Oak Tree Lane to Monument Road), and at the end of the developed portion of School Lane to McKinley Avenue by Sugartown School in northern Willistown.

Road crossing obstacles for pedestrians and equestrians are also identified on Map 6; such obstacles are comprised of Rt. 3, Rt. 30, Paoli Pike, and other identified roads that present current or projected future barriers to trail interconnections. Although numerous cyclists use Willistown roads, there is no bike path or right-of-way network in the Township.

In addition, the Township has a fairly extensive network of up to 60 miles of unimproved equestrian trails throughout the middle and southern section of the Township between Dovecote Lane to the north and Route 3 to the south. This trail network weaves through private, institutional, and public lands and in road right-of-ways. Some of the private trail corridors are included in conservation easements. It is challenging to include these trails in public maps or for planning purposes. One such challenge is that they are on private lands, so individual landowners may object to being included in a public map or publicly accessible trail plan. Another challenge is that the easement trail corridors and are not necessarily contiguous, so publishing them while the only access to them would be through private lands could prove to be prob-

lematic. No private property trails are shown on the map. Preservation and usage of these trails by future generations will require collaboration between the equestrian community, the Township, the Willistown Conservation Trust, and others. The era when horse trail locations were a well-kept secret, and traffic and liability concerns were much less factors for equestrians, are gone. Action by all parties is needed if equestrian trails are to prosper.

Trail planning partnerships include collaborations between Willistown and Willistown Conservation Trust on the Kirkwood-Okehocking Trail Loop. The Kirkwood-Okehocking Trail Loop is a proposed project which seeks to establish a public pedestrian and equestrian natural surface trail corridor connecting Okehocking Preserve with Willistown Conservation Trust's Rushton Woods Preserve and Kirkwood Preserve. Proposed trail heads include the Township's Okehocking Preserve and the Willistown Conservation Trust's Rushton Woods Preserve and Kirkwood Preserve with others under consideration. The Loop includes critical links including the dirt parts of Warren Avenue and Plumsock Roads. Willistown also worked with Malvern Borough on the 2013 Malvern-Willistown Greenway Plan which is still a viable guiding document. See Appendix 7 for additional information on these planning efforts.

The Patriots Path is a planned trail corridor that is intended to link Valley Forge National Historic Park in Tredyffrin Township via the Chester Valley Trail with a spur to both the Paoli Massacre Site in Malvern Borough and the Battle of the Clouds Park in East Whiteland Township. The Patriots Path would not be a County operated facility like the County Struble Trail, but rather a multi-municipal pedestrian network consisting of a section of the County's Chester Valley Trail, along with municipal trails and sidewalks and trails within Valley Forge Park. Inter-municipal linkages to Willistown Township are possible as part of Malvern Borough's proposed Patriot's Path south (a portion of which constitutes the general location of the Malvern-Willistown Greenway Trail). Currently there is limited pedestrian trail/sidewalk access from the Township's northern neighborhoods to the adjacent town centers of Paoli and Malvern. The Malvern-Willistown Greenway Plan identifies these linkages in northern Willistown. See Appendix 7 for a description of this planning effort.

While trail corridors will provide additional opportunities both within the Township and to adjoining municipalities, Chester County, through its publi-

cations *Landscapes3* (2018) and *Linking Landscapes* (2002) encourages municipalities to consider how their trails and open spaces will link to protected open spaces outside of their local community. From the County's perspective, it is important that local trails fit into the larger network of county, regional, and even national trails and parklands. The goal for Willistown Township is to provide north-south trail connections to Malvern Borough, East Whiteland Township, and Edgmont Township, and east-west trail connections to Tredyffrin Township and East Goshen Township.

Chester County regional priority trails include the Chester Valley Trail (CVT), a major east-west trail link located just north of Willistown in Great Valley. The County has declared focusing on completing trails in the CVT areas a priority.

The Paoli Pike Corridor Master Plan of 2017 developed by East Goshen Township identifies transforming Paoli Pike to a pedestrian accessible corridor as a top priority in East Goshen Township's Comprehensive Plan. Paoli Pike runs east-west through multiple municipalities, including East Goshen, Willistown, and Malvern Borough. Map 13 identifies the Paoli Pike Trail Corridor and a connection to the East Goshen Township Paoli Pike Trail which has been completed from Route 352 to Line Road at the edge of Willistown Township. The Paoli Pike Trail calls for the trail to run along Paoli Pike to the West Goshen border. The vision is to link West Chester Borough through Willistown to Malvern Borough and Paoli. Map 13 also directionally identifies nearby trails including the regional Chester Valley Trail in Chester County and the Chester Creek Rail Trail, Rocky Run, and Darlington Trails in Delaware County. The identification of these trails is an indication that the Township would like to link to these recreational and circulation offerings.

The Chester County Planning Commission has also identified Regional Recreation Corridors in *Linking Landscapes*, a number of which are located within and adjacent to Willistown Township. The recommended Regional Recreation Corridors have been classified into 3 categories; undeveloped, informally used, and partially developed. The corridors are 2,000 foot wide planning zones for trails. The Corridors create a network of potential trails that pass through every County borough and city, and each federal, state and County park. The County calls for some sort of trail to go through them or near them, and, "if a local group can find an alternative alignment that is cheaper or more effective, the County will support

it." The Corridors running through Willistown include the Ridley Regional Recreation Corridor in the south and the Paoli Battlefield Regional Recreation Corridor in the north as depicted on Map 13 and further described in Appendix 7.

Finally, it is important to note that trails are a recreational, circulation, and transportation asset. While the interconnection of trails is of value in getting from one recreational facility to another, so too are they valuable in providing non-vehicular circulation in areas that have high traffic volume and potentially providing opportunities for commuting, particularly given the potential for regional trail linkages.

Park and Recreation Program Services

Willistown Township maintains an active park and recreation program open to Township and area residents and administered by a dedicated Township staff; specific details regarding program offerings and Township staffing can be found in Appendix 7.

6.13.3 Basis for Policy

The basis for parks and recreation policies is found in the mission of the Parks and Recreation Department to celebrate community and enrich lives through people, parks and programs. The Department's vision is to have a thriving, healthy, connected community. Willistown Parks and Recreation endeavors to foster healthy minds, bodies, and spirits through its parks and recreation programs. There is extensive documentation of the positive impacts and benefits of parks and recreation on the physical, mental and social health of individuals and their communities.

The Township has cross-referenced its policy with the Chester County Comprehensive Plan. *Landscapes3* (2018) and the County's *Linking Landscapes: A Plan for the Protected Open Space Network in Chester County* (2002) which continues to be the standard today.

The Township's planning approach corresponds with that of Chester County in many ways including the following: *Landscapes3* measures the success of livability of a community with four metrics, one of which is access to parks and recreation. The County objective is to foster healthy living by supporting walkability and access to quality recreation options. It goes on to state that "the use of these facilities is influenced by proximity to where people live, distribution within a community, the types of amenities offered, and overall maintenance." This access is quantified by all residents living within a half-mile

radius of a federal, state, county, municipal, school district, or non-profit recreational facility. This radius is "a standard measure of facility accessibility and utilization." *Landscapes3* delineates growth areas and suggests parks and recreation planning principles and design elements for these areas that correspond to the Township's assessment.

In *Linking Landscapes*, an inventory of diverse park and recreational lands and facilities is compared to applicable standards to ascertain short and long-term recreation needs. These standards, further described in Appendix 7, were considered in the inventory and assessment of Township recreational lands.

Other guidance included the resident response received in surveys and public meetings. The 2020 Comprehensive Plan Update Survey and the Parks and Recreation feedback therein, along with previous surveys, have been important components in formulating a strategy to address parks and recreation needs and services. Information regarding the Township's surveys is also included in Appendix 1 (Survey Top Line Report and power point presentation).

The establishment of a Township trail network and improved sidewalk networks derives its priority in part from the results of the 2020 Comprehensive Plan Update Survey and prior Parks and Recreation resident surveys. In fact, there is consistency in the current and past surveys. In the 2004, 2009, and 2020 surveys, the number one 'favored activity' was hiking/nature walking. In 2020, sidewalk use was second, and third was dog walking. Across all surveys, the highest priority recreational service is providing hiking and walking trails with sidewalks ranking third in 2020. The Township recreation service with the lowest satisfaction rating (2020) was pedestrian circulation (also viewed as the number one inadequacy in 2009), specifically lack of sidewalks.

When asked what the Township needs more of, the number one response was walking/hiking trails, tied with bike paths. In 2020, sidewalks were ranked third, with passive/low impact preserves ranked fourth. The highest ranked 'important Township initiative' to the residents in the 2020 survey is to "secure land to preserve open space, protect the environment, and provide passive recreation", and second is to "secure land for preservation and development of walking/hiking trails." The 'top service priorities for improvement' were: traffic management/circulation; pedestrian circulation: paths and trails; pedestrian circulation: sidewalks; and bicycle circulation.

The Township has taken a conceptual approach

to trail planning based upon existing trail conditions, differing land uses in the Township, differing residential development densities, location of desirable destinations within and outside of the Township, and obstructions, including the bisection of the Township by state roads. A structure of generalized planning corridors has been designated in an effort to recognize alternative pedestrian, and in some cases equestrian and potentially bicycle, travel opportunities for residents, school students, sports enthusiasts, neighboring Township residents, visitors, etc. The intent is that the design of a Willistown trail network should be based on linking destinations to the populous they serve, as well as to each other, while taking into consideration the land uses and service areas of need of each distinct Township area. Sixty-eight percent (68%) of residents are calling on the Township to focus on developing a Township-wide trail/sidewalk circulation plan including connections to the towns of Malvern and Paoli.

The 2020 Comprehensive Plan Update Survey includes the Top 5 Focus Areas & Initiatives for Preservation, Recreation, and Circulation. These are:

1. Secure land to preserve open space, protect the environment, and provide passive recreation.
2. Secure land for preservation and development of walking/hiking trails.
3. Develop a Township-wide trail/sidewalk circulation plan (including connections to Malvern, Paoli, etc.).
4. Develop a traffic calming and improvement plan.
5. Secure land for developing neighborhood parks.

See Appendix 7 for a description of the Township's conceptual trail planning approach, including a description of proposed corridors and a trail classification system.

The Township also looked to the 2020 Survey to assess public sentiment on bicycling. The top ranked responses pertaining to bicycling included the need for traffic management/circulation and improved bicycle circulation.

When asked what the Township needs more of, the highest ranking was for hiking and walking trails, followed by bike paths. Bicycling also ranked sixth in terms of its importance to residents. The two biggest challenges to bicyclists in Willistown are road conditions (old, narrow country roads without shoulders and high-speed state roads) and traffic volume.

When asked about top initiatives for preservation, recreation, and circulation, residents suggested the need for a traffic calming and improvement plan (ranked 4th with 47% of residents in favor).

6.13.4 Township Planning and Regulation Today

Chapter 96, Parks of the Willistown Township Code, defines use regulations and prohibitions; enforcement; powers and duties of the Parks and Recreation Board; permit issuance; code provision violations and penalties; and existing rights and remedies and severability. Additional Code references regarding trails can be found in Chapter 4, Section 4.2.2.

The Okehocking Preserve Management Plan, 2005, provides the Township with a blueprint for managing and improving the unique natural resources of the Okehocking Preserve while providing important passive recreation opportunities; also discussed is the use of a portion of the site for future active recreation. The plan remains relevant but should be considered for a formal update.

The Township's park and recreation access and service area goal in the less populated areas of the Township is to assure park, preserve, or recreational infrastructure accessibility within 0.5 miles of every Township resident. These facilities may be state, county, municipal, school district, or nonprofit owned; the key is public access. This service area radius applies predominantly to the RU Rural Zoning District of the Township and the guiding planning principle is for the preservation of open space and natural resource protection with passive recreation. It should be noted that this is the only area in the Township where acquisition and/or protection of larger tracts of land for public access is viable. All opportunities for open space passive recreation are considered by the Open Space Review Board with a process in place that includes feedback from other Township Boards and Commissions with the Board of Supervisors making final acquisition decisions.

For the more densely populated areas of the Township (the sections of Willistown that Chester County identifies as Urban Center), a 0.25 mile service area is recommended. Map 13 graphically depicts this (and also includes facility offerings of neighboring Townships in the service area calculations).

A priority for non-vehicular circulation is the establishment of trail and sidewalk infrastructure connecting the Township's northern communities to

Malvern Borough and Paoli business district as well as recreational destinations.

The Township recognizes the importance of public comment in the planning process and is committed to improving existing parks and recreation infrastructure and expanding infrastructure based on need.

The results of the 2020 Comprehensive Plan Update Survey and prior Parks and Recreation surveys are used for planning purposes.

6.13.5 Recommendations for Policy Implementation/ Actions to Implement

The recommendations identified below are intended as actions to be addressed within the implementation schedule identified in Chapter 7. Additional considerations for future park and recreation planning are identified in Appendix 7.

Facilities

The Township should continue to focus on specific areas where parks and recreation needs and shortages exist and seek opportunities to acquire and develop park lands based on the planning guidelines herein (and identified on Map 13, Park and Recreation Plan). Such needs include, but are not limited to:

- Assure parks and recreation infrastructure is accessible to all residents of the Township. The service area radius (0.25 or 0.5 miles, depending on location) may be associated with state, county, municipal, school district, or nonprofit owned lands as long as they are publicly accessible.
- Area 1 (a mini park service area), located along the Tredyffrin Township line, is divided from the southern part of Paoli and Willistown by the Main Line railroad tracks and U.S. Route 30 (Lancaster Avenue). Lands available for mini park development will be challenging in this area due to the high density residential development. Park development options include monitoring the availability of residential property and examining the possibility of developing recreational facilities on Paoli Memorial Hospital lands. Coordination with neighboring Tredyffrin should also be pursued.
- Area 2 (a mini park service area), located south of Paoli Pike in northeastern Willistown, is made up of high density residential development. Lands available for mini park development will be challenging in this area due to the intensity of development. Park development options rely principally on monitoring the availability of these residential properties.

It should be noted that the 2011 Comprehensive Plan also identified an Area 3 for a mini park service area and an Area 4 for a neighborhood park service area. Both have been eliminated for the following reasons: much of the service area in Area 3 is under homeowner association ownership where the Township has no parks and recreation jurisdiction, and the parcel identified in Area 4 for a neighborhood park has been developed.

- Continue collaborations with conservation organizations (Brandywine Conservancy, Willistown Conservation Trust, Natural Lands) to preserve any remaining viable lands in the southern portion of the Township (predominantly the RU Zoning district) for their ecological and recreation benefits. Lands adjacent to existing or planned recreational assets, including trail corridors, should be given highest priority. Connectivity of ecological protection is key to greater environmental protection results, and connectivity of recreational assets is key to a robust parks and recreation infrastructure.
- Continue the work of the Open Space Review Board and its coordination with other Township Boards and Commissions in order to achieve the highest and best open space and natural resources conservation, preservation, and recreation project accomplishments.
- Consider creating a two-fold park management plan that outlines a management and maintenance program and schedule for: 1) the ecological components of park facilities, and 2) facilities infrastructure. Coordinate with the Public Works Department in creating infrastructure management components of park plans that include timelines for maintenance and replacement work. Assign cost estimates to improvements and ongoing maintenance; insert in the Parks and Recreation Budget or Public Works Budget, as appropriate. Execute the plans.

Services – Programming

- Partner with neighboring parks and recreation programs and other organizations to promote facilities and programming and encourage use. Communicate and coordinate efforts with neighboring parks and recreation departments to utilize unique assets in each municipality.
- Continue public/ private partnerships involving municipal governments, sports leagues, land trusts, and other landowners in the expansion of the Township's recreational infrastructure and programming offerings.

- Continue to manage, improve, and expand as necessary, all aspects of recreational programming.
- Consider the use of recreational programming technology to simplify program permitting, registrations and planning.

Trail Facilities and Services

- Promote the establishment of recreational trails throughout Willistown as part of a Comprehensive Trails Network in cooperation with local and regional organizations and trail user groups, including the Willistown Conservation Trust, the Willistown Trails Association, and neighboring municipalities. Focus should be on routes which increase access/linkage between existing recreation sites, open space areas, residential neighborhoods, and cultural and retail destinations in both Willistown and surrounding communities. Pedestrian circulation should be incorporated into all new development unless deemed inappropriate (location of development and lack of interconnection options, land use and lack of pedestrian circulation needs, etc.).
- Consider undertaking a Township-wide trail/side-walk circulation plan per the recommendations of the 2020 Comprehensive Plan Update Survey.
- Consider adding trail design standards to the Township Code that reflect intended users and locations (including the desire for trail establishment; surface material standards appropriate to trail location and use; appropriate roles for the Township and others regarding trail ownership, maintenance, and monitoring; and opportunities for working partnerships to establish a Township-wide trail network); work and coordinate with local conservation organizations to achieve these objectives. Consider revisions to Township fencing standards to increase yard setbacks up to ten feet in the RU district to respect existing equestrian and pedestrian trails along property lines. Ensure that the Township Code includes strict requirements for inventory of existing formal and informal trails wherever land disturbance is proposed. Amend 123-37 to more clearly specify required continuance/formal dedication of existing trails (including options to move trails if needed for access or other code requirements, provided through linkages are provided in a manner that ensures trail continuity), additional trail rights-of-way in areas mapped as desirable trail "links" and trail segments known to coincide with public roads.
- Coordinate with other Township boards and commissions, neighboring municipalities, local con-

servation organizations such as the Willistown Conservation Trust, Willistown Trails Association, Natural Lands, and the Chester-Ridley-Crum Watersheds Association, as well as Chester County and other planning organizations, local trail, equestrian and hiking groups to maintain, improve, create, monitor, and map trails throughout the Township and on Township lands. Create opportunities to pursue joint funding and grant acquisition for trails planning and coordination.

- Incorporate interpretive signage as a component of trails programming.

6.14 OPEN SPACE PRESERVATION, LANDOWNER ASSISTANCE AND PRIVATE LAND STEWARDSHIP

6.14.1 Policies for Open Space Preservation, Landowner Assistance and Private Land Stewardship

- Continue to support ongoing dialogue with and initiatives by private landowners and community groups championing land protection and land and water stewardship.
- Continue to provide information to residents about the Township's comprehensive planning efforts, including efforts to preserve land and protect the Township's natural resources for future generations.
- Continue Township efforts to protect natural and man-made resources, preserve land and interconnect open space through innovative site design and natural resource protection efforts, open space purchases, and park and recreation facilities, among others. Consider partnering with local environmental and conservation organizations on a project-by-project basis to identify public rights-of-way and public easements that could be utilized to expand trail systems and connect public lands.
- Continue championing public access to open space and providing programming and educational opportunities.
- Partner with and support action by local land trusts such as the Willistown Conservation Trust and local watershed associations like the Chester Ridley Crum Watersheds Association to assist landowners in the protection of environmentally sensitive lands and areas of significant physical, historic, and scenic value, as well as recreational assets such as pedestrian and equestrian trails. Continue to support and collaborate with local land trusts, watershed associations, and environmental organizations to support

the sound stewardship of the area's private lands.

- Provide stewardship education and interpretive signage on Township properties and at Township events. Coordinate with local environmental, conservation groups, and volunteers as possible.
- Partner with local land trusts, watershed associations, libraries, etc. to serve as a community educational resource for residents on matters concerning land conservation and stewardship.

6.14.2 Existing Conditions/Background

Open Space Preservation

Willistown Township has been active in preserving open space for many years; from running a successful open space referendum and establishing an open space fund for land and easement purchases to adopting natural resources and open space conservation ordinance provisions to supporting initiatives by private landowners and conservation groups, the Township has worked diligently to preserve its open land and other community assets for ecological, social, and community benefit. The recreation component of preservation is the desire to ensure appropriate public access for passive recreation on lands preserved by the Township in conjunctions with local organizations.

Historically, Willistown Township has utilized its open space fund and private/public partnerships to accomplish its preservation initiatives. For a summary of these efforts to date, see Appendix 7.

Other approaches often used by municipalities to preserve land for open space and recreation include the use of transfer of development rights (TDR) or fee-in-lieu (of open space set-asides during development). In prior years the Township has carefully considered such tools but has chosen not to use them. For example, preservation of open space using other techniques has been so successful that insufficient land is available as "sending areas" for TDR. The fee-in-lieu model has not gained traction because passive recreation has been provided for developments greater than 15 acres under the requirements of the Township's Open Space Conservation District (Article XXVI of the Zoning District).

The Township's Public/Private Conservation Partnerships

One of the Township's most successful preservation alliances has been with the Willistown Conservation Trust (WCT). WCT has its origins in 1980 when

its predecessor, the Willistown Area Conservation Program, was formed as a satellite program of the Brandywine Conservancy. Between 1980 and 1996, the Program's staff worked closely with more than ninety landowners in Willistown and neighboring townships to protect their lands in perpetuity through the donation of conservation easements. In 1996 the Trust evolved as an independent non-profit community-based land trust, whose mandate is to meet the ever increasing challenges that threaten the area's critical, natural, scenic, and historic resources, and to assure the long term continuation of a vigorous conservation organization in Willistown Township and surrounding communities. The result of these efforts so far has been the donation of conservation easements that permanently preserve nearly 7,500 acres within the upper watersheds of the Ridley, Crum, and Darby Creeks.

From its advent, WCT and the Township have successfully partnered on many conservation-oriented projects. In 1999, WCT worked with the Township and advocated for the passage of the Township's Open Space Referendum. The referendum asked residents to favor increasing the Township's earned income tax by 1/8th of one percent to establish a fund solely for the purchase and preservation of open space. Township voters overwhelmingly passed the referendum in November of 1999. Establishment of the Open Space Fund has enabled the Township to leverage significant dollars from other public sources, principally Chester County and the Pennsylvania Department of Conservation and Natural Resources (DCNR), as well as private donations, toward the purchase of natural, scenic, historic, and recreational lands.

In recent years, some of the Township's most successful efforts have involved partnerships with conservation organizations such as WCT to identify priorities for protection and jointly seek funding for land and easement purchases. For example, since establishing its open space fund, Willistown Township has partnered with WCT on the following land acquisition projects:

- **Okehocking Preserve**

From 2001 through 2007 WCT obtained significant public funding that contributed to the Township's acquisition of the 183 acre Okehocking Preserve along West Chester Pike. Over \$2,000,000 in grant funds was secured by the Trust from Pennsylvania DCNR and \$290,000 from Chester County. The Trust holds a conservation easement on the entire preserve.

- **Sugartown Barrens**

WCT obtained a grant from Chester County in the amount of \$729,000 toward a joint acquisition project involving the Township, Natural Lands Trust, and Greater Chester Valley Soccer Association to acquire the 109-acre Sugartown Barrens tract from Bryn Mawr Rehabilitation Center. Sixty-one (61) acres of this acquired tract were added to NLT's adjacent Willisbrook Preserve, 21 acres were acquired by Greater Chester Valley Soccer Association for active recreational use, and 27 acres were acquired by the Township (Serpentine Preserve). WCT holds a conservation easement on the entire acreage.

- **Kirkwood Preserve**

In 2004 and 2005 the Township secured a public grant from Chester County in the amount of \$500,000, and provided \$3,150,000 of its own open space funds to assist WCT in purchasing its 83 acre Kirkwood Preserve on Grubbs Mill Road. The total purchase price for the preserve was \$6,000,000. An exceptionally scenic resource, Kirkwood Preserve also contains significant environmentally sensitive lands, including frontage along the Crum Creek, and many acres of open fields that provide nesting and foraging habitat for a number of declining grassland bird species. There is also an extensive network of walking and horseback riding trails on the preserve, accessible from a trailhead parking lot along Grubbs Mill Road.

In 2021, Willistown Township provided \$450,000 of the Township Open Space Fund to WCT for the acquisition of an additional 12.244 acres to Kirkwood Preserve. WCT leveraged these funds to attain \$250,000 in grant funding from Chester County and \$500,000 from the State Department of Conservation and Natural Resources to acquire the property.

- **Wroten Property**

On behalf of the Township, WCT secured a grant from Chester County in the amount of \$165,000 to enable the Township to purchase the 2 acre Wroten property on Sugarbrook Lane (a portion of the Crum Creek Open Space). This property contains frontage along the Crum Creek and is adjacent to other Township owned conservation land. The grant covered the entire purchase price for the property.

In the future, the Township intends to cooperate further with organizations such as WCT to protect additional natural and scenic landscapes, as well as collaborate on joint stewardship efforts focused on environmental education and land management.

A key component of completing successful preservation efforts of the Township and these partnerships is maintaining a staff liaison with outside organizations and utilizing the robust volunteer Township boards and commissions, in particular, those that are a part of the open space project review and recommendation process.

Land Management

A large component of protecting resources involves the wise stewardship of lands set-aside for preservation. Land management on preserved lands must be undertaken in a manner that is both consistent with the designated use and benefits the larger community. Towards that end, the Township undertook to develop a preserve management plan for the Okehocking Preserve that serves both as a property management plan and as a demonstration project replicable on other lands in the Township (see additional information under 6.14.4, below).

One use being examined on lands in the Township involves the practice of sustainable local agriculture. Several efforts are underway, including the Community Farm Program established in 2008 by WCT as a way to further its land protection and stewardship mission by modeling regenerative agriculture and promoting open space and natural resource protection. The mission of the program is:

- to demonstrate, teach, and promote regenerative agricultural practices (farming practices that contribute to and become part of the local ecology);
- to provide a variety of fresh, healthy, chemical-free food to the local community;
- to reduce fossil fuel consumption from transporting food long distances;
- to create a farm infrastructure that models innovative, renewable energy usage and “green” technology;
- to protect and enhance Willistown’s natural and scenic resources, prime agricultural soils and critical watersheds;
- to support other farmers, local chefs and food networks; and
- to share the joy of working on the land and the bounty of fresh food with people of all ages and backgrounds regardless of financial circumstances.

The centerpiece of the WCT program is Rushton Woods Preserve, located at 911 Delchester Road, and

adjacent to the Trust’s 30-acre Rushton Woods Preserve. Rushton Woods Preserve is home to the farm program’s “Community Supported Agriculture” (CSA) venture, which offers families a convenient and interactive way to get locally grown produce straight from the farm. At the beginning of the growing season CSA members pay an annual membership fee to cover production costs, and in return, they receive a weekly share of fresh food throughout the growing season.

Willistown Conservation Trust Bird Conservation Program

WCT is part of a global bird migration monitoring effort which includes bird banding, wildlife tracking, research and reporting. Bird populations have declined significantly in the last fifty years (by one account more than 3 billion birds, more than a third, in the past 50 years). The Trusts efforts seek to expand the scientific understanding and conservation of birds by using the Trusts conserved lands and conservation programs to study impacts on bird populations.

Greenways and Other Opportunities to Link Open Space

Although the preservation and wise management of open space is itself a noble endeavor, it is also important to interconnect large areas of open space to form “greenways.” Greenways are generally defined as linear open spaces established to connect our parks, wildlife areas, historic sites, and communities to create corridors through which animals (and plants) can migrate and prosper, and people can travel, exercise, and enjoy nature. Greenways have been established to conserve wildlife habitat and natural resources, provide recreational opportunities, and promote alternative transportation. While these uses are not always compatible, neither are they mutually exclusive.

One effort worth noting in Pennsylvania is the Pennsylvania Greenways Partnership, which has created several documents aimed at assisting municipalities with the creation of greenways. Of use is the Partnership’s definition of greenway:

“A greenway is a corridor of open space. Greenways vary greatly in scale, from narrow ribbons of green that run through urban, suburban, and rural areas to wide corridors that incorporate diverse natural, cultural, and scenic features. Greenways can be land- or water-based, running

along stream corridors, shorelines, or wetlands. Some follow old railways, canals, ridge tops, or other features. They can incorporate both public and private property. Some greenways are primarily recreational corridors, while others function almost exclusively for environmental protection and are not designed for human passage. Greenways differ in their location and function, but overall, a greenway network will protect natural, cultural, and scenic resources, provide recreational benefits, enhance the natural beauty and the quality of life in neighborhoods and communities, and stimulate economic development opportunities.”

As a component of Willistown’s open space network, the conceptual role of the greenway is as an environmental corridor whose location is defined by the major streams traversing the Township. Protection of natural integrity, as well as scenic and cultural qualities, is the paramount purpose. Public access by means of trails is an added objective within appropriately selected segments of the greenway corridors. Such access can be one priority in the creation of common open space during the review of development proposals, where the tract contains a stretch of the greenway. Full public ownership of the greenway is neither feasible nor essential, but the Township will want to identify parcels where public acquisition or easement donation has the most potential public benefit. In many cases, attaining the greenway protection objective can occur with landowner contact and public education about land management practices.

A protected greenway will be an important complement to separate trail corridors and bikeways, and in some locations will contain these means of access. In Willistown, the focus for greenways creation is the Valley, Ridley and Crum Creek stream networks. All three creeks represent environmental corridors, the protection of which will support Township objectives regarding riparian buffers, vegetation, wildlife habitat, water quality, community character, passive recreation, and resident awareness. The majority of first-order stream miles, coupled with the Exceptional Value designation of the Valley Creek and the West Branch of the Crum Creek, and the High Quality designation of the Ridley and Crum Creeks, lend value to the Township’s greenway protection efforts and should foster intergovernmental cooperation and the leveraging of funds for planning and implementation. But greenways, by their very definition, encompass

more than just stream networks; attempts should also be made to build a system of contiguous greenways that connect or consolidate large areas of open space. Greenways should be an interconnected system of open space which is biologically productive and provides an aesthetic and recreation benefit to present and future residents of the Township. Furthermore, Township planning for greenways, as well as trails and bikeways, should complement and help implement the County’s open space plan element, *Linking Landscapes*. Extensions of the protected greenway corridors beyond the Township boundaries is also important to consider.

Chapter 4, in particular Section 4.4, Composite of Resources and Priorities for Protection, identifies resource protection priorities (parcels) given current land use patterns and water resources; this analysis forms the basis for future Township preservation and outreach efforts and forms the basis for determining appropriate greenway corridors along stream corridors and among large open space parcels.

6.14.3 Basis for Policy

While the Township believes it has been successful in the preservation of open space, it is important to remember that preservation involves the creative energy and commitment of the Township, its volunteer boards and commissions, its citizens, and its large landowners. No single tool or group of tools will work without the perseverance of all involved. Thus, the need for partnerships among a variety of entities and working relationships with landowners will play crucial roles in the Township’s future preservation efforts.

6.14.4 Township Planning and Regulation Today

Willistown has been immensely effective at implementing the recommendations of past planning efforts, particularly as they relate to natural and man-made resource protection, open space preservation, land stewardship, and innovative site design. Among those recommendations the Township has successfully accomplished the following:

- The Township’s Environmental Protection Ordinance, Chapter 73, contains net-out provisions that assess potential impacts to sensitive natural resources through subdivision and land development and

protects such resources by minimizing their disturbance. The provisions require the application of a resource protection ratio to protected land in order to calculate developable land. Natural resources protected through these provisions are: floodplains/floodways, wetlands, steep slopes, woodlands, hydric soils, and riparian buffer areas. Furthermore, the ordinance contains provisions for landscaping and other land and resource management tools to enhance the natural (and scenic) landscape.

- The Township’s Zoning Ordinance, Chapter 139, provides both an agricultural zoning district (the RU Rural District) and an open space district (the OSC Open Space Conservation District). Among other things, the RU District is intended to facilitate agricultural, conservation and recreation purposes, and protect and preserve natural and historic resources. The OSC District provides opportunities for compact development using creative site design that conserves land, protects open space and provides opportunities for the interconnection of habitat areas (through the creation of biodiversity corridors).
- As part of the Township’s Zoning Ordinance, Chapter 139, the Township adopted historic preservation ordinance provisions. The ordinance and its updates provide a “clear process by which proposed land use changes affecting historic resources can be reviewed by the Township”, encourage continued use and preservation of historic resources, discourage unnecessary demolition of historic resources, and provide guidance to help mitigate negative effects of proposed land use changes.
- Willistown Township first adopted its Official Map in 2004 and has updated it several times since; official maps, as permitted by the Pennsylvania Municipalities Planning Code, authorize municipalities to map appropriate elements of their comprehensive planning with regard to public land and facilities. Among those items that may be mapped are existing and proposed public parks, as well as pedestrian ways and easements. The Township may not only designate but reserve land for public use or parkland. Owners of such tracts must serve written notice if they intend to build, subdivide or otherwise develop the land covered by the reservation, after which the municipality may withhold the land from subdivision or development for a period of one year. If the Township has not purchased or condemned the land within that period, it must permit the landowner to develop the land in accordance with applicable ordinances. While this technique offers the Township

temporary relief (and permits time to negotiate), the preservation of open space in this case ultimately depends on the Township’s willingness to purchase it or arrange for its purchase. Willistown’s current map contains existing public parkland, preserves, development restricted open space, eased lands, and historic districts, as well as proposed public parks, open space reservations, and trails.

- In light of the creation of the Township’s Open Space Fund, the Township formed an Open Space Review Board shortly after the open space referendum was passed by Township residents. Unlike the Township’s Parks and Recreation Board, which manages all Township parks and preserves, the Open Space Review Board oversees the municipal acquisition of open space. As documented herein, the Township has been successful in partnering with many organizations over the years to publically acquire and maintain open space using a variety of public and private funding options. (See Appendix 7 for the Open Space Fund report to date).
Furthermore, the Township has encouraged the preservation of agricultural land through the Chester County/Commonwealth of Pennsylvania Agricultural Land Preservation Programs (as authorized by Act 442 of 1968) and continues to promote the donation and/or purchase of conservation easements, the gifting of land (with or without retained life estates), bargain sales, codicils, and limited development, all of which are effective preservation strategies available to private land owners.
- As part of the Township’s efforts to manage its open lands in a responsible manner, as well as to provide a demonstration project for others to follow, the Township prepared its Okehocking Preserve Management Plan in 2005. The publication’s intent is to “ provide Willistown Township with a document for managing and improving the unique natural resources of the Okehocking Preserve while providing important passive recreation opportunities” for Township residents. The publication is intended as a reference guide to be consulted periodically (and updated, as needed) to manage the unique resources of the Preserve. The management mission for the Preserve is to: provide human recreation and edification about natural resources; preserve and improve natural ecosystems and habitat; integrate into a larger network of protected open space and recreational lands that together sustain biodiversity; respect the tract’s historic character; protect and improve this property as a sub-watershed of Ridley Creek, thus

improving the watershed as a whole; and, integrate the primary uses/functions of this property—both the recreational and natural resource preservation and improvement uses/functions—as part of an overall management philosophy for the property.

6.14.5 Recommendations for Policy Implementation/Actions to Implement

- Continue strategic partnerships with conservation groups, watershed associations, residents and landowners in order to fund and pursue the highest level of success in preserving land for future generations of Township residents.
- Assemble a system of contiguous greenways that connect or consolidate large areas of open space; identify parcels where public acquisition or easement donation has the most potential public benefit. Such greenways should, where feasible, be biologically productive (such as biodiversity corridors) and provide an aesthetic and recreation benefit (including, but not limited to, scenic viewshed areas and trail corridors) to the citizens of the Township. Assembling such lands is achieved in a variety of ways, including the recognition that some lands cannot be built on (floodplains and other riparian areas, for example), while other lands need concerted efforts (including public acquisition and landowner outreach) to achieve protection.
- Strengthen the open space set-aside provisions of the Township’s Subdivision and Land Development Ordinance, Chapter 123. While current regulations (§123-43) require “an adequate area of land...be provided to serve the recreational and open space needs of the residents,” no specific set-aside is required. Such a set-aside, based upon a rational formula, should be considered, both as a means of providing recreation where it is needed most (i.e., within the residential development taking place) and as a means of preserving open space. Important to note is that greenways and/or trails could be incorporated as part of any set-aside provisions enacted. For the record, it should also be noted that the Township considered fee-in-lieu provisions (of an open space set-aside) several years ago but concluded it preferred to see open space set-aside on individual tracts.
- Consider revisiting and updating the Okehocking Preserve Management Plan to reflect advancements in preserve management and address changes to

the management priorities adopted by other conservation organizations on nearby preserved lands.

- Educate preserve and open space visitors through events, informative signage, information on the website, through social media, etc.

6.15 TRANSMISSION PIPELINES

6.15.1 Policy for Transmission Pipelines

- Monitor existing and future pipeline activity and coordinate with pipeline companies to protect the public health, safety and welfare of Willistown Township residents.

6.15.2 Existing Conditions/Background

The Township is currently host to several transmission pipelines, including two Sun Pipeline Company pipelines (formally Sun Oil pipelines), a Texas Eastern pipeline, and a Mobil Oil pipeline. The pipelines generally run through private land and/or along public road rights-of-way.

6.15.3 Basis for Policy

Willistown Township recognizes the existence of several pipelines running through portions of the Township, as referenced above under Existing Conditions/Background (see Map 11 for locations). Such transmission pipelines provide opportunities to meet the energy demands of the Atlantic seaboard but also pose risks for those communities potentially affected should a pipeline failure occur. Under normal circumstances, underground pipelines are relatively benign; however, where emergencies such as failures do occur, varied threats to public health and welfare can be significant, from direct impacts such as contaminated soils and groundwater pollution to indirect impacts associated with cleanup (expanded access points, groundwater recovery and remediation facilities, expanded soil disturbance, etc.).

6.15.4 Township Planning and Regulation Today

The Township has monitored pipeline activity in years past and continues to do so on an as-needed basis. Since adoption of the 2011 plan, and in response to the recommendations contained in that plan, the Township adopted in 2014 a series of regulations complimentary to the Pennsylvania Oil and Gas

Act and the Federal Energy Regulatory Commission to protect the public health, safety, and welfare, and regulate land uses in conformance with the Pennsylvania Municipalities Planning Code, Act 247, as amended. Among issues addressed are surface land uses affiliated with transmission pipelines, appropriate access provisions for pipeline rights-of-way, and buffering and setback standards appropriate to reduce adverse impacts to residents of new development should a pipeline failure occur. In addition, the Township standards provide for increased communication with pipeline operators, particularly as related to new development proposals within proximity of transmission pipelines, and provide measures to protect new land uses with high on-site populations. (See Chapter 139, Zoning, Article XVII, Supplementary Regulations, §139-101; Chapter 123, Subdivision and Land

Development, Article V, Plan Requirements and Procedures, §123-17; Chapter 123, Subdivision and Land Development, Article VI, Design Standards, §123-47.2).

6.15.5 Recommendations for Policy Implementation/ Actions to Implement

- Continue to monitor existing and future pipeline activity, including undertaking direct communication with pipeline companies operating in the Township, and enforce, as necessary, its regulations regarding new development in proximity to transmission pipelines, including transmission pipeline issues and activities.



Kelly Hughes

Chapter 7

IMPLEMENTING THE PLAN

The goals and policies developed for this plan are summarized in Chapter 2 and expanded upon in Chapters 4, 5 and 6. Accordingly, each goal's policies were developed with the clear intention that they be implemented in some fashion; as such, recommendations for policy implementation (actions to implement) accompany each policy developed for this plan. Section 7.1 summarizes the key planning issues discussed throughout this document. Section 7.2 summarizes the Township's guiding principles for policy implementation, specifically, the desire of the Township to manage growth in a sustainable fashion. Finally, Section 7.3 summarizes this plan's goals, policies, and implementation strategies using tables -- identifying responsible parties, prioritization (a time frame for implementation), and funding options and/or resource needs.

It is highly recommended that this Chapter be reviewed periodically to develop a yearly work plan tied to implementation priorities.

7.1 SUMMARY OF KEY PLANNING ISSUES

Throughout this document, key planning issues were identified which further informed the goals and policies identified initially in Chapter 2. In some cases, although not all, these same planning issues led to the creation of goals and policies not otherwise envisioned at the start of the planning process. Setting aside plan details, this section steps back and highlights some of the important topics discussed as policies and implementation actions.

Chapter 3, Community Background, showed that, in absolute numbers, *increases in population* are not likely to be an overwhelming influence in Willistown Township's future. Large areas of the Township have been voluntarily and perpetually preserved through conservation easement strategies and Township purchases. Such efforts have effectively eliminated the possibility of development from large areas of the Township. Nevertheless, as development pressures intensify regionally, Willistown will likely see its remaining uncommitted lands developed; furthermore, it is likely the Township will experience increased redevelopment as the scarcity of "green fields" intensifies. Clearly, the Township is not looking at a stagnation of its resident population over this period, and thus the issues of resource protec-

tion, future land use, and the provision of services and facilities with which this plan deals should retain much of their relevance, as well. On the other hand, new residents bring new perspectives, and the Township will need to be cognizant of the needs of its citizens moving forward.

The *demographic composition* of the nation's population will continue to change significantly in the years ahead. The American population is aging and the 'baby-boomers' are in the midst of retiring. In the 1950's and 1960's, the housing market for the 'young family' (the boom) favored large lots, relatively low densities, and heavy reliance on the automobile. Baby boomers facing retirement today (the very first cohort of baby boomers having turned 65 in 2011), have very different housing needs than they did as children or as young adults forming families. Baby boomers in their sixties and early seventies are likely to prefer homes on smaller lots, with low maintenance lawns, (or none at all), located with easy access to recreation, entertainment, and health care facilities. In their eighties and nineties, baby-boomers will need retirement facilities that offer health care and daily living support. To the degree that Willistown Township's population mirrors national trends, it will also experience changed housing needs. This trend has already affected Willistown; within the last ten years the Township has experienced development of life care facilities (such as Sunrise) and several senior living and condominium communities (among them the Chapel Hill development Daylesford Abbey and the Applebrook development adjacent to Bryn Mawr Rehabilitation Hospital). Clearly some of the changes the Township is witnessing also relate to the changing needs of millennials and younger generations (condominium development being one indicator of the changing needs of younger generations as well). These generations' family and home purchasing needs, coupled with a changing economy, will continue to influence housing and service needs for years to come. Improvements in and around the Paoli rail station will likely contribute to the diversification of Willistown's population. This, in turn, should yield benefits in reduced auto commutation and the vibrancy of a pedestrian-friendly, mixed-use environment.

Chapter 4, Protecting Community Values, emphasized the need for continued vigilance in protecting

the natural, scenic, cultural, and historic resources of the Township. Environmental protection is not an issue on which the Township has or should waver. The thirty-seven plus years since adoption of the original *Guidelines for Growth* demonstrates the clear benefits of protecting the environment—through regulation, purchase, easement donation and other means. In recent years the Township has explored alternative zoning approaches to development—allowing for a variety of housing types and densities in those areas where infrastructure exists to support such growth; promoting sustainable green building technologies capable of reducing consumption of energy and environmental resources; and permitting new kinds of development that preserves more of the inherent natural and scenic qualities of a tract while promoting growth for today’s needs. The Township has also expanded and clarified its efforts over the years to provide recreation services and enhance park and recreation facilities to better serve the outdoor recreation needs of Township residents and visitors alike. Resident support for a robust park and recreation system is evidenced in the results of the 2020 Comprehensive Plan Update Survey (see Appendix 1).

Chapter 5, Guiding Future Growth, examined and established Township policies for various sorts of land uses, including residential, industrial, and institutional. A primary finding of this chapter is that the future land use plan shown in past versions of *Guidelines for Growth* remains fundamentally correct and that the Township should continue to provide opportunities for a range of dwelling types and densities that are sustainable, protect community values, reduce energy consumption and decrease the impacts of climate change. Furthermore, the Township should continue to participate in regional planning efforts that permit the concentration of residential development in areas within walking distance of public transportation (such as efforts currently underway in Paoli) and promote an appropriate regional distribution of residential, commercial, and industrial development.

Chapter 6, Community Facilities and Services, reiterated the need to provide adequate community facilities in a comprehensive and cost efficient manner, coordinate regionally, where appropriate, the provision of services, and couple land use planning to infrastructure investments, most notably transportation, parks and recreation planning, and open space preservation. Transportation projects, such as the Paoli Train station, offered a genuine opportunity for the Township to provide higher density, mixed use communities near a regional transportation hub, and the

result, the Town Center District and Transportation District, provide pedestrian friendly, sustainable development options in and around this major transportation facility. Park and recreation planning continues its momentum forward as well given resident interest and Township investments in recreation programming and facilities. (see the 2020 Comprehensive Plan Update Survey, Appendix 1).

7.2 GUIDING PRINCIPLES

Listed below are the guiding principles for the Township’s land use policies and implementation strategies. Each is derived from the topics discussed throughout this plan and reflects the strong sentiments of those responsible for its production.

7.2.1 Manage Growth Sustainably

Sustainability can be defined simply as the ability to meet present needs without compromising the ability of future generations to meet their own needs. Further, sustainability in government services, businesses, schools and individual lives indicates a commitment to economic prosperity, ecological integrity and equity. The concept of sustainability dates from the late 1980’s when the World Commission on Environment and Development, known as the Brundtland Commission, first offered a definition of sustainability similar to that above. Numerous regional, national, and international earth summits, a presidential council on sustainable development, and a host of other undertakings, including events such as the United Nations Climate Change Conference, have occurred since and recent federal, state and county initiatives have aimed to define and measure sustainability in a meaningful way.

While it is likely that measures of sustainability will be further refined in years to come, it is Willistown’s belief that its comprehensive planning encompasses sustainability in all its elements; from environmental stewardship to the provision of social services to sound fiscal policies, the Township strives to meet the needs of its residents without compromising the quality of life of future generations. From the standpoint of land use, the Township continues its belief in the planning philosophy that growth be concentrated in or near an urban core (Malvern and Paoli) and radiate out in lesser and lesser densities towards rural, agricultural and open space uses (such as the Okehocking Preserve). This classic philosophy of growth mimics the “green country town” development model espoused by Wil-

liam Penn for Philadelphia and represents a long standing growth management tradition for this outlying municipality.

It has been abundantly clear through Willistown’s planning and preservation efforts that the citizens of this Township value what it is they have and have worked towards its preservation. In an era of diminishing agricultural lands and dwindling open spaces, Willistown has been a leader in preservation, both in terms of agricultural land and open space permanently preserved (through purchase or regulation) and through its commitment to partnerships with local conservation groups such as the Willistown Conservation Trust to permanently preserve open space through joint county and state grant requests and conservation easements, among others.

Willistown is also committed to providing superior public services, from its premier police department to its financial support of local libraries, fire protection services and parks and recreation services to its commitment to developing opportunities for alternative modes of travel (from expanding trail and sidewalk opportunities to active participation in the implementation of the Paoli Community Master Plan and its emphasis on improved multi-modal transportation choices).

With regard to fiscal policy, the Township remains prudent in how it collects and spends revenues. While Township revenues have remained relatively stable in recent years, the cost of services has continued an upward trend. Rather than raise taxes (an option clearly permissible given the Township’s current tax rates as permitted under Pennsylvania law), the Township has chosen to find more efficient ways of providing services. From a sustainability perspective, the Township has also given much consideration to how it raises its revenues. For example, while the Township could increase its real estate taxes, it chooses not to do so because reliance on such taxes can discourage retention of larger land parcels (on a comparative basis, real estate taxes tend to impact owners of large parcels of land to a greater degree than owners of smaller parcels; furthermore, real estate taxes do not accurately reflect a resident’s ability to pay nor do they reflect the demand on services created by a property and land use). The Township also plans to implement over time sustainable municipal practices into municipal decision-making, including such things as auditing energy use in government buildings, incorporating energy efficiency and green building technologies into government buildings, using retrofit LED lighting, and undertaking vehicle replacement (as

needed over time to improve efficiency and introduce hybrids and electric vehicles).

Clearly the Township’s actions in recent years attest to its belief that sustainability is a core principle for the Township. Of interest therefore is the organization ICLEI - Local Governments for Sustainability. The “International Council for Local Environmental Initiatives” or ICLEI, is an international association of local governments as well as national and regional local government organizations who have made a commitment to sustainable development. Membership in an organization such as this is worthy of consideration.

As the Township looks to the future, it must continue looking both inward (at its own social, economic and environmental practices) and outward by striving to form alliances and partnerships with organizations that influence policies and practices at the county, regional, and national levels. Examples of such efforts include continued efforts to realize the goals espoused in the Paoli Community Master Plan now that the Paoli Rail Station is near completion, and working with Chester County to realize the goals of Landscapes3 and Watersheds 2045 (including working collectively to collect data and develop mutually agreeable “sustainability indicators” that complement the County’s existing Landscapes and Watersheds indicators and the Township’s planning goals). Undoubtedly other programs exist or will be developed within this document’s planning horizon and the Township will continue to review such efforts as it strives to implement its core planning goals through the policies and actions contained herein.

7.2.2 Continue a Strong Land and Resource Preservation Ethic

The Township will continue to champion the preservation of environmental resources and the functional integrity of the natural environment. Although the Township has a responsibility to protect *all* its environmental resources—including its scenic, historic and cultural resources—it has a special responsibility to protect from development those land areas designated as Rural/Agricultural/Preserved/Suburban Low Density on the Future Land Use Plan. These lands comprise large areas of prime agricultural soils and remain largely in agricultural/rural use today, despite the preponderance of development in surrounding communities. Furthermore, these lands are environmentally significant, scenically exceptional, and irreplaceable.

7.2.3 Continue to Focus on Developed Portions of the Township and Opportunities for Redevelopment

Much of the Township's recent focus has been on the developing areas towards its northern end, that portion of the Township that is largely developed but continues to see infill and redevelopment. To the degree that our already developed communities remain attractive, new lands do not need to be developed. It should be noted that infill is not always an attractive option in established neighborhoods; residents often like the small portions of green that remain in their neighborhoods and lament increased traffic and the stresses placed on infrastructure. As such, the Township should remain cognizant of neighbor concerns and work with prospective developers to minimize any such impacts. In addition, the Township should prioritize the provision of recreational services and facilities in these areas as such services contribute to community quality of life and wellness. Maintaining a high quality of life in already developed areas is essential if the Township wishes to preserve natural areas and provide park and recreation destinations. The recognition that Paoli is evolving, as evidenced in the Paoli Community Master Plan, underscores the opportunities for broadening development options and increasing transportation choices.

Three land use trends are likely to influence land use decisions over the planning horizon (and fortunately, these trends could promote sustainable land use rather than sprawl). The three trends are: changing housing needs, increasing environmental awareness, and changing expectations about government roles. The housing market, driven by multigenerational needs and interests, coupled with increases in the cost of transportation and other services, will most likely emphasize smaller lots, sited closer to amenities and services. Environmental awareness will continue to increase as new data about sustainability, climate change, energy use and supply, stormwater management, and building design, among others, improves our understanding of environmental processes. Finally, local, state and federal organizations will be less able to fund new infrastructure investments, partly in response to fiscal prudence, but also due in part to the unsustainable growth patterns of the past and rising energy costs. Future investments, particularly for transportation systems, will likely need to be increasingly cost efficient.

Part of the desire to focus on the northern portion of the Township involves the degree to which the Township will plan for integrated land uses—that is, *permitting residences, employment, recreation, and*

shopping to exist in close proximity—such efforts are increasingly recognized as sensible policy and formed the basis for decisions regarding future development in Paoli in and around the rail yard. Integrating land uses can both protect the environment, since smaller land areas are required for the same amount of development, and can reduce the social and environmental costs associated with low density, land consumptive development. Integrating land uses can also reduce energy consumption. It can also provide children the opportunity to walk or bike to school (and after-school activities) where feasible and within reason, rather than being isolated at home or dependent on parents. Furthermore, it can decrease the time spent shuttling dependent elderly to and from activities and commuting to work. Integrating land uses can also decrease the portion of their income that families must spend on automobiles, gas, and insurance costs, all anticipated to rise dramatically in the years to come.

7.2.4 Continue Planning from a Regional Perspective

A final emphasis for this comprehensive plan is for the Township to continue to consider issues from the *regional perspective*. Stormwater management issues or other water resource issues do not stop at municipal lines, nor is traffic volume an individual municipal issue. A single land development in a neighboring municipality could mean literally hundreds of new trips per day through Willistown. Willistown will need to work closely with its neighbors, the County, and state and federal organizations to ensure that traffic impacts, among others, are minimized.

Prime examples of Willistown's hard work in this regard include past planning efforts with Tredyffrin Township to plan for land use in and around the Paoli train station, coordination with Malvern and other neighboring communities regarding trail planning, and continued coordination with Chester County on *Landscapes3* and *Watersheds 2045*. While the Township works to address its local land planning issues, it will also continue to coordinate with neighboring municipalities and with Chester County, PADEP, PennDOT, SEPTA, DRBC, and the Federal Highway Administration.

The regional planning perspective applies to open space and parks and recreation as well. For example, adjacent park and recreation assets are identified on Map 13, Park and Recreation Plan, for the purposes of planning future offerings and connecting existing networks and destinations; in addition, the recognition of nearby park and recreation assets reduces redundancy in facilities and services when residents can access those elsewhere (and others can access Willistown's).

7.3 RECOMMENDATIONS FOR POLICY IMPLEMENTATION

Each of the Township's three main goals: to protect community values, guide future growth, and provide community facilities and services, led to the creation of policies and strategies by which to fully implement recommendations for future action.

The following tables summarize the policies and implementation strategies developed for each of the Township's three main goals, as well as assign responsible parties for implementation and coordination, establish a priority for execution, and identify funding or resource needs.

Goal 1 - Protecting Community Values

The first of Willistown's three fundamental planning goals is to protect the quality of the Township's natural and constructed environments as a function of the community values and quality of life Township residents hold dear. Chapter 4 identifies both general policies and resource-based policies for protecting community values. General policies are stated below. The Township is responsible for monitoring these policies, turning such efforts into action, and complimenting or revising resource-based policies over time. Review of general policies is an "on-going" activity, consistent with the implementation of resource-based policies.

It should be noted that Chapter 4 also identifies a strategy for resource protection based upon GIS resource prioritization (Maps 7, 8, and 9 graphically depict this process). Efforts at implementation should consider this exercise when targeting specific resources for recommended protection strategies.

General Policies for Preserving Environmentally Sensitive Lands and Natural Resources

- Continue to develop techniques by which to guide and encourage the conservation of land and promote its connectivity.
- Reexamine priorities for the conservation of land within the Township, e.g. woodlands and other vegetation, wetlands, habitat areas, surface water and ground water recharge/supply areas, steep slopes, prime agricultural soils, etc., being mindful of species loss, the needs of pollinator species, and the overall impacts of preservation initiatives. Consider partnering with local environmental and conservation organizations on a project-by-project basis to identify public rights-of-way and public easements that could be utilized to create and expand trail systems and connect public lands. Consider utilizing

the Township Open Space Fund to acquire trail easements or land in fee simple to create and expand trail systems.

- Encourage creative and innovative site planning using conservation design principles that maximize the protection of key land and environmental resources; evaluate and maintain site hydrology; preserve and/or enhance significant concentrations of natural resources, open space, wildlife habitat, biodiversity corridors, and greenways (interconnected open space); incorporate unique natural, scenic, and historic site features into the lot configuration; preserve the integral characteristics of the site as viewed from adjacent roads; establish internal trail systems and connections to external trail systems and future trail systems; and ensure flexibility in development design to meet community needs for complementary and aesthetically pleasing development. Assist property owners, as appropriate, with land conservation and development alternatives during the sketch plan review of subdivision and land development proposals.
- Continue to protect individual environmental resources such as wetlands, floodplains and other hydrological resources, areas of steep slope, and woodlands. Monitor efficacy of regulatory provisions and update and refine as needed.
- Continue maintaining, enhancing and expanding upon recreational resources that protect sensitive lands and natural resources while offering educational opportunities and public access.
- Continue to support the Environmental Sustainability Commission, Planning Commission, Open Space Review Board, and Parks and Recreation Board in appropriately filling their roles in a manner that protects resources. Consider training, workshops, and other techniques for ensuring these voluntary bodies have the support and tools they need.
- Continue to use Township preserve and park land as models of conservation, ecological improvement, and connectivity.

General Policies for Preserving Areas of Significant Physical, Historic and Scenic Value

- Encourage the dedication of protective easements for historic or cultural resources.
- Encourage future development that reinforces the Township's historic settlement pattern and continued use of land for agricultural purposes.
- Monitor efficacy of regulatory provisions related to scenic quality protection, including, for example,

- any landscaping, buffering and screening standards.
- Monitor efficacy of regulatory provisions related to historic resource protection and documentation.
- Promote techniques for creative land planning and design consistent with conservation design principles to preserve scenic resources in the Township.
- Continue efforts to implement the recommendations made in the 2006 Okehocking Preserve Management

Plan and update the plan as necessary over time.

Resource-Based Policies

The following table summarizes the implementation strategies developed for each of the resource-based policies described in Chapter 4; additionally, the table assigns responsible parties for implementation and coordination, establishes a priority for execution, and identifies funding issues.

Goal 1 – Protect Community Values: Resource-Based Policies	Responsible Parties		Time Frame/ Priority	Funding Options/ Resource Needs*
	Principal	Secondary		
Policies for Preserving Environmentally Sensitive Lands and Natural Resources				
Water Resources Policy - Continue to preserve and protect the Township's water resources, which include surface water resources (headwaters areas, flood plains, wetlands, hydric soils, and riparian buffer areas), and ground water resources.				
<i>Implementation Strategies</i>				
Continue to enforce the Environmental Protection Ordinance (EPO) and refine and expand, as needed. Provide EPO education and enlist adherence.	Willistown Board of Supervisors (BofS), Planning Commission (PC), Willistown Township (staff & consultants)	Environmental Sustainability Commission (ESC), Chester County Planning Commission (CCPC)	Ongoing	Township Funding and Coordination, County Support (example: Vision Partnership Program)
Revise the Township's development regulations to further encourage innovative site design, especially within headwaters regions.	PC, BofS, Willistown Township	ESC	Ongoing	Township Funding and Coordination, County Support (example: Vision Partnership Program)
Consider public education specified in the NPDES Phase II rule for reducing pollutants and protecting water quality.	Willistown Township, ESC	PC, Chester-Ridley-Crum Watersheds Association (CRCWA), Chester County Water Resources Authority (CCWRA)	Short term, Ongoing	Township Funding and Coordination; State, County funding opportunities
Consider TMDL issues on Little Valley Creek (and portions of Valley Creek)	U.S. EPA, PA DEP, Willistown Township	CCWRA	Ongoing	State, County Support, Township Funding
Utilize Chester County's Watersheds plan (coming 2023) for the Ridley, Crum and Valley Creeks	Willistown Township	CRCWA, CCWRA	Ongoing	Township Funding, Township and County Coordination (CCWRA)
Maintain emphasis on land application of treated effluent in rural areas	Willistown Township	ESC	Ongoing	Township Coordination
Encourage donation of conservation easements in headwaters and flood plain areas.	Willistown Conservation Trust (WCT)	Willistown Township, Open Space Review Board (OSRB), Natural Lands (NL), Brandywine Conservancy (BC), CRCWA	Ongoing	Township and Non-profit Coordination, State and County Open Space Funding Programs (examples: PA Community Conservation Partnerships Program, CC municipal OS grant program), Foundation Support (example: William Penn Foundation)
Expand water resource management efforts at Okehocking Preserve to other Township preserves, parks and trails	Willistown Township, Parks and Recreation Department	P&R Board, WCT, Stroud Water, Drexel University, CRCWA	Short term	Township and State Funding, Foundation support, and County Coordination (CCWRA)

Land Resources Policy - Continue to guide and encourage the conservation of land. Continue to preserve and protect natural resources and promote techniques for land conservation, creative land planning and design.				
<i>Implementation Strategies</i>				
Continue to enforce, refine, and expand the Environmental Protection Ordinance (EPO); consider providing increased protection to steep slopes.	PC, BofS, Willistown Township	ESC, CCPC	Ongoing	Township Funding and Coordination, County Support
Encourage donation of conservation easements in steeply sloping stream corridors, wetlands and on agricultural lands containing prime agricultural soils. Encourage ASA lands to sell Ag conservation easements as appropriate (ASA currently includes 85 parcels of 2,060 acres).	Willistown Township, WCT	OSRB, NL, BC, CRCWA	Short term, Ongoing	Township and Non-profit Coordination, State and County Open Space Funding Programs, County and State Ag. easement funding programs, Foundation Support
Promote alternative green technology/GSI stormwater best management practices, Conservation Design, and Low Impact Development practices that promote infiltration and reduce runoff.	Willistown Township, PC, BofS	ESC, CCWRA, CRCWA	Short term, Ongoing	Township, County and Non-profit Coordination
Promote the use of "minimum disturbance/minimum maintenance."	Willistown Township, PC, BofS	ESC, CCWRA, CRCWA	Ongoing	Township, County and Non-profit Coordination
Review/Revise development regulations to further encourage innovative site design, especially within sloped areas and on prime agricultural soils.	PC, BofS, Willistown Township	ESC, CCPC	Short term	Township Funding and Coordination, County Support (example: Vision Partnership Program)
Promote the restoration of agricultural lands w/ histories of chemical fertilizer use	ESC, Willistown Township	WCT, NL, BC, CRCWA	Ongoing	Township Coordination, PA Dept. of Agriculture
Encourage the conversion of grass lawns to meadow lands, where feasible	ESC, Willistown Township	WCT, NL, BC, CRCWA	Ongoing	Township and Non-profit Coordination
Continue to support and fund the Township's open space acquisition program. (see Map 9 for acquisition priorities)	Open Space Review Board, Willistown Township	PC, ESC, BofS, WCT, BC, NL	Ongoing	Township and Non-profit Coordination and Support, State and County Open Space Funding Programs, Foundation Support
Biotic Resources Policy - Continue to preserve and protect environmentally sensitive lands and areas of significant biotic resources.				
<i>Implementation Strategies</i>				
Continue to enforce the Environmental Protection Ordinance (EPO) and refine and expand, as needed.	PC, BofS, Willistown Township	ESC, CCPC	Ongoing	Township Funding and Coordination, County Support
Research/evaluate ordinances and landowner agreements that protect biotic resources on developed land.	ESC, PC, Willistown Township	WCT, NL, BC, CRCWA	Short term, Ongoing	Township and Non-profit Coordination and Support

Update Plant List (Appendix B) in EPO, cross-reference as needed, update invasive species lists.	Willistown Township, PC, BofS, P&R Department	ESC, CRCWA, WCT	Short term	Township Funding and Coordination
Consider ways to reduce wildlife habitat fragmentation and protect biodiversity corridors when configuring development open space.	Willistown Township, PC, BofS	OSRB, ESC, CRCWA, WCT, P&R Department	Short term, Ongoing	Township Funding and Coordination, State and County Open Space Funding Programs, Foundation Support
Encourage reductions in chemical lawn fertilizers that impact wildlife and aquatic life, including pollinator species.	ESC, PC, Willistown Township	WCT, NL, BC, CRCWA	Ongoing	Township Funding and Coordination, Non-profit coordination
Promote site design options that retain existing vegetation.	PC, BofS, Willistown Township	EAC, CRCWA, WCT	Short term, Ongoing	Township Funding and Coordination, Non-profit Coordination
Encourage donation of conservation easements that protect biotic resources.	WCT	Willistown Township, OSRB, NLT, BC, CRCWA	Ongoing	Township and Non-profit Coordination, State and County Open Space Funding Programs, Foundation Support
Policies for Preserving Areas of Significant Physical, Historic and Scenic Value				
Scenic, Historic, and Cultural Resources Policy - Continue to protect the quality of Willistown's natural and man-made resource; preserve and protect areas of significant physical, historic, cultural, and scenic value; minimize disturbance to scenic resources within the public viewed during land conversion. Protect sites of significance.				
<i>Implementation Strategies</i>				
Continue to enforce the EPO and the Historic Preservation Ordinance.	PC, Historical Commission (HC), BofS, Willistown Township	Building Code Official (BCO), ESC	Ongoing	Township Coordination
Consider formal scenic road designation, either through local efforts or through the state scenic byway program; consider appropriate signage & education. (see also Goal 3 – local road character recommendations).	PC, BofS, Willistown Township	PennDOT, HC, OSRB, P&R Board (P&RB), P&R Department, WCT	Long term	Township Funding and Coordination, State Funding and Coordination, Foundation Support
Consider adopting a scenic roads overlay district.	PC, BofS, Willistown Township	HC, OSRB, P&RB, P&R Department	Long term	Township Funding and Coordination, County Funding (Vision Partnership Program)
Consider preparation of a scenic roads brochure.	PC, HC, Willistown Township	OSRB, P&RB, P&R Department, WCT	Long term	Township Funding and Coordination, Foundation Support

Consider additional landscaping policies or regulations and revisions to the historic ordinance to protect scenic, historic, recreational, and cultural resources.	PC, HC, P&R Department, BofS, Willistown Township	P&RB	Long term	Township Funding and Coordination
Consider a scenic easement acquisition program; encourage historic dedications, façade easements, etc.	OSRB, HC, P&R Department, Willistown Township	PC, BofS, WCT	Long term	Township Funding and Coordination, State and County Open Space Funding Programs, Foundation Support
Continue to actively engage public on open space and recreation missions	P&R Department, P&RB	OSRB	Long term	Township Funding and Coordination
Map landmarks of historical or cultural significance.	HC, PC	OSRB, WCT	Ongoing	Township Funding and Coordination
Review and revise the 2006 Okehocking Preserve Management Plan	Willistown Township, P&R Department	P&RB, WCT, BC, NL	Short term	Township Funding and Coordination; State, County funding opportunities (example: DCNR grant programs)
Parks, Recreation, Preserves, and Trails Policy - Preserve and protect existing parks and recreation resources; preserve the continuity of Willistown's existing trail network; connect recreational assets through existing and proposed trails.				
<i>Implementation Strategies</i>				
Update park planning efforts to guide the management, maintenance and funding of existing park properties and trails.	P&RB, P&R Department	PC, BofS, OSRB	Short term, Ongoing	Township Funding and Coordination, State and County Open Space Funding Programs, etc.
Consider two-fold management plan for park ecological components and facilities infrastructure.	P&RB, P&R Department, Public Works Department (PWD)	BofS	Short term, Ongoing	Township Funding and Coordination, State and County Open Space Funding Programs
Consider P&RB review function in the subdivision/land development process.	P&RB, P&R Department, Willistown Township	PC, BofS, OSRB, ESC	Short term, Ongoing	Township Coordination
Update trail planning efforts to identify existing trails, guide creation of new trails, and regulate accordingly.	P&RB, P&R Department, PC	BofS, OSRB, ESC, Willistown Trail Association	Short term, Ongoing	Township Funding and Coordination, State and County Open Space Planning Grants

Consider challenges to bicycle use throughout the Township	P&RB, P&R Department, BofS	Chester County Parks Department, Willistown Area Trails Association, WCT, CRCWA, Surrounding Municipalities	Ongoing	Township Funding and Coordination, County coordination and funding.
Policies for Protecting Neighborhoods and Housing Stock				
Protect and enhance the established neighborhoods; allow for a variety of housing types and densities in those areas where infrastructure exists to support such growth; encourage green building technologies; encourage future development that is safe, efficient and sustainable; continue promoting housing opportunities consistent with Paoli master planning; provide adequate access to pedestrian trails, park facilities and open space. .				
<i>Implementation Strategies</i>				
Administer and update the Township's Property Maintenance Code.	BCO, Zoning and Subdivision Officer	Zoning and Subdivision Officer	Ongoing	Township Coordination
Sustain appropriate mixed-use zoning objectives.	PC, Willistown Township	BofS	Ongoing	Township Coordination
Plan for needed public facilities that improve livability but do not result in unwanted growth.	Willistown Township	Chester County	Ongoing	Township Funding and Coordination, Township and County coordination.
Maintain appropriate regulatory opportunities for accessory dwellings, conversion of single-family dwellings for multi-family use, and home occupations.	PC, Willistown Township	BofS	Ongoing	Township Coordination
Consider housing affordability in the context of the Township's housing stock; seek options for greater housing mix, mixed use, and multi-family housing, as needed.	Willistown Township, PC, BofS	ESC, HC, CCPC, Neighboring municipalities	Ongoing	Township Coordination, Township and County coordination.
Maximize opportunities and incentives for green building technologies, sustainable development, and Conservation Design/ Low Impact Development techniques.	PC	ESC, BofS	Short term, Ongoing	Township Coordination; Chester County Planning Commission (CCPC) Chester County Water Resources Authority (CCWRA), U.S. Green Building Council Resources

Table 7-1: Goal 1 – Protect Community Values: Resource-Based Policies

*A note about funding: Given the time horizon of this plan and the recognition that funding sources continually evolve, the emphasis here is on the potential for shared funding opportunities and responsibilities, regardless of the availability of specific funding programs. See Appendix 8 for a selection of funding programs currently available.

Goal 2 - Guiding Future Growth

The second major goal of this plan is to guide future growth in a planned and orderly fashion and to provide for a range of land uses consistent with the protection of the community values identified in Chapter 4. Future residential, institutional, commercial and industrial development shall be respectful of existing land use patterns yet innovative in response to new planning and design practices, deferential to the carrying capacity of the Township's roads and the desire to reduce vehicle miles traveled, consistent with available water supplies and sewage treatment facilities and cognizant of environmental

opportunities and constraints. The Township is prepared to accommodate its fair share of population growth and has considered the population and household projections outlined in Chapter 3, taking into account the Township's regional location and its anticipated growth during the lifetime of this plan.

The following table summarizes the implementation strategies developed for residential, institutional, commercial and industrial development described in Chapter 5; additionally, the table assigns responsible parties for implementation and coordination, establishes a priority for execution, and identifies funding issues.

Goal 2 – Guide Future Growth	Responsible Parties		Time Frame/ Priority	Funding Options/ Resource Needs*
	Principal	Secondary		
Policies for Residential Development				
Continue to use the Township's current Zoning Ordinance as a general guide for residential development. Focus on redevelopment and infill opportunities in the northern portion of the Township to address future diverse housing needs. Continue to rely on conservation design principles to accommodate growth in agricultural/residential zoning districts. Consider additional opportunities for multi-family housing, transit-oriented and village development, form-based codes; promote and incentivize green building principles and zero net-energy provisions.				
<i>Implementation Strategies</i>				
Review the Code periodically to ensure continued opportunities for a range of dwelling types and densities that are sustainable, protect community values, reduce energy consumption and decrease the impacts of climate change.	PC, Willistown Township	ESC, BofS	Short term, Ongoing	Township Coordination, Township and County Coordination
Continue to examine opportunities by which to accommodate appropriate development while maintaining open space and agriculture. Provide for recreation, trails and sidewalks to interconnect neighborhoods.	PC, Willistown Township	P&RB, P&R Department, BofS, OSRB, WCT	Ongoing	Township Funding and Coordination, State and County Open Space Funding Programs, Foundation Support

Continue to participate in regional efforts that concentrate residential development near public transportation and promote a regional distribution of residential development.	PC, BofS, Willistown Township	CCPC, Malvern Borough, Tredyffrin Township, Amtrak, SEPTA	Ongoing, Long term	Township Funding and Coordination; Federal, State, County Funding and Support
Maximize opportunities and incentives for green building technologies, minimum energy efficiency code provisions, etc.	PC, BCO, Willistown Township	BofS	Short term, Ongoing	Township Coordination, Township and County Coordination, U.S. Green Building Council Resources, International Energy Conservation Code (IECC), ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers)
Discourage Airbnb or VRBO rentals through tools and ordinances	PC, BCO	BofS	Short term	Township Funding and Coordination
Policies for Institutional Development				
Accommodate institutional uses (as currently permitted) where it is demonstrated that such uses will be harmonious with the character of surrounding land uses, consistent with local landscape character, protect community values, and have adequate infrastructure. Scrutinize the location of such uses, promote green building technologies and achieve additional open space protection.				
<i>Implementation Strategies</i>				
Monitor the districts for which new provisions governing institutional uses exist; determine the viability of such uses for mixed use communities.	PC, Willistown Township	BofS	Ongoing	Township Coordination
Continue to accommodate institutional development that preserves large amounts of open space, is congruent with agricultural activities, provides tax revenues, and minimizes impact to community services.	PC, Willistown Township	BofS	Ongoing	Township Coordination
Maximize opportunities and incentives for green building technologies, minimum energy efficiency code provisions, etc.	PC, BCO, Willistown Township	BofS	Short term, Ongoing	Township Coordination, Township and County Coordination, U.S. Green Building Council Resources, International Energy Conservation Code (IECC), ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers)
Policies for Commercial and Office Development				
Continue to accommodate commercial uses as permitted along the Route 30 business corridor (including King and Central Avenues east of Malvern), along the Paoli Pike corridor west of Sugartown Road, and along the Route 3 planned highway corridor extending along Route 3. Consider form-based standards and codes to address physical form, building mass, and the relationship of building facades to public settings. Promote green building technologies.				

<i>Implementation Strategies</i>				
Monitor the districts for which provisions governing commercial uses exist; determine the viability of such uses within these districts.	PC, Willistown Township	BofS	Ongoing	Township Coordination
Monitor the Paoli community for which new provisions governing commercial uses exist; determine the viability of such uses as components of mixed use communities.	PC, Willistown Township	BofS, Tredyffrin Township	Ongoing	Township Coordination
Continue to participate in regional planning activities to promote an appropriate regional distribution of commercial development.	PC, BofS, Willistown Township	CCPC, Malvern Borough, Tredyffrin Twp., East Goshen Twp., Edgmont Twp., Westtown Twp., E. Whiteland Twp.	Ongoing	Township Coordination
Maximize opportunities and incentives for green building technologies, minimum energy efficiency code provisions, etc.	PC, BCO, Willistown Township	BofS	Short term, Ongoing	Township Coordination, Township and County Coordination, U.S. Green Building Council Resources, International Energy Conservation Code (IECC), ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers)
Policies for Industrial Development				
Remain consistent with County and regional land use plans in guiding future industrial development along the Route 30 transportation corridor. Limit such uses to the Township's current industrial district; expand in future should regional studies determine need. Encourage green building technologies that promote sustainable development.				
<i>Implementation Strategies</i>				
Consider expanding use provisions to further permit and incentivize "green" industries that focus on renewable energy, recycling, and related job growth.	PC, Willistown Township	BofS	Short term	Township Coordination
Continue to monitor demands for and the available supply of industrial land.	PC, Willistown Township	BofS	Ongoing	Township Coordination
Continue to participate in regional planning activities to promote an appropriate regional distribution of industrial development.	PC, BofS, Willistown Township	CCPC, Malvern Borough, Tredyffrin Twp., E. Whiteland Twp.	Ongoing	Township Coordination
Maximize opportunities and incentives for green building technologies, minimum energy efficiency code provisions, etc.	PC, BCO, Willistown Township	BofS	Short term, Ongoing	Township Coordination, Township and County Coordination, U.S. Green Building Council Resources, International Energy Conservation Code (IECC), ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers)

Table 7-2: Goal 2 – Guide Future Growth

*A note about funding: Given the time horizon of this plan and the recognition that funding sources continually evolve, the emphasis here is on the potential for shared funding opportunities and responsibilities, regardless of the availability of specific funding programs. See Appendix 8 for a selection of funding programs currently available.

Goal 3 - Providing Community Facilities and Services

The third of Willistown’s fundamental planning goals is to provide those community facilities and services that are appropriate for a second class township, that meet the needs of current and future residents, and that can be reasonably provided to the extent of the Township’s financial resources. General policies for community facilities and services emphasize the need to monitor existing facilities and services and improve, support, and expand such offerings where warranted.

The following table summarizes the implementation strategies developed for community facilities and services described in Chapter 6; additionally, the table assigns responsible parties for implementation and coordination, establish a priority for execution, and identifies funding issues.

Goal 3 – Provide Community Facilities and Services	Responsible Parties		Time Frame/ Priority	Funding Options/ Resource Needs*
	Principal	Secondary		
Policy for Fire Protection				
Continue to financially support volunteer fire companies that provide fire protection services to Willistown Township residents.				
<i>Implementation Strategies</i>				
Ensure active and continuing fire service.	Township Administration; Malvern, Paoli, Newtown Square, and Goshen Fire Companies	BofS	Ongoing	Township Coordination w/ Malvern, Paoli, Newtown Square, and Goshen Fire Companies
Continue to financially support volunteer fire companies.	BofS	Township Administration	Ongoing	Township Funding and Coordination
Periodically examine fire response time for each of the four companies to ensure that services are adequate for needs.	Township Administration and Police Department	BofS	Ongoing	Township Funding and Coordination
Policies for Police Protection				
Continue to operate and fund the Willistown Township Police Department; periodically examine whether protective services are adequate for needs; continue to support the Department in its mission to enhance the safety and security of residents; work in partnership with the public to maintain their trust and confidence..				
<i>Implementation Strategies</i>				
Continue to monitor police services to ensure they are adequate; provide funds for necessary services.	Township Administration and Police Department	BofS	Ongoing	Township Funding and Coordination

Policy for Emergency Medical Assistance				
Continue to cooperate with Chester County in provision of '911' services.				
<i>Implementation Strategies</i>				
Continue to cooperate with Chester County in provision of "911" services; routinely monitor response times ensure services are adequate for needs.	Township Administration and Police Department	BofS	Ongoing	Township and County Coordination
Policies for Roads				
Continue to plan for those roads intended for through traffic and those roads intended for local traffic; discourage through traffic on roads not intended for such traffic; continue to improve regional transportation for efficiency and consider innovative strategies to meet needs; encourage ride sharing; continue to maintain local roads; ensure that new development minimizes impacts to the existing road network; encourage traffic calming strategies to ensure safety and promote better circulation; develop strategies to correct any identified circulation and parking problems; examine Route 30 and Route 3 and continue implementation of the Paoli Community Master Plan; consider a program for roads identified as scenic roads; examine opportunities for safe biking and safe equestrian passage; identify the Township’s dirt roads as mixed use vehicular and recreational and establish protection strategies.				
<i>Implementation Strategies</i>				
Use the functional road classification system to guide future land use and preserve local roads Guide development to areas with collector access to the arterial network so as to maintain efficient access and safety control while preserving the rural character of local roads.	PC, Willistown Township	BofS	Ongoing	Township Coordination
Consider undertaking a Township-wide trail/sidewalk circulation plan per the recommendations of the 2020 Comprehensive Plan Update Survey.	PC, P&R Department, Willistown Township	P&RB, BofS, Willistown Trails Association	Short term	Township Funding and Coordination, County Coordination and Support (Vision Partnership Program, etc.)
Consider a specific policy for addressing traffic calming to address high cut-through traffic.	Police Department	PC, BofS, PennDOT	Short term	Township Funding and Coordination
Preserve local road character; consider local adopt-a-highway program (see also Goal 1 – scenic roads recommendations).	PC, BofS, Willistown Township	HC, OSRB, P&RB, P&RD, WCT	Long term	Township Funding and Coordination, Foundation Support
Document traffic conditions and needed road improvements for state and federal funding.	PC, BofS	Township Administration and Police Department	Ongoing, Long term	Township, County, State and Federal Coordination; PennDOT 12 Year Program, DVRPC Transportation Improvement Program (TIP), Liquid Fuels Tax
Investigate circulation funding opportunities.				

Consider creation of an Access Management Plan for the Township road system.	PC, Willistown Township	BofS	Long term	Township Funding and Coordination, County Support (Vision Partnership Program)
Monitor existing signalized intersections and consider advances in signal control technology to improve vehicle detection and intersection signaling; monitor existing signal control settings periodically to ensure proper functioning	PC	BofS	Short term, Ongoing	Township Funding and Coordination, County Support (Vision Partnership Program), PennDOT funding options (such as the "Green Light Go" program)
Policies for Public Transportation				
Encourage land use patterns that increase choices for residents, accommodate but do not require private automobiles for all trips; encourage new development within ½ mile of public transportation to provide pedestrian linkages; promote expansion of public transportation and pedestrian improvements including continued support to the Paoli Community Master Plan.				
<i>Implementation Strategies</i>				
Promote pedestrian linkages between residential neighborhoods and the mixed use areas around Malvern and Paoli; provide sidewalks and/or other pedestrian linkages to the upper third of the Township; coordinate access among sidewalks, recreational trails and public transportation; seek funding to link pedestrian access.	PC, BofS, Township Administration, Willistown Township	P&RB, P&RD, Chester County Parks Department, Willistown Area Trails Association, WCT, CRCWA, Malvern, Tredyffrin, Developers	Ongoing, Long term	Township, County, State and Federal Coordination and Funding; Developer Support
Continue to work with local public transportation providers to ensure public transit is available to those who wish to use it.	PC, BofS, Township Administration	Amtrak, SEPTA, DVRPC, CCPC	Ongoing, Long term	Township, County, Regional, State and Federal Coordination and Funding
Examine zoning, development and redevelopment regulations and opportunities in northern Willistown (i.e., mixed use, retirement communities, public transportation, Paoli)	PC, Willistown Township	BofS	Ongoing, Long term	Township Funding and Coordination, County Support
Policy for Municipal Services and Facilities				
Monitor municipal administrative needs to provide services in the most efficient manner possible. Consider incorporating sustainable municipal practices into decision-making, including energy auditing, energy efficiency programs, green technology use, LED lighting retrofits, and hybrid/ electric vehicle replacement.				
<i>Implementation Strategies</i>				
Continue to provide current municipal services; continue to rely on voluntary boards and commissions for planning and advisory roles.	Township Administration, BofS	PC, P&RB, ESC, OSRB, Zoning Hearing Board (ZHB), Historical Commission (HC), Land Conservancy Authority Board (LCAB), Malvern Library Board (MLB), Paoli Library Board (PLB)	Ongoing	Township Funding and Coordination

Continue innovation and incorporation of sustainable practices into municipal decision-making.	Township Administration, BofS	PC, ESC	Short term, Ongoing	Township Funding and Coordination
Partner with Chester County to implement community-wide objectives of the County's Climate Action Plan; consider participating in PADEP's climate action program; consider preparing a Township climate action policy	PC, ESC	Chester County, PADEP, BofS	Short term, Ongoing	Township Funding and Coordination, County Coordination, State Funding and Coordination
Policies for Water Supply				
Protect and safeguard sources of water supply to ensure an adequate supply for domestic use and fire protection; promote watershed protection consistent with county <i>Watersheds</i> Plan and PA Water Plan; promote groundwater quality and ensure sufficient ground water recharge to meet water supply needs; monitor regional river basin commission activities to ensure that water withdrawal permits do not negatively impact local supplies.				
<i>Implementation Strategies</i>				
Willistown should continue to: protect the quality and quantity of available ground water for future generations; prevent excessive development from negatively impacting existing wells where limited supplies of ground water exist; utilize data from <i>Watersheds</i> and the State Water Plan to assist in the conservation of water resources; follow the ground water protection guidelines of the State Water Plan; monitor for changes in ground water supply due to climate change; continue to seek opportunities to use Township-owned lands for demonstration projects improve water quality, stormwater management, and riparian buffers	Township Administration, BofS	PC, ESC, OSRB	Ongoing	Township Funding and Coordination; State and County Funding and Support
Policies for Sewage Disposal				
Coordinate land use planning with sewage facilities (Act 537) planning; extend public sanitary sewer to developed areas of the Township where existing needs have been documented; coordinate development activity with existing sewage facilities where capacity exists and growth is appropriate; restrict the extension of public facilities in those areas identified for preservation. Examine best available technologies as appropriate; promote beneficial reuse of treated wastewater. Continue homeowner maintenance of individual systems and centralized management of other systems.				
<i>Implementation Strategies</i>				
Follow recommendations of the Act 537 plan. Ensure land use policies are adequately addressed in sewer policies.	Township Administration, BofS	PC, ESC	Ongoing	Township Funding and Coordination; State Funding and Support
Adopt and implement any mandated federal or state program regulations, including registration of responsible management entities.	Township Administration, BofS, Willistown Township	PC, ESC	Ongoing	Township Funding and Coordination; State Funding and Support

Policies for Stormwater Management				
Encourage and maximize ground water recharge; minimize increase in surface water runoff volumes; encourage ecologically sound stormwater Best Management Practices (BMPs) and Green Stormwater Infrastructure (GSI); continue participation in and implementation of PA Act 167 plans underway, including participation in county-wide planning efforts; implement the requirements of the National Pollutant Discharge Elimination System (NPDES) Phase II program.				
<i>Implementation Strategies</i>				
Enforce and update stormwater management standards; define responsible parties for system maintenance; minimize impervious surfaces and maximize infiltration; enforce EPO and regulations therein; control runoff volume so that post development peak runoff rates do not exceed pre-development runoff rates; encourage BMPs/ GSI; monitor impacts of climate change and resolve as needed.	Township Administration, BofS, PC, Willistown Township	ESC	Ongoing	Township Funding and Coordination; State and County Funding and Support (example: Act 167 municipal reimbursement programs)
Implement planning and enforcement on Crum Creek, Ridley Creek, and Little Valley Creek per Act 167 planning process; enforce and participate in NPDES Phase II and MS4 programs, including implementation of minimum control measures.	Township Administration, BofS, PC	PWD, ESC	Ongoing	Township Funding and Coordination; State and County Funding and Support (example: Act 167 municipal reimbursement programs)
Continue SWM improvement projects on Township-owned lands, including tree plantings, etc.; work with local environmental organizations as possible.	Township Administration, P&R Department, P&RB	CRCWA, NL, WCT, BC, etc.	Ongoing	Township Funding; State Funding through CRCWA and other Orgs; State and County Funding
Continue SWM public education through events, informational signage at Township projects, Articles, Website, Social Media, etc.	Township Administration, P&R Department, P&RB	PWD	Ongoing	Township Funding
Policy for Solid Waste Collection, Disposal and Recycling				
Monitor cost and quality of privately provided trash collection services to ensure residents' needs are met; regulate accordingly pursuant to the authority granted under the "Municipal Waste Planning, Recycling, and Waste Reduction Act" (Act 101).				
<i>Implementation Strategies</i>				
Continue to monitor services provided by private contractors, ensuring trash removal and recycling efforts are undertaken in a safe, environmentally appropriate fashion	Township Administration, Recycling Commission (RC)	BofS, ESC	Ongoing	Township Coordination
Solicit appropriate grants for recycling events and public education initiatives	ESC	BofS, PC	Ongoing	Township Coordination and Funding, County, State, and federal grants, Foundation support

Consider adopting a single-use waste ordinance banning the use of plastic bags, cutlery, straws and Styrofoam in commercial establishments.	ESC, PC, Willistown Township	<u>BofS</u>	Short term	Township Coordination
Work with Chester County to implement waste reduction/ zero waste initiatives.	ESC, PC	Chester County	Ongoing	Township and County Coordination
Investigate cost efficiencies (or not) of using a dedicated Township-wide trash and recyclable hauler.	ESC	<u>BofS</u> , Township Administration	Short term	Township Coordination
Consider developing a Township-wide composting program	ECS	<u>BofS</u> , Township Administration	Short term, Ongoing	Township Coordination
Policy for Education				
Monitor Great Valley School District plans which might affect land use planning.				
<i>Implementation Strategies</i>				
Ensure that plans for new construction are consistent with this Plan's recommendations related to land use. Continue meeting quarterly with the school district to discuss student growth and enrollment, as well as proposed Township housing development.	Township Administration, PC, Great Valley School District	<u>BofS</u>	Ongoing	Township Coordination
Monitor school budgets and periodically examine their impacts on property taxes.	Township Administration	<u>BofS</u>	Ongoing	Township Coordination
Policy for Library Services				
Continue to financially support local public library services.				
<i>Implementation Strategies</i>				
Continue to provide financial support to the Malvern and Paoli libraries.	<u>BofS</u> , Township Administration	Malvern Library Board, Paoli Library Board	Ongoing	Township Funding and Coordination

Policies for Parks and Recreation				
Ensure Willistown is an attractive and desirable area; provide parks, preserves and recreation facilities for the Township within an effective budgetary program; continue coordinating with other Township boards and commissions, local municipalities, non-profits and others to preserve, enhance and protect park and recreational facilities and services; continue to solicit feedback from Township residents on park and recreation offerings; manage the ecological assets of the Township; implement the Okehocking Preserve Management Plan and update as needed; establish trail and recreation interconnections throughout the Township and to adjoining municipalities; work towards providing park and recreation amenities with ½ mile of each residents home.				
<i>Implementation Strategies</i>				
Facilities: Focus efforts where needs exist in areas identified on Map 13 (service area access, Areas 1 & 2).	P&RB, P&R Department, BofS, Township Administration	PC, OSRB	Ongoing, Long term	Township Funding and Coordination, State and County Open Space Funding Programs
Continue collaborations with conservation organizations to preserve remaining viable lands.	P&R Department, Township Administration	BC, NL, WCT	Ongoing	Township Funding and Coordination
Continue work of the OSRB to achieve open space and natural resource preservation.	P&R Department, OSRB, Township Administration	BofS, Township Administration	Ongoing	Township Funding and Coordination
Consider two-fold park management plan for maintenance and scheduling.	Township Administration, P&R Department, PWD	BofS, Township Administration	Ongoing	Township Funding and Coordination
Services: Partner with neighboring parks groups and continue improving recreational programming.	P&RB, P&R Department	BofS, Township Administration, WCT, Surrounding municipalities	Ongoing	Township Funding and Coordination
Continue public/ private partnerships for programming offerings.	P&RB, P&R Department	BofS, Township Administration, local equestrian groups, recreation leagues, WCT, etc.	Ongoing	Township Funding and Coordination, cooperative ventures with public and private recreation organizations
Continue to manage, improve and expand recreational programming.	P&R Department	P&RB, BofS	Ongoing	Township Funding and Coordination
Consider use of recreational programming technology.	P&R Department	P&RB, Township Administration	Short term	Township Funding and Coordination

Trail Facilities and Services:				
Promote establishment of recreation trails throughout Township, specifically linkages and interconnections; incorporate trails in all new development, unless deemed inappropriate.	P&R Department, P&RB, Township Administration	WCT, neighboring Municipalities, BofS, PC, OSRB	Ongoing	Township Funding and Coordination, County Funding, DCNR funding/grant programs
Consider undertaking Township-wide trail/sidewalk circulation plan (see Policies for Roads, above)	PC, P&R Department, Township Administration	P&RB, BofS	Short term	Township Funding and Coordination, County Coordination and Support (Vision Partnership Program, etc.)
Consider adding trail design standards to Township Code (including revisions to fencing standards, inventorying requirements, dedication of existing trails, through linkages, etc.)	PC, P&R Department, Willistown Township	P&RB, BofS	Short term	Township Funding and Coordination
Coordinate with Township boards and commissions, non-profits, and others to maintain and monitor trails	P&R Department, Township Administration	BofS, other Township boards and commissions	Ongoing	Township Funding and Coordination
Incorporate interpretive signage as a component of trails programing.	P&R Department	BofS	Ongoing	Township Funding and Coordination
Policies for Open Space Preservation, Landowner Assistance and Private Land Stewardship				
Continue an ongoing dialogue and partnership with private landowners, land trusts and community groups championing land protection and stewardship; continue efforts to protect natural and man-made resources, preserve land and interconnect open space; continue championing public access to open space; provide stewardship and education to the community and incorporate interpretative signage as needed.				
<i>Implementation Strategies</i>				
Continue strategic partnerships in order to fund and pursue land preservation	BofS, OSRB	PC, WCT, CRCWA, NL, BC, local equestrian groups	Ongoing, Long term	Township and Non-profit Coordination, State and County Open Space Funding Programs, Foundation Support
Assemble a system of contiguous greenways that connect or consolidate large areas of open space; identify parcels where public acquisition or easement donation has the most potential public benefit.	BofS, OSRB, PC, Township Administration	WCT, CRCWA, ESC, NL, BC, local equestrian groups	Ongoing, Long term	Township and Non-profit Coordination, State and County Open Space Funding Programs, Foundation Support
Strengthen the open space set-aside provisions in the Township Code.	PC, Willistown Township	BofS, P&R Department	Short term	Township Funding and Coordination
Consider updating Okehocking Preserve Management Plan	P&R Department, Willistown Township	P&RB, BofS	Short term	Township Funding and Coordination, State funding (example: DCNR funding programs)

Educate preserve and open space visitors through events, signage, website posts, etc.	P&R Department, Township Administration	P&RB, OSRB, BofS	Ongoing	Township Funding and Coordination
Policy for Transmission Pipelines				
Monitor existing and future pipeline activity and coordinate with pipeline companies to protect the public health, safety and welfare of Willistown Township residents.				
<i>Implementation Strategies</i>				
Monitor existing and future pipeline activity and examine increased communication with pipeline operators.	Township Administration	BofS, PC	Ongoing	Township Coordination w/ Sunoco Pipeline (Energy Transfer), Laurel Pipeline Co./ Buckeye Partners LP, Texas Eastern Transmission Corporation/Duke/Spectra Energy (now Enbridge).
Continue to enforce Township regulations regarding new development in proximity to transmission pipelines	PC, Willistown Township	BofS	Ongoing	Township Coordination; County, State, Federal Coordination and Support

Table 7-3: Goal 3 – Provide Community Facilities and Services

*A note about funding: Given the time horizon of this plan and the recognition that funding sources continually evolve, the emphasis here is on the potential for shared funding opportunities and responsibilities, regardless of the availability of specific funding programs. See Appendix 8 for a selection of funding programs currently available.

Appendices

Appendix 1:

2020 SURVEY: TOP LINE REPORT BY PLANNING AREA

Introduction

Context

Willistown Township conducted a Comprehensive Plan Update survey from May 22 through July 10, 2020 as an important component of updating its Comprehensive Plan, *Guidelines for Growth*. The Plan looks at Willistown's history, considers current conditions, and charts a vision for the future including how to grow, develop, and improve facilities and services. Opinions expressed in the survey will be analyzed and documented through such reports as this and considered in the Comprehensive Plan update process.

Representation: Households/Tax Parcels

The 2020 Comprehensive Plan Update Survey was sent to each tax parcel (property) owner. The survey was also available online to residents and non-residents. An extensive outreach campaign was conducted encouraging participation. The respondents were asked to fill out one survey per household/business. Restrictions were placed on the online survey so that only one survey could be completed per device, and the paper surveys were only available via USPS mail to parcel owners. Almost 1,400 of 2,216 surveys received were paper.

Keep in mind that the responses are individual residents or business owners representing the sentiment of their entire household or business. The US Census estimates Willistown's population as of July 1, 2019 as 11,014 residents. Chester County identifies 4,571 total tax parcels in Willistown.

Survey Results Representative of Entire Township and Planning Areas

The Township engaged Boathouse Row Marketing and Sales Strategy Group to assess the reliability of the survey, the results of which reflect a very high-level of success. Based on the statistics listed below, there is a 99% Confidence Level for total respondents for this survey. This means that the Township can be confident that *the survey responses represent every resident in Willistown*. There is a 2% Margin of Error for the responses or a range of 4 percentage points.

- ✓ 92.8% of respondents are Willistowners of 2,216 surveys
- ✓ 45% of total parcels responded
- ✓ 48% of residential tax parcels responded

An analysis of the percentage of residents in each Planning Area and the percentage of residents who responded to the survey in each Area shows a Confidence Level of 95% with a Margin of Error of 4% or a range of 8 percentage points. This means that the *distribution of the responses represent each Planning Area accurately* in the survey results. In conclusion, ***the Township can be confident that the survey responses not only reflect every resident in Willistown but also represent the sentiment of each individual Planning Area.***

Survey Responses and Reliability Detail

In the review of completions against representation for the Total Resident Parcels of Willistown Township, the overall response rate of 45% is significantly higher than a typical study where a *good*

sample size is 10% of the total universe.¹ Willistown’s exceptionally high response rate has produced a confidence level of 99% and a very small margin of error or +/- 2%.

Additionally, the responses by Planning Area are also high for each area as shown in the table below. When we look at the completions for the Total survey as well as the completions for each Planning Area, there is both high statistical confidence and very low margin of error.

- ✓ Total Respondents: 99% confidence level; 2% margin of error for all questions. (+/- 2%)
- ✓ Responses by Area: 95% confidence levels, 4% margin of error for all questions (+/- 3% to 3.9%)

Planning Area	Total # Tax Parcels	# Respondents	% of Participation by Tax Parcels Per Area	Confidence Level	Margin of Error
Total	4571	2057	45%	99%	+/- 2%
Area 1 Northwest	684	379	55%	95%	+/- 3.25%
Area 2 Northeast	1,630	587	36%	95%	+/- 3.2%
Area 3 Northcentral	352	256	73%	95%	+/- 3.2%
Area 4 Central	802	435	54%	95%	+/- 3.2%
Area 5 Southwest	1,103	400	36%	95%	+/- 3.9%

It is important to note that the survey has also been tested for over or under representation. There is no Planning Area that skews any of the data in this study nor in the findings.

The survey numbers match quite closely to the distribution of the resident parcels in Willistown: There is no Area that is large enough or too disproportionate to affect the sentiment of the Areas (each group) and/or the Township (overarching results of all groups). This survey presents very solid data.

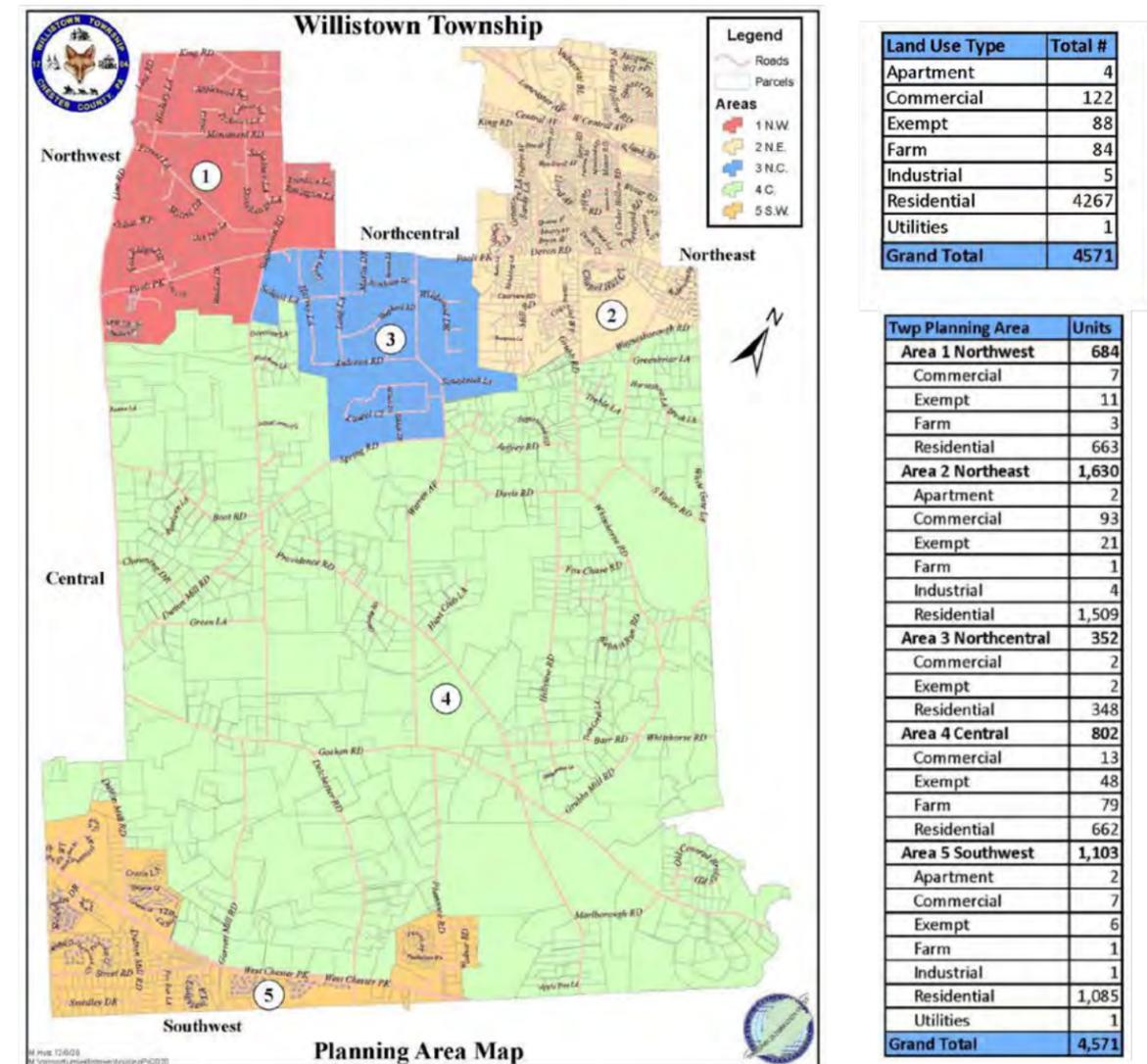
Area	Resident-only Parcels	Completed Surveys
	%	%
Area 1 Northwest	16%	17%
Area 2 Northeast	35%	27%
Area 3 Northcentral	8%	12%
Area 4 Central	16%	20%
Area 5 Southwest	25%	18%
Other	NA	6%

¹ Responses vary by question, as sometimes people skip a question. However, nearly all questions have a high response rate and a low skip rate. Specific response numbers are noted for each question evaluated in this report.

Approach

The 2020 Comprehensive Plan Update Survey Top Line Report by Planning Area is based on the delineation of the Township into 5 Planning Areas identified by number and location and defined by tax parcel: Area 1: Northwest; Area 2: Northeast; Area 3: Northcentral; Area 4: Central; and, Area 5: Southwest.

The Planning Areas were taken from historical Willistown Parks & Recreation surveys and were delineated based on land use/zoning, geography, neighborhood planning, and the sectioning of the Township by major and arterial roadways. The Chester County GIS Department created the following Willistown Township Planning Area Map of the parcels and provided associated tax parcel database information for each Planning Area based on mapping provided by Willistown Township.



Data Presentation

This Top Line Comprehensive Plan Survey Report provides both overarching Township sentiment and findings by Planning Area. The percentage (%) and number (#) of respondents for each Planning Area including the open-ended responses (those where the respondent could write in comments) are presented by question. Top Line response analysis is provided and focuses on the questions in the survey that indicate sentiment, opinion, value, and needs (questions 8 through 17). Further drill down interpretation is customizable and can offer deeper insight.

Statistics Help Identify Sentiment by Planning Area

In the evaluation of top line findings by Planning Area, analysis tools identify any statistically significant differences by Planning Area. In other words, in the individual question reporting the report notes topics, satisfaction, or needs that are driven and distinguishable by Planning Area. It is also noted when there is no difference and the overall sentiment is uniform across the Township.

Reading Percentages When Evaluating Topline Results by Planning Area

When reading percentages by Planning Area, keep in mind that percentages given are not in relation to the overall number of respondents. The percentage of responses by Planning Area is relative to each Planning Area uniquely.

Raw Data Observations

Raw data open-ended responses and verbatims were analyzed in order to quantify household sentiment so that there is a sense of magnitude of the comments and feedback from residents completing the survey's open-ended responses. Key words, themes, and the percentage and number of respondents are noted and should be weighted accordingly. Further drill down analysis of the raw data will likely provide additional valuable insight.

Actionable Parameters

Based on the number of responses and the sample size of each Planning Area, it is recommended that any areas near or above a 15% dissatisfaction amount at the Planning Area level should be explored by the Township to uncover more detail and identify possible solutions.

Summary

Overarching Township Sentiment & Themes Summary

Boathouse Row Marketing has carefully reviewed all responses including the verbatim and open-ended and has found the following overarching sentiment and themes. Note: differences by Planning Area as revealed in this report may warrant further drill down analysis of the raw data to provide additional valuable insight. Those areas are noted below.

- A. Overall, residents are **very happy to live in Willistown** and are **satisfied with the services they are provided** as residents. This overall sentiment is found not only in the measured responses to questions but also in the open ended and unaided responses throughout the questionnaire.
- B. All eight Resource Preservation Efforts presented for importance rating including open space, environmental, trails, historic, scenic, and recreation were in the **92% to 98%** percentiles reflecting a Township-wide sentiment that these preservation efforts are highly valued by residents across all Planning Areas. (Q. 11)
- C. Residents in all Planning Areas and age groups value and want to maintain **open space and the preservation and protection of land for open space and recreation**. (Q. 11, 15)
- D. Of 21 Township services, the following areas were rated **top six in satisfaction** with consistency across all Planning Areas. (Q. 8)
 1. General appearance of the Township
 2. Police Service
 3. Parks and recreation facilities conditions
 4. Snow Removal
 5. Fire Service
 6. Parks and Recreation Programs (statistically tied with Fire Service)
- E. Of the same 21 Township services, the following have the **lowest/least satisfaction** and warrant deeper review and improvement planning. (Q. 8, Q. 9)
 1. Pedestrian circulation: Sidewalks
 2. Bicycle circulation (look at safety versus recreational emphasis)
 3. Road conditions
 4. Pedestrian circulation: Paths & Trails
 5. Traffic management/circulation
 6. Stormwater management
- F. Consistent with findings of previous questions, the residents rate the following as **top 5 most important services to be available** to the Township residents (Q. 13):
 1. Hiking and Walking Trails
 2. Gardening
 3. Sidewalks
 4. Bicycling
 5. Dog Walking
- G. The **top four rated priorities** that Willistown residents believe the Township **needs more of** are below. Each one received a 30% or higher response rate. (Q. 12)
 1. Hiking and walking trails
 2. Bike Paths

- 3. Sidewalks
- 4. Passive/low impact preserves
- H. The **lowest rated priorities** in terms of needing “more” are:
 - 1. Public transportation: Rail
 - 2. Public transportation: Bus
 - 3. Youth activities
- I. The top 3 **most important Township Initiatives** of 9 proposed to residents regarding preservation, circulation, and recreation are (Q. 14):
 - 1. Secure land to preserve open space, protect the environment, and provide passive recreation
 - 2. Secure land for preservation and development of walking/hiking trails
 - 3. Develop a traffic calming and improvement plan

Note: Further drill down analysis by Planning Area may provide additional valuable insight.
- J. The **least important Township Initiatives** conceptually proposed to residents are (Q. 14):
 - 1. Build a multi-purpose sports court
 - 2. Develop a concert venue/amphitheater
 - 3. Develop land for athletic fields

Note: Further drill down analysis by Planning Area may provide additional valuable insight.
- K. A substantial percentage of residents want housing **development to stop or be reduced**. They are **open to development** that provides a **variety** of housing types. The older population voiced a desire for housing opportunities (not senior living) that are smaller lot yet affordable for their fixed income levels. Further drill down analysis can provide additional valuable insight. (Q. 10, Q. 17)
- L. Of the many modes of communication, the Township could explore those that are most popular or most regularly used and to see how it can capitalize on their popularity. Conversely, the Township could explore possible economic or digital efficiencies for those that are less utilized.

Following are the **top 5 utilized modes of communication**. (Q. 16)

 - 1. TowneCrier newsletter (via snail mail)
 - 2. Willistown Township Notify Me email/text
 - 3. Parks & Recreation E-newsletter
 - 4. Willistown Township website (willistown.pa.us)
 - 5. Malvern Community Forum Facebook

Top 5 underutilized modes of communication are:

 - 1. Willistown Township Twitter
 - 2. Willistown Township Instagram
 - 3. Flyers in the Township Administration Office
 - 4. Malvern Community Forum Facebook (tied)
 - 5. Willistown Community Page Facebook (tied)

Prepared by:

Rosemarie McElwee Console
Boathouse Row Marketing, LLC | Malvern, PA

Mary N. Hundt
Willistown Township Director of Parks & Recreation
610-647-5300 x224 | mhundt@willistown.pa.us

Appendix 2:

HISTORIC TREES IN WILLISTOWN TOWNSHIP

Willistown Township’s Historic Commission inventoried historic trees as part of a community inventory that eventually became part of the Township’s 1993 *Open Space, Recreation, and Environmental Resources Plan*. As part of the Township’s Tricentennial Celebration in 2004 the Township once again inventoried what it referred to as “treasured trees” for a tree tour map of the Township. While some of the trees on the 2004 list came from the original inventory, other notable trees were added and trees no longer standing were deleted. A complete list of trees identified in both inventories, starting with those trees inventoried for the 2004 Tricentennial, and showing those trees no longer standing, became this appendix for the Township’s 2011 Comprehensive Plan. What follows is the same list, notated to indicate trees that have been lost since the 2011 plan.

- 1) **American Beech** (*Fagus grandifolia*) – location: Paoli Pike; estimated age: approximately 280-340 years (lost since the 2011 plan); also listed as #1 in 1993 plan.
- 2) **White Oak** (*Quercus alba*) – location: Bryan Road; estimated age: 300 years; also listed as #2 in 1993 plan.
- 3) **Red Maple** (*Acer rubrum*) – location: Grubb Road; estimated age: 100 years.
- 4) **White Oak** (*Quercus alba*) – location: Grubb Road; estimated age: 100 years.
- 5) **White Oak** (*Quercus alba*) – location: Grubb Road; estimated age: 125 years.
- 6) **White Oak** (*Quercus alba*) – location: Waynesborough Road; estimated age: 150 years (no longer standing).
- 7) **Norway Maple** (*Acer platanoides*) – location: South Valley Road; estimated age: 100+ years.
- 8) **American Sycamore** (*Platanus occidentalis*) – location: White Horse Road; estimated age: 203 years.

- 9) **American Sycamore** (*Platanus occidentalis*) – location: White Horse Road; estimated age: 275 years; also listed as #5 in 1993 plan.
- 10) **American Sycamore** (*Platanus occidentalis*) – location: White Horse Road; estimated age: 250 years.
- 11) **American Sycamore** (*Platanus occidentalis*) – location: White Horse Road; estimated age: 250 years.
- 12) **Norway Maple** (*Acer platanoides*) – location: Hillview Road; estimated age: 110 years.
- 13) **Norway Maple** (*Acer platanoides*) – location: Hillview Road; estimated age: 110 years.
- 14) **Tulip Poplar** (*Liriodendron tulipifera*) – location: Hillview Road; estimated age: 95 years.
- 15) **White Oak** (*Quercus alba*) – location: Grubbs Mill Road; estimated age: 275 years; also listed as #9 in 1993 plan.
- 16) **Silver Maple** (*Acer saccharinum*) – location: crossroads of Goshen and Providence Roads (Village of White Horse); estimated age: 73 years.
- 17) **Honey Locust** (*Gleditsia triacanthos*) – location: crossroads of Goshen and Providence Roads (Village of White Horse); estimated age: 200 years.
- 18) **American Sycamore** (*Platanus occidentalis*) – location: Providence Road; estimated age: 175 years.
- 19) **Burr Oak** (*Quercus macrocarpa*) – location: Providence Road; estimated age: 200 years.
- 20) **Burr Oak** (*Quercus macrocarpa*) – location: Providence Road; estimated age: 200 years.
- 21) **American Sycamore** (*Platanus occidentalis*) – location: Goshen Road/Providence Road; estimated age: 270 - 290 years; also listed as #3 in 1993 plan.
- 22) **Ash** (*Fraxinus excelsior*) – location: Goshen Road; estimated age: 160 years.
- 23) **Ash** (*Fraxinus excelsior*) – location: Delchester Road; estimated age: 300 years (designated a William Penn Tree by Longwood Gardens).

24) **Beech** (*Fagus grandifolia*) – location: Brushwood Bryn Clovis Annex off Sugartown Road; estimated age: 300+ years.

25) **Oak** (*Quercus alba*) – location: Brushwood Bryn Clovis Annex off Sugartown Road; estimated age: 300+ years.

26) **Copper Beech** (*Fagus sylvatica var. purpurea*) – location: Boot Road; estimated age: 350 years.

27) **American Beech** (*Fagus grandifolia*) – location: Sugartown Road at Village of Sugartown; estimated age: 200+ years.

28) **Ash** (*Fraxinus excelsior*) – location: Sugartown Road; estimated age: 200 years.

29) **White Oak** (*Quercus alba*) – location: Sugartown Strawberries Farm off Sugartown Road; estimated age: 250 years.

30) **Copper Beech** (*Fagus sylvatica var. purpurea*) – location: Sugartown Strawberries Farm off Sugartown Road; estimated age: unknown.

31) **American Sycamore** (*Platanus occidentalis*) – location: Tait’s Farm; estimated age: 264 years (no longer standing); listed as #4 in 1993 plan

32) **White Oak** (*Quercus alba*) – location: South Valley Road; estimated age: 239 years; listed as #6 in 1993 plan.

33) **White Oak** (*Quercus alba*) – location: Northeast Corner of Jaffrey and Warren Avenue; estimated age: 250 years (no longer standing); listed as #7 in 1993 plan.

34) **Silver Maple** (*Acer saccharinum*) – location: Sugartown and Boot Roads; estimated age: 108 years (no longer standing); listed as #8 in 1993 plan.

35) **Silver Maple** (*Acer saccharinum*) – location: 761 Hillview Road; estimated age: 298 years; listed as #10 in 1993 plan.

36) **White Ash** (*Fraxinus americana*) – location: 34 Rabbit Run Road; estimated age: 248 years (no longer standing); listed as #11 in 1993 plan.

37) **American Beech** (*Fagus grandifolia*) – location: Hillview Road; estimated age: 348 years; listed as #12 in 1993 plan.

38) **White Oak** (*Quercus alba*) – location: Hillview Road; estimated age: 250 years; listed as #13 in 1993 plan.

39) **Tulip Poplar** (*Liriodendron tulipifera*) – location: Hillview Road; estimated age: 190 years; listed as #14 in 1993 plan.

40) **American Sycamore** (*Platanus occidentalis*) – location: Jarvis Property; estimated age: 210 years (no longer standing); listed as #15 in 1993 plan.

41) **American Sycamore** (*Platanus occidentalis*) – location: corner of White Horse and Grubbs Mill Road; estimated age: 350 years; listed as #16 in 1993 plan.



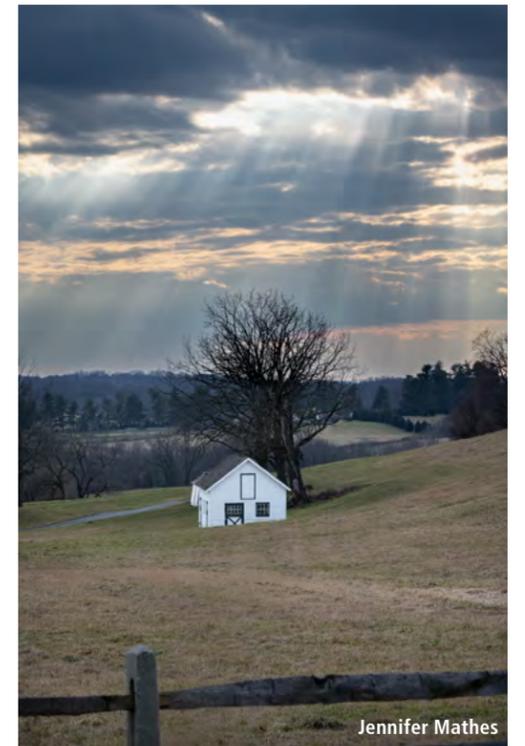
Cindi Myers

Appendix 3:

VISUAL ACCENTS AND INTRUSIONS

- 1) Stone Bridge
- 2) Ruin
- 3) Spring House Building
- 4) Stone Bridge
- 5) Stone Wall
- 6) Stone Bridge
- 7) Stone Bridge
- 8) Barn Ruin
- 9) Stone Wall
- 10) Stone Wall
- 11) Stone Wall
- 12) Stone Wall
- 13) Stone Wall
- 14) Village
- 15) Stone Wall
- 16) Stone Wall
- 17) Stone Wall
- 18) Stone Wall
- 19) Stone Wall
- 20) Stone Wall
- 21) Stone Wall
- 22) Village
- 23) Ruin
- 24) Old Wind Mill
- 25) Stone Wall
- 26) Ruin
- 27) Wetland

- A) Utility Transformers & Cell Tower
- B) PA DOT Maintenance
- C) Cell Tower
- D) Cell Tower



Jennifer Mathes



Jennifer Jacobs

Appendix 4:

METHODOLOGY AND RECOMMENDED NETWORK FOR SCENIC ROAD DESIGNATION

Scenic roads are defined as roads having a high degree of natural beauty and historic or cultural value. Criteria used for selection (taken in part from the FHWA publication, *Scenic Byways* and the National Scenic Byways Program @ www.bywaysonline.org) included combinations of the following:

1. Scale of roads (size, dimension, functional road classification, etc.);
2. Characteristics of roads (runs with topography, winds, changes with terrain, etc.);
3. Scenic accents and/or vistas along roads;
4. Historic characteristics of, or along, roads (historic houses, stone walls, ruins, village settlement, spring houses, covered bridges, stone bridges, etc.);
5. Natural resources and/or ecosystems in close proximity to roads (watercourses, wetlands, rock outcrops and other geologic formations, woodlands, meadows, wildlife habitat, PA natural diversity inventory sites, etc.); and
6. Recreational activities along or adjacent to roads.

A brief description of each road, its positive or negative attributes, the criteria that apply to it, and its functional road classification, follow.

1. Boot Road - Stretch between Township Line Road and Sugartown Road

Attributes - Both the north and south sides of the road contain open land within the public viewshed, forested patches, ruins, stone walls, and historic structures (wetlands, steep slopes and prime agricultural soils present); road intersects Sugartown Historic Village National Register District; some development on the south side of the road which partially detracts from the roads scenic quality

Applicable Criteria - 1,2,3,4,5
Functional Road Classification - Minor Arterial

2. Sugartown Road - Stretch between Paoli Pike and Goshen Road

Attributes - Both the east and west sides of the road contain large expansive views of open land, large portions of which are within the public viewshed; patches of forested sections with tree canopy providing the scenic boundary elsewhere (PNDI site and prime agricultural soils present); numerous vistas, historic structures (including the Sugartown Historic Village National Register District)

Applicable Criteria - 1,2,3,4,5,6
Functional Road Classification - Major Collector

3. Green Lane - Between Dutton Mill Road and Sugartown Road

Attributes - Partially wooded, dirt road which gives a rural feel; south side near Sugartown Road provides views of open land within the public viewshed; road crosses tributary; significant portions of prime agricultural soil present; historic structure visible; some development which partially detracts; size and make-up of road contribute significantly to scenic quality

Applicable Criteria - 1,2,3,4,5
Functional Road Classification - Local Road

4. Spring Road - Between Sugartown Road and Warren Avenue

Attributes - Predominantly wooded, however open land within the public viewshed comprises a significant portion of the south side of the road; historic structures along the road (including the road's bisection of the Sugartown Historic Village National Register District); road crosses west branch of the Crum Creek; ample prime agricultural soils

Applicable Criteria - 1,2,4,5
Functional Road Classification - Local Road

5. Warren Avenue - Portion between Spring Road/Jaffrey Road and Goshen Road

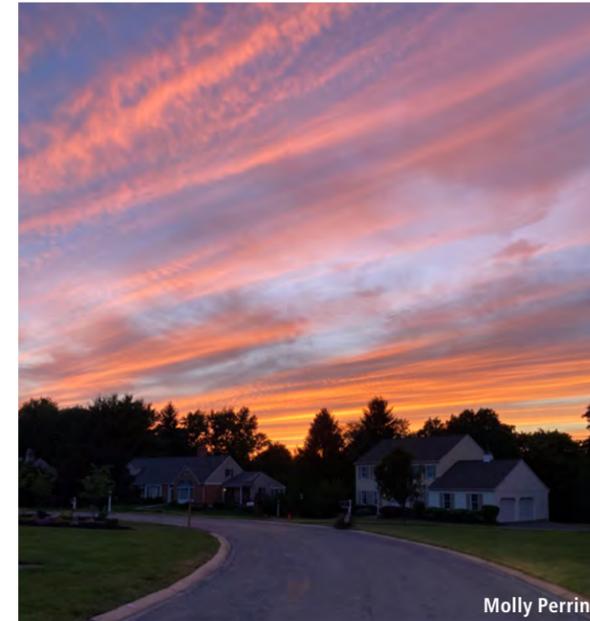
Attributes - Upper portion of road between Spring and Providence Roads heavily wooded with tributary of Crum Creek intersecting road (portions of steep slope leading down to tributary); evidence of wetlands along portion of creek adjacent to road; southern portion of road (between Providence and Goshen Roads) is dirt and adds a rural feel; several patches of open land within the public viewshed; several historic sites; scenic vista at intersection with Davis Road; Radnor Hunt Club backs up to the southeast side of the road

Applicable Criteria - 1,2,3,4,5,6
Functional Road Classification - Local Road and Major Collector

6. Davis Road - Between Warren Avenue and Grubb Road

Attributes - North side of road predominantly wooded with White Manor Country Club occupying the land to the south of the road; scenic vista at intersection with Warren Avenue; road passes over Crum Creek with evidence of wetlands

Applicable Criteria - 1,2,3,5,6
Functional Road Classification - Local Road



7. Hillview Road - Between Davis Road and Barr Road

Attributes - Tree-lined road with pond; west side of road borders White Manor Country Club; road passes over Crum Creek; several small patches of open land within the public viewshed; visual evidence of steep slopes and evidence of wetlands adjacent to creek

Applicable Criteria - 1,4,5,6
Functional Road Classification - Local Road

8. Grubb Road - Portion between Treble Lane and White Horse Road

Attributes - West side of road predominantly wooded; east side contains several portions of open land within the public viewshed; scenic accent (spring house) and historic structure; evidence of steep slopes, wetland area and prime agricultural soils

Applicable Criteria - 1,2,3,4,5
Functional Road Classification - Local Road

9. White Horse Road - Between South Valley Road and Grubbs Mill Road

Attributes - Several open sections of road with much land in the public viewshed; visual accents (barn ruin and stone bridge over the Crum Creek); historic structures; stone wall along portion of road; evidence of prime agricultural soils

Applicable Criteria - 1,2,3,4
Functional Road Classification - Major Collector

10. Treble Lane - Between Grubb Road and South Valley Road

Attributes - Part wooded and part open land within the public viewshed; bridges the scenic portions of Grubb and South Valley Roads; portion of road fairly developed (detracts from scenic quality); prime agricultural soils present

Applicable Criteria - 1,5
Functional Road Classification - Local Road

11. South Valley Road - Between Waynesborough Road and the township line

Attributes - Almost entire stretch of this road open with good public views; Scenic vista; several historic structures, including a stone wall and stone bridge (traversing the Crum Creek); portion of road tree-lined; portions also fairly developed but development does not significantly detract from scenic quality; evidence of prime agricultural soils and wetlands (within proximity of creek)

Applicable Criteria - 1,2,3,4,5
Functional Road Classification - Major Collector

12. Grubbs Mill Road - Between township line and Goshen Road

Attributes - Significant portions of open land within the public viewshed; sections partially tree-lined with stone wall running along road; road crosses Crum Creek (portions of road follow creek); steep slopes define character of other portions of the road

Applicable Criteria - 1,2,3,4,5
Functional Road Classification - Major Collector

13. Providence Road - Portion between Warren Avenue and Apple Tree Road

Attributes - Significant portions of land (primarily pasture) within the public viewshed; several scenic vistas comprising the most expansive views in the Township; numerous historic structures, including the Whitehorse Village area (determined to be eligible for the National Register of Historic Places); Radnor Hunt Club within one scenic vista; stone walls along large portion of the road; tributary of Crum Creek originates near road

Applicable Criteria - 1,2,3,4,5,6
Functional Road Classification - Major Collector

14. Goshen Road - Portion between Dutton Mill Road and Marlborough Road

Attributes - Significant portions of land along road in the public viewshed; scenic vistas; numerous historic structures, including the Whitehorse Village area (determined to be eligible for the National Register of Historic Places); stone walls along large portion of the road; Radnor Hunt Club along one portion of road; rolling countryside; evidence of prime agricultural soils

Applicable Criteria - 1,2,3,4,5,6
Functional Road Classification - Major Collector

15. Marlborough Road - Between Providence Road and Goshen Road

Attributes - Stone wall and historic structures highlight this small road; road is comprised almost entirely of open land within the public viewshed, portion or road tree-lined; evidence of prime agricultural soils

Applicable Criteria - 1,2,3,4,5
Functional Road Classification - Local Road

16. Plumsock Road - Between Goshen Road and West Chester Pike (Rt. 3)

Attributes - Wooded, dirt road with strong rural feel; few areas within the public viewshed; several historic structures; tributary of Ridley Creek intersects road, portion runs with road; significant steep slopes and evidence of wetlands within close proximity to road; size and make-up of road contribute significantly to scenic quality

Applicable Criteria - 1,2,4,5
Functional Road Classification - Local Road

17. Delchester Road - Between Goshen Road and West Chester Pike (Rt. 3)

Attributes - West side of road offers significant open land within the public viewshed; expansive scenic vista point; several historic structures, including a stone wall along portions of the road; evidence of prime agricultural soils; rolling topography adds to scenic quality; PENN DOT maintenance building is an intrusion which detracts from scenic quality

Applicable Criteria - 1,2,3,4,5
Functional Road Classification - Local Road

18. Garrett Mill Road - Between Goshen Road and West Chester Pike (Rt. 3)

Attributes - Largely wooded with patches of open areas that provide views; numerous historic structures, as well as a stone wall along portions of the road; small one lane bridge with historic grouping of homes; small scale of road and rolling hills contribute greatly to scenic quality; evidence of wetlands and PNDI sites

Applicable Criteria - 1,2,3,4,5
Functional Road Classification - Local Road

19. West Chester Pike (PA 3) - Section between Plumsock Road and Garrett Mill Road

Attributes - North side of road contains open land within the scenic viewshed; forested sections, including locally important vegetation; steep slopes, which contribute to the views along the road; historic barn; evidence of PNDI site; Ridley Creek and related tributary cross under road; scale of road and scenic intrusion (Penn DOT storage facility) partially detract from road's scenic quality

Applicable Criteria - 2,3,4,5
Functional Road Classification - Principal Arterial

20. Line Road - Section between Paoli Pike and Goshen Road

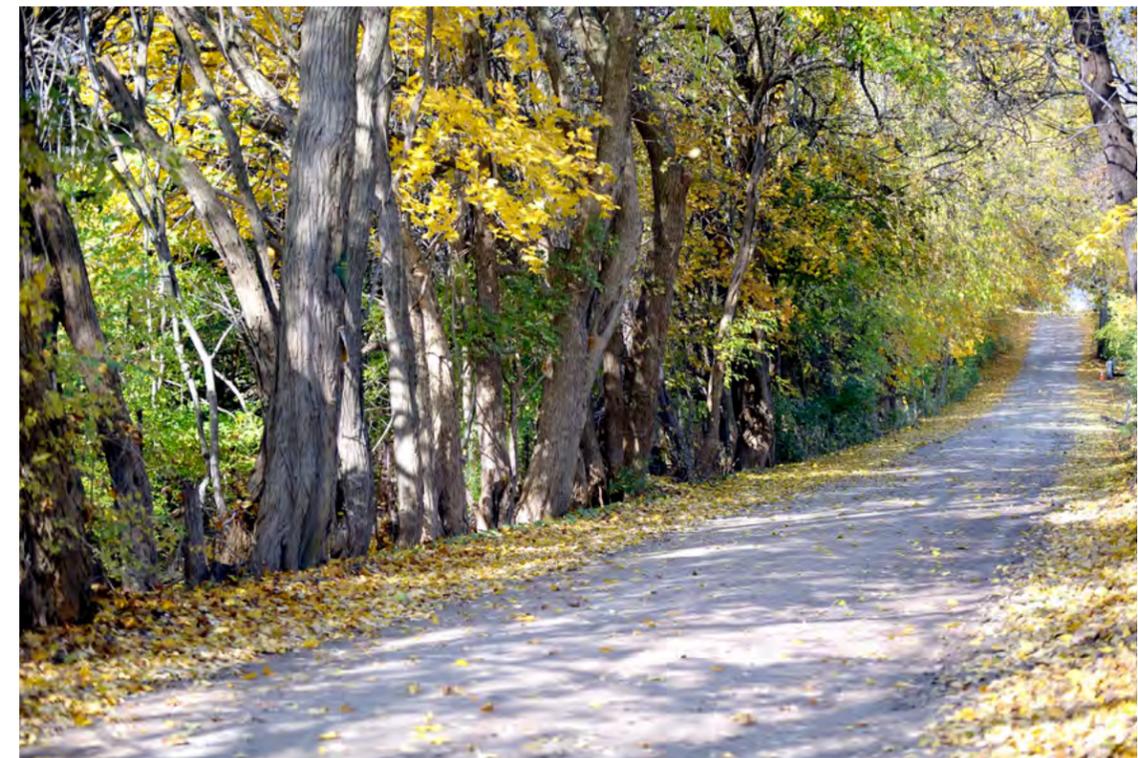
Attributes – East side of road contains several areas of open land with scenic viewshed, scenic accents, and two vista points; also included are historic structures, forested land, and recently available township park land. Note: the west side of the road, while scenic in many areas, is part of East Goshen Township.

Applicable Criteria: 1,3,4,5,6
Functional Road Classification – Local Road

21. Barr Road – Between Providence Road and Grubbs Mill Road

Attributes – Contains a scenic viewshed, scenic accent, and sloping forested land; residential development along road does not impeded scenic quality.

Applicable criteria: 1,3,5
Functional Road Classification – Local Road



Appendix 5:

HISTORIC RESOURCE INVENTORY

	Parcel ID#	Address	Breou Map Name	AoQ Page	AoQ Name	Circa
1	54-2C-119	7 Farmhouse Lane	Mrs. Fahanstock	608	Thomas Griffith House	1799
2	54-2-32	743 Monument Road	John Dean	616	Abner Rogers House	1810
3	54-2-38	544 Sugartown Road	Hughes	632	Samuel Rogers House	1835
4	54-2-41	728 Monument Road (also 730)	Wm. Williams	620	Joseph Lewis House	1820
5	54-2-39	744 Monument Road	J. Farra	635	Samuel Lewis House	1860
6	54-2-70.1	841 Forest Lane	Clarkson Hall	623	Maris Hall House	1823
7	54-2-70.3	6 Tiburon Lane	Clarkson Hall			
8	54-2-92.1	369 Paoli Pike	Woodward Brown	629	Thomas Temple House	1830
9	54-2-109	356 Paoli Pike	H. Esler	604	Enoch Malin House	1785
10	54-2-57	583 Sugartown Road		626	Joseph Rogers House	1827
11	54-3-23	9 Callery Way	William. Cox	613	William Cox House	1802
12	54-3-16	660 Sugartown Road	B. Stewart			
13	54-3-432	655 Sugartown Road	Thomas Cox	387	Thomas Garrett House	1760
14	54-3-17	673 Sugartown Road	E. Cox			
15	54-3-18	675 Sugartown Road	J. Bishop			
16	54-6-4	687 Sugartown Road	J. Bishop			
17	54-6-1.6	310 Boot Road	Granville Williams	468	Samuel Garrett House	1740
18	54-5-6	350 Boot Road	Howard Williams	464	Benoni Griffith House	1730
19	54-5-8	213 Line Road	Thomas Manning	474	Samuel Crockson House	1740
20	54-6-23	418 Dutton Mill Road	James Casey	481	Jess Jones House	1750
21	54-6-27.1	409 Dutton Mill Road	Josh. Garrett	532	Joshua Garrett House	1859
22	54-6-29	401 Dutton Mill Road	J. Smith			
23	54-6-30.1	47 Green Lane	Humphrey Taylor	526	Daniel Sinquet House 2	1840
24	54-6-31	772 Sugartown Road	J.O. Thompson	510	Daniel Sinquet House 1	1797
24.1	54-6-31	17 Green Lane		510	Daniel Sinquet 2nd House	
25	54-6-46	779 Sugartown Road	S. Smith	405	James Coggins House	1808
26	54-6-28	8116 Goshen Road	Isaac Dutton	456	Joshua Ashbridge House	1798
27	54-8-2	240 Dutton Mill Road	Benjamin Smedley	167	William Griffith House	1815
28	54-8-6	209 Dutton Mill Road	Thompson (barn)	152	Noah Brady House	1810

	Parcel ID#	Address	Breou Map Name	AoQ Page	AoQ Name	Circa
29	54-8-28	101 Worington Drive	Milton Garrett	164	Barn	
29.1	54-8-28.1	111 Worington Drive	Milton Garrett	164	Smedley School House	1840
29.2	54-8-28.1	105 Worington Drive	Aaron Garrett	164	Garrett Tenant House	1815
30	54-8-33	2093 Dutton Mill Road	D.W. Green	156	Willistown Inn	1810
31	54-8-34	2087 Dutton Mill Road	D.W. Green	157	Willistown Inn	1810
32	54-8-22.2A	3600 Dartmouth Road	Elwood Smedley	150	Richard Cox House	1808
32.1	54-8-22	3798 Dartmouth Road	Elwood Smedley	150	Cox Springhouse	1808
33	54-8-35	42 Street Road	Elwood Smedley	148	Thomas D Smedley House	1805
34	54-8-64.26	2071 Dutton Mill Road	Thomas Smedley			
35	54-8-64.14	2069 Dutton Mill Road	Elwood Smedley	149	Thomas D Smedley House	1805
36	54-8-73	1500 Meadow Hunt Lane	Marshall Matlack		Amos Yarnall House?	
37	54-9-2	5214 West Chester Pike	Davis Broomhall	280	William Penn Inn	1801
38	54-9-3	5208 West Chester Pike	Hannah Green	284	Henry Bowman House	1805
39	54-7-47.2	5206 West Chester Pike	Samuel Davis	213	Enoch Yarnall House	1815
40	54-7-47	980 Providence Road	Samuel Davis	208	Moses Yarnall House	1880
41	54-7-49	1018 Providence Road	Jesse Leedom	277	Caleb Yarnall 1 House	1800
42	54-7-60.2	987 Providence Road	Eli Yarnall			
43	54-7-62	15 Marlborough Road	Nathan Yarnall	208	Eli Yarnall House	1880
44	54-7-63	11 Marlborough Road	Reuben Thomas			
45	54-7-64	9 Marlborough Road	Reuben Thomas	265	Frances & Ruben Thomas	1829
46	54-7-65	6041 Goshen Road	Nathan Yarnall	256	Townsend Thomas House	1795
47	54-7-65.2	6045 Goshen Road	Nathan Yarnall			
48	54-7-68	6029 Goshen Road	Joseph Wharton	259	Isaac Yarnall House	1795
48.1	54-7-68.1	6003 Goshen Rd		53	Bartram Bridge	1860
49	54-7-66	6019 Goshen Road	Is. Bartram	243	Mordecai Thomas Tennent	1817
50	54-7-67	6011 Goshen Road	D. Davis (estate)	262	Isaac & Jane Baker House	1808
51	54-7-22	6004 Goshen Road	Jonathan Sager	240	Mordecai Thomas House	1796
52	54-7-21	6014 Goshen Road	Is. Bartram	235	Isaac Thomas House & Mill	1765

	Parcel ID#	Address	Breou Map Name	AoQ Page	AoQ Name	Circa
53	54-7-19	6074 Goshen Road		301	Nathan Yarnall tenant House	1820
54	54-7-54.1	16 Marlborough Road	Phebe Garrett	249	Joseph Thomas House	1795
55	54-7-54	6101 Goshen Road	White Horse Sch	67	Whitehorse School #4	1869
55.1	54-7-54	951 Providence Road		310	Joseph Thompson House	1795
55.2	54-7-54	6097 Goshen Road		307	William Cochran House	1840
55.3	54-7-54	28 Marlboro Road		304	Joseph Barr House	1840
56.1	54-7-44	944 Providence Road aka 970	Jesse Davis	227	John Yarnall House	1765
56.2	54-7-44	944 Providence aka 940		252	Jacob Vogdes House	1795
56.3	54-7-44	944 Providence aka 966		287	Nathan Evans House	1849
56.4	54-7-44	947 Plumsock Road		313	Preston Hibbard House	1872
57	54-7-45	7025 Goshen Road	Th. Massey (estate)	244	Thomas Massey House	1780
58	54-6-88	7037 Goshen Road	Elizabeth Yarnall	299	John Massey House	1810
59	54-6-59	7036 Goshen Road	M.A. Weir	297	Mary Ann Weir House	1845
60	54-6-58	7040 Goshen Road	William Evans	298	Hannah Yarnall House	1850
61	54-6-60	852 Providence Road	William Johnson	348	Caleb Hibbard Barn	1790
62	54-6-57	826 Providence Road	Josiah Hibberd	352	Benjamin Hibbard House	1796
63	54-6-55.3	840 Warren Avenue	Davis Garrett	435	Enos Hibbard House	1850
64	54-6-54	816 Warren Avenue	Amos Garrett	418	Davis Garrett 2 House	1805
65	54-6-53	808 Warren Avenue	Harvey Garrett		Samuel Pennock House	1740
66	54-7-15	864 Grubbs Mill Road also 866	G.W. Miller	215	James Massey House	1730
66.1	54-7-15	865 Grubbs Mill Road also 866	G. W. Miller	219	Thomas Massey House	1730
67	54-7-6.1	775 Hillview Road	Crawford Barr	367	George S Robert House	1850
68	54-7-15.2	16 Barr Road (historic?)	George W. Miller			
69	54-7-16	2702 Whitehorse Road	William Stong	221	Levi & George Massey House	1783/1808
70	54-7-11.1	822 Grubbs Mill Road	William Stong	316	Nathaniel Grubb House	1750
71	54-7-10.2	8 Barr Road	William Stong	357	Samuel Grubb Tenant	1811
71.1	54-7-10.2	8 Barr Road	William Strong	358	Samuel Grubb Barn	1811
72	54-4-45	34 Rabbit Run Road	William Stong	360	Mary Grubb Tenant	1811
73	54-4-20	800 Grubbs Mill Road	Grubb's Mill	323	Nathaniel Grubb Grist Mill	1700
73.1	54-4-21	800 Grubbs Mill Road	Grubb House	323	Samuel Grubb House	1826

	Parcel ID#	Address	Breou Map Name	AoQ Page	AoQ Name	Circa
74	54-4-22	791 Grubbs Mill Road	George Entrekin	365	Joseph Lukens House	1845
75	54-4-23	2424 Grubbs Mill Road	Enoch Ottey	363	Enoch Ottey House	1840
76	54-6-17	741 Hillview Road	T. Philips			
77	54-6-18	760 Hillview Road	F. Leonard			
78	54-6-19	764 Hillview Road	Franklin Leonard	331	Thomas Philips House	1770
79	54-7-1	766 Hillview Road	Franklin Leonard			
80	54-6-17	831 Providence Road	William Evans barn	335	Joshua Evans Barn	1840
81	54-6-12	750 Warren Avenue	William Rogers	442	Samuel Garrett House 4	1810
82	54-6-10	739 Providence Road	Joseph Bennett	428	Samuel Hall House	1760
83	54-6-49	728 Providence Road	M.E. Church			
84	54-6-9.5	3 Steeplechase Lane	J. Bishop			
85	54-3-188	231 Spring Road	Jno. Garrett	431	John Hall House	1786
85.1	54-3-188.1	231 Spring Road	Jno garrett	431	John Hall Barn	1850
86	54-3-192	736 Warren Avenue	Mrs. M. Hall	450	Caleb Hall House	1832
87	54-3-189	221 Spring Road	William Williams	423	Thomas Hall House #2	1753
88	54-3-190	209 Spring Road	Morgan Hall			
89	54-3-322.1	155 Davis Road (aka 729 Warren)	Josiah Hibberd	579	Richard Robinson House	1805
90	54-3-325	129 Davis Road	J. Harris	555	John Harris House	1790
91	54-3-314.3	123 Jaffrey Road	Jos James	543	Joseph James House	1765
92	54-4-16	2400 Grubbs Mill Road	Enoch Ottey	341	Caleb Smedley House	1780
93	54-4-10	2340 S. Valley Road	S. Davis			
93.1	54-4-10	2320 S. Valley Road		572	Francis Smedley House	1790
93.2	54-4-10	2312 S. Valley Road		558	Benjamin Cox House	1790
93.3	54-4-10	2320 S. Valley Road		589	Patrick Bonney Tenant	1867
93.4	54-4-10	2320 S. Valley Road		588	Patrick Bonney House	1855
93.5	54-4-10	741 Whitehorse Road		539	Jeffery Smedley Tenant House	1850
94	54-3-333	732 Whitehorse Road	R. Paist	536	George Smedley House & Barn	1746
95	54-4-9	2287 S. Valley Road	P. Bond			
96	54-4-7	2307 S. Valley Road	W. Alexander	591	William Nuzum House	1857
97	54-4-6	2309 S. Valley Road	S. Davis	590	Rubin Hampton House	1857
98	54-3-384	333 S. Valley Road	Thomas Smedley	593	John Wilson House	1860
99	54-3-384.1	339 S. Valley Road	Smedley School	68	E. Willistown School	1871

	Parcel ID#	Address	Breou Map Name	AoQ Page	AoQ Name	Circa
100	54-3-379	179 Grubb Road	R.F. Matthews	577	Smedley Barn	1850s?
101	54-3-301	647 Warren Avenue	Hibbard Evans	548	Isaac Malin House	1780
102	54-3-300.17	158 Grubb Road	Robert Morris	562	Caleb Maris House	1790
103	54-3-357	151 Grubb Road	R. Clemens	583	Robert Clemens House	1808
104	54-3-383.2	327 S. Valley Road	Thomas Smedley	550	Thomas Smedley House	1790
105	54-3-377	13 Horseshoe Lane	P. Yarnall	586	Peter Yarnall House	1830
106	54-3-376	9 Horseshoe Lane	Thomas Smedley			
107	54-3-386	2028 Waynesborough Road	William Wayne	665	William Wayne Tenant	1870
108	54-3-387	2030 Waynesborough Road	William Wayne		Barn Ruins w/20th Cen House	
109	54-3-299	136 Grubb Road (aka 17 Mill)	C. Maris	568	Caleb Maris House	1838
110	54-3-287	8 Greenstone Way	Joseph Gowdy	638	John Phillips House	1805
111	54-3-340	28 Devon Road	William Edwards	662	Jonathan Maris House	1840
112	54-1Q-306	69 Devon Road	Bajeux	641	Joseph Roland House	1810
113	54-3B-42	14 Queens Avenue	Jacob Roberts	654	Ellis Williams House	1817
114	54-1P-174	57 Grubb Road	Greentree School	70	Greentree School	1874
115	54-1L-83	172 Lancaster Avenue	I. Major	73	Church of Good Samaritan	1876
116	54-1P-10	13 Arlington Road	G.T. Ruth	649	Gideon Ruth 2nd House	1876
117	54-1P-1	454 King Road	G.T. Ruth	646	George King House	1810
118	54-1-23	332 Central Avenue	D. Evans	651	Joseph King House & Store	1815
119	54-1-20	340 Central Avenue	D. Evans	660	Sarah Bartholomew	1839
120	54-1Q-316	40 Cobblestone Drive		N/A	John Christian Bullett	1899
121	54-8-29	401 Dutton Mill Road	John Storkey	528	John Storkey Slaughterhouse	1886
122	54-3-333	732 Whitehorse Road	R. Paist	541	Smedley Spring & Tenant House	1765
S-1	54-6-3	266 Boot Road	B. Stewart	502	John Garrett House	1795
S-1a	54-6-3	272-274 Boot Rd	B. Stewart	509	Sugartown Blacksmith Home	1830
S-1b	54-6-3	266 Boot Rd	B. Stewart	503	Cobbler shop	1800 +/-
S-2	54-6-6	260 Spring Road	N. Williams	402	William Garrett House	1805
S-2a	54-6-6	260 Spring Rd	N. Williams	408	Hannah Cheever House	1835
S-2b	54-6-6	260 Spring Rd	N. Williams	409	Hannah Cheever Barn	1860
S-4	54-6-9.3	253 Spring Road	Sugartown School	66	Sugartown Public School	1866
S-6	54-6-21	690 Sugartown Road	S. Worrall	514	Sharpless Worrall General Store	1800-1830
S-7	54-6-22	698 Sugartown Road	L. Hoopes	523	Phineas Waterman House	1835

	Parcel ID#	Address	Breou Map Name	AoQ Page	AoQ Name	Circa
S-8	54-6-26.3	423 Dutton Mill Road	Spread Eagle	492	Sugartown Inn	1790
S-8a	54-6-26.3	423 Dutton Mill Road	Spread Eagle	496	Sugartown Inn Barn	1860
S-9	54-6-8	695 Sugartown Road	Goshen friends	392	Goshen Friends School	1784
S-9a	54-6-8	697 Sugartown Road	Goshen Friends	392	School Master house	1785
S-10	54-6-9.1	701 Providence Road	E. Burns	417	Mordecai Hall House	1860
O-1	54-6-83.2	7069 Goshen Road	Friends Meeting	72	Friends Meeting	1799
O-2	54-6-55.1	7098 Goshen Road	William Kirk	444	John Cox House	1815
O-3	54-6-42	7126 Goshen Road	J. Johnson	396	Jesse Smedley House	1795
O-4	54-6-43	8002 Goshen Road	Jonathan Fronefield	381	Lawrence Cox/Rising Sun Inn	1740
O-5	54-6-91.2	902 Delchester Road (aka 912)	Thomas Massey			
O-6	54-6-44	8016 Goshen Road	Schroder	406	Thomas Lindsey House	1805
O-7	54-6-45	8024 Goshen Road	Smith	399	John Scott House	1805
O-8	54-6-69	8055 Goshen Road	Miles	198	Robert S. Miles House	1860
O-9	54-6-39	8066 Goshen Road	R.B. Smedley	499	John Smedley House	1795
O-10	54-6-67	8085 Goshen Road	R.G. Smedley	132	Geo. Smedley Mill	1766
O-11	54-6-68	8067 Goshen Road	R.G. Smedley	132	Geo. Smedley House	1766
O-11.1	54-6-68	8067 Goshen Road	Geo. Smedley	132	Geo. Smedley Barn	1790
O-12	54-6-72	928 Garrett Mill Road	H. Garrett	189	Edward Sill House	1840
O-13	54-8-8	217 Dutton Mill Road	Bart. Smedley	195	Levi Garrett Tenant House	1845
O-14	54-6-73	988 Garrett Mill Road	Cullen	182	Joseph H. Duckett House	1840
O-14.1	54-6-73	988 Garrett Mill Road	Cullen	183	Duckett Paper Mill	1839
O-15	54-6-74	944 Garrett Mill Road	H. Garrett	139	Samuel Bell House	1800
O-16	54-6-91	955 Garrett Mill Road	H. Garrett	172	Schroder Tenant House	1880
O-17	54-6-75	959 Garrett Mill Road	Shady Grove School	69	Shady Grove School	1881
O-18	54-8-11	978 Garrett Mill Road (aka 982/984)	H. Garrett	171	William Garrett House	1825
O-18.1	54-8-11	978 Garrett Mill Road (aka 982/984)	H. Garrett	171	Garrett Paper Mill	1840
O-19	54-8-12	1002 Garrett Mill Road	T. Smedley	111	Mordecai Yarnall House	1728
O-20	54-8-12.1A	1006 Garrett Mill Road	T. Smedley			
O-21	54-8-13.1	6022 West Chester Pike	G.P. Hughes	141	Levi Garrett House	1800
O-23	54-8-14.1	5316 West Chester Pike	Wm. Evans	143	Aaron Garrett House	1802
O-24	54-8-73	1500 Meadow Hunt Lane	Etty	104	Amos Yarnall House	1727
O-25	54-9-4	5261 West Chester Pike	Hidell	191	George S Matlack House	1840

	Parcel ID#	Address	Breou Map Name	AoQ Page	AoQ Name	Circa
O-27	54-7-24	964 Plumsock Road	Campbell	181	Davis Garrett Tenant House	1840
O-28	54-6-85	936 Plumsock Road	T. Yarnall (estate)	179	Davis Garrett House	1840
O-29	54-6-83.1	920 Plumsock Road	T. Yarnall (estate)	124	Thomas James House	1751
O-30	54-6-81	921 Delchester Road	S. Irvin	170	Joseph Roberts House	1820
O-31	54-6-79.3	967 Delchester Road	T. Yarnall (estate)			
O-32	54-6-79.2	975 Delchester Road	T. Yarnall (estate)	199	Truman Yarnall House	1862
O-33	54-6-89	974 Delchester Road (aka 978)	A.C. Anderson	117	Mordecai Yarnall House	1739
O-33.1	54-6-89	974 Delchester Road (aka 978)	A.C. Anderson	118	Thomas Willing House	1795
O-34	54-6-78.3	991 Delchester Road	Wm. Garrett			
O-35	54-6-78.5	999 Delchester Road	Wm. Garrett	162	Caleb Yarnall House	1811
O-36	54-6-78	995 Delchester Road	Wm. Garrett			
O-37	54-7-23	958 Plumsock Road	T. Guilleic?	197	John Hibbard House	1855
O-38	54-6-83	910 Plumsock Road	Eliza Yarnall	72	Willistown Meeting	1799
O-39	54-8-3	1701 West Chester Pike	Bowater/Smedley	98	John Bowater Property	1697
W-1	54-7-13.3	7000 Goshen Road	S.B. Grubb	295	Blacksmith Shop	1811
W-2	54-7-13.3A	870 Providence Road	S.B. Grubb	295	Mary & Edith Yarnall House	1810
W-3	54-7-13.4	7004 Goshen Road	S.B. Grubb	312	Charles Mendenhall	1850
W-4	54-7-13	7008-7020 Goshen Road	S.B. Grubb	295	Caleb Yarnall House	1812
W-4.1	54-7-13	7008-7020 Goshen Road	S. B. Grubb	293	Caleb Yarnall House 2	1805
W-5	54-7-14.2A	877 Providence Road (aka 6154 Goshen)	J. Stong	269	Whitehorse Inn	1798
W-5.1	54-7-14.2A	878 Providence Road (aka 6154 Goshen)	J. Stong	269	2-Story Barn	1835
W-7	54-7-46	7001 Goshen Road	M.T. Bartram	273	Whitehorse Store	1798
W-8	54-7-46.1	7005 Goshen Road	M.T. Bartram	306	Henry Pratt House	1840/1848

Appendix 6:

PARK AND RECREATIONAL RESOURCES IN WILLISTOWN TOWNSHIP

Greentree Park

Location: 21 Grubb Road, Malvern, PA 19355 on the corner of Woodland Avenue in northeastern Willistown. Description: Playground equipment for recommended ages 2-5 and 5-12, basketball court, recreational field, trail, gazebo, restrooms. 8 acres. Purchased by the Willistown Township Open Space Fund. Tax parcel number 54-1P-167.

Duffryn Trail

Location: 26 Duffryn Avenue, Malvern, PA 19355 in northeastern Willistown. Description: Connects Willistown to Malvern Borough's Randolph Woods Park of 38 acres. No designated parking. Approximately 0.16 acre. Purchased by the Willistown Township Open Space Fund. Tax parcel number 54-1P-26.

Mill Park

Location: 1 Mill Road, Malvern, PA 19355, off Grubb Road by General Wayne Elementary School in northern Willistown. Description: Mill Park: Samantha's Park playground equipment for recommended ages 5-12, 2 baseball fields, picnic pavilion, restrooms. 18.8 acres. Tax parcel number 54-3-297-2.

Serpentine Preserve

Location: 139 and 143 Line Road, Malvern, PA 19355, adjacent to Natural Lands' Willisbrook Preserve in northwestern Willistown. Description: 139 offers trails and undeveloped future active recreation. 27 acres. Under conservation easement with Willistown Conservation Trust. Purchased by the Willistown Township Open Space Fund. 143 offers trails and connection to Natural Lands' Willisbrook Preserve. 22.1 acres purchased by the Willistown Open Space Fund, Department of Conservation and Natural Resources Community Conservation and Preservation Partnership Fund, and Chester County Preservation Partnership Municipal Grant Program. Tax parcel numbers 139: 54-2-95-3, and 143: 54-5-1, 54-5-2

Sugartown Preserve

Location: 705 Providence Road, between Spring Road and Providence Road, Malvern, PA 19355 in the middle of Willistown. Access easement over Historic Sugartown-owned property at 257 Spring Road, Malvern. Description: Undeveloped future passive recreation and 1.2 acre building envelope. Home of the Willistown Community Garden. 16.2 acres. Under conservation easement with Willistown Conservation Trust. Tax parcel number 54-6-9-6.

Rita Reves Park

Location: 1040 Garrett Mill Road, Newtown Square, PA 19073, in southeastern Willistown. Description: Playground equipment for recommended ages 5-12, 2 baseball fields, 1 soccer field, sand volleyball court, picnic pavilion, restrooms. 20 acres. Purchased with assistance from Chester County Municipal Grant Program. Tax parcel number 54-8-13.

Okehocking Preserve

Location: 5316 West Chester Pike, Newtown Square, PA 19073, in southern Willistown. Secondary access: 996 Delchester Road. Description: Passive recreation with permitted future active recreation. Over 7 miles of mown and wooded trails. 180 acres. Purchased by the Willistown Township Open Space Fund; Department of Conservation and Natural Resources (DCNR) Community Conservation and Preservation Partnership Program; Land and Water Conservation Fund through DCNR; and Chester County Landscapes 21st Century Preservation Partnership Municipal Grant Program funding. Under conservation easement with Willistown Conservation Trust. Tax parcel numbers: 996: 54-8-14.3; 54-8-14-5; 54-8-14-4; 54-8-14-2A; 54-8-2679; 54-8-14-2B; 54-8-14-2; 54-8-14-1; 54-8-20

Willistown Conservation Trust Barn

Location: 5316 West Chester Pike, Newtown Square, PA 19073, in southern Willistown. Willistown Conservation Trust owns a 4.44 acre flag lot and bank barn in the middle of the property. Tax parcel number 54-8-14.

Kirkwood Preserve

Location: 855 Grubbs Mill Road, Newtown Square, PA, 19073, in southeastern Willistown, and 2706 Whitehorse Road. Description: 95.2 acres, owned by Willistown Conservation Trust. Purchased with assistance from the Willistown Township Open Space Fund. Tax parcel numbers 855: 54-7-19-1; 54-7-19-3. Tax Parcel Numbers 2706: 54-7-16.1.

Rushton Woods Preserve

Location: 911 Delchester Road, Newtown Square, PA 19073, in southern Willistown, and 7019 and 7099 Goshen Road. Description: 86 acres, owned by Willistown Conservation Trust. Tax parcel numbers: 925: 54-6-79.7; 7099: 54-6-79.7B; 7019: 54-6-79.7C; 911: 54-6-79.11; 921: 54-6-81

Willisbrook Preserve

Location: Adjacent to Willistown's Serpentine Preserve, 110 Line Road, Malvern, PA 19355. Description: 126 acres, owned by Natural Lands Trust. Tax parcel numbers: 54-2-95-1; 54-2-95-2; 54-2-125; 54-5-6-1. Note: The Natural Lands property known as Summerhill Preserve, located on Goshen Road, is not included as a recreational resource at this time because public access is currently limited.

Existing trail resources are as follows:

Informal unpaved trail recreation opportunities can be found throughout Willistown Township in a patchwork of private and institutional open space lands and along roadways.

Publicly accessible trails are located in road right-of-ways and on municipal and conservation trust owned lands. The 225' Duffryn Trail connects northeastern Willistown Township to Malvern Borough's Randolph Woods and beyond. Mown and wooded loop trails are offered at Willistown Township's Okehocking Preserve (approximately 7 miles of trails); the Willistown Conservation Trust Barn, Kirkwood Preserve, and Rushton Woods Preserve; and, Natural Lands' Willisbrook Preserve. See Map 6 for existing, publicly accessible trails.

Appendix 7:

PARK FACILITY AND PROGRAMMING PLANNING GUIDANCE AND SERVICES

2002 Chester County Recreational Park Standards and Their Applicability to Willistown Township

Chester County’s Planning Department maintains that the standards of 2002 remain applicable today. Willistown Township’s definition of parks coincides with that of Chester County. Linking Landscapes defines a “park” as any outdoor property that is owned in-fee or permanently eased for recreation by a government agency, is open to the general public, is specifically managed to provide public recreation, and has public recreation as its primary use. This definition stresses that parks are acquired, designed and managed to be public recreational facilities. Recreation planners typically describe

parks based on the ways in which they are used. Some parks are designed and maintained to be used primarily for strenuous recreation activities such as exercise, team sports and child’s play. These activities are referred to as “active recreation.” Other parks are designed, maintained and used for quieter, less athletic activities, such as fishing, picnicking and bird watching. These lower energy activities are known as “passive recreation,” and they have a minimal effect on their surroundings. Some parks are used for both active and passive recreation.

The 2002 population-based county standards and the categories of parks used in the standards are shown in the table below and remain pertinent today. Municipalities that complete or update their municipal open space plan using County funds are required to include some form of population-based recreation standard. Although not required to follow the County’s standards, Willistown Township chose to do so.

The 2002 Chester County Recreational Park Standards (Figure 4.1 *Linking Landscapes*)

Type of Recreational Park	Service Radius	Minimum Acreage Standard	Maximum Population	Size of Recreational Park
Regional Park	30 miles (Equal to a 60 minute drive)	20 acres per 1,000 people	None	1000 acres or more
Sub-regional Park	7.5 miles (Equal to a 15 minute drive)	8.5 acres per 1,000 people	100,000	400 acres to 999 acres
Community Park	2.5 miles (Equal to a 5 minute drive or a 30 minute walk)	3.0 to 6.0 acres per 1,000 people	25,000	20 acres to 399 acres
Neighborhood Park	0.5 miles (Equal to a 15 minute walk)	2.5 to 3.5 acres per 1,000 people	5,000	0.5 acre to 19.9 acres
Mini Park	0.25 mi. (Equal to an 8 minute walk)	0.25 acres per 1,000 people	2,000	0.01 acre to 0.49 acre

Source: CCPC, June 1982 and February 2002.

The Standard definitions are as follows:

The **Service Radius** of a park is a circular area drawn around a park on a map. Ideally, a park should be designed to accommodate the recreation needs of all the people who live within this circle.

The **Acreage Standard** describes the number of park users per acre of parkland. It is measured in acres per 1000 users. A park with an Acreage Standard of 5 acres per 1000 users would have a density of 250 users per acre. In general, playgrounds and sports fields have a higher user density than wooded or natural resource based parks.

The **Maximum Population** is the largest recommended population for a given Service Radius. If the population of a Service Radius exceeds the Maximum Population, park planners should consider adding more park facilities in the region.

The Chester County Planning Commission developed these population-based Standards to ensure that recreational parks would be built to serve all parts of the County, and to identify overcrowding on parks that have already been built. The standards were developed to apply to conventional non-linear recreational parks. Currently there are no Chester County population- based standards for trails or special purpose parks because these facilities are established based on available resources, and not as a reaction to a community’s population.

Local and Regional Trail Planning Efforts

Willistown envisions the establishment of a trail network across the Township as an alternative travel opportunity for residents, school children, and visitors to link residential areas, community facilities, parks, and neighboring community recreational and business uses and trail systems; providing passive recreation opportunities within and between developed sites; and designing a trail network that utilizes and coordinates available trail routes with identified destinations, e.g., parks, commercial centers, natural areas, schools, etc. Trails are both a recreational and transportation asset. While the interconnection of trails is of value in getting from one recreational facility to another, so too are they valuable in potentially providing opportunities for commuting, particularly given the potential for regional trail linkages.

The Patriots Path and Malvern-Willistown Greenway Trail

Currently there is limited pedestrian trail/sidewalk access from the Township’s northern neighborhoods to the adjacent town centers of Paoli and Malvern. One opportunity to address this will be through the Malvern-Willistown Greenway Trail project (currently in the beginning planning stages). This project is the result of a partnership among Willistown Township, Malvern Borough, Willistown Conservation Trust (WCT), Chester-Ridley-Crum Watersheds Association, Chester County Planning Commission and Willistown residents. The proposed trail will connect Malvern Borough residents to General Wayne Elementary school in Willistown, sports fields used by Borough and Willistown residents, parks, and historic destinations; conversely, the trail will also connect Willistown residents to Malvern’s library, shopping



Tony Fernandes

and business district, park system and historic sites. Furthermore, the trail will connect both communities to outside destinations such as the East Goshen Township Park, Ridley Creek State Park and the County’s Chester Valley Trail. Among the proposed trail destinations are: public open spaces west of Sugartown Road via Monument Road (Willistown), Paoli Memorial Grounds (Malvern), Paoli Battlefield (Malvern), Quann Park (Malvern), Burke Park (Malvern), Randolph Woods (Malvern), Greentree Park (Willistown), General Wayne Elementary School (Willistown), and Mill Road Park (Willistown). This is a top priority project linking the northern sections of Willistown Township and destinations therein to Malvern Borough and beyond. See Map 13: *Park and Recreation Plan* for proposed trail links and

of the camps and conducts marketing.

The Willistown Park and Recreation Board, a voluntary, seven-person board, collaborates with the Parks and Recreation staff. This Board's responsibilities are outlined in the Township Code, Chapters 31 and 96, Parks, and include: general supervision of all Township parks and all maintenance thereof, including replacements of property and equipment; and recommendations to the Board of Supervisors with respect to rules and regulations for Township parks and recreation facilities, including the control of access to township facilities.

Willistown Parks and Recreation Department programming includes: the School's Out—Let's GO *WilMa!* Park Party, the Greentree In Tune and On Tap music series, and the Willistown Country Fair held at Greentree Park; the annual Okehocking Preserve Creek Cleanup as a part of the Chester Ridley Crum annual program and other habitat improvement projects and tree plantings at the preserves; the award-winning *GO WilMa!* outdoor adventure program (which includes two historic organizations, two land trusts, three municipalities, and the two local libraries); the Greentree ArtLit Walk (a series of display cases along the paved trail where Malvern and Paoli Libraries currently post story books and Willistown Parks will host other exhibitions); and, the Willistown Summer Fun Camps (eight weeks of elementary recreation camps at General Wayne Elementary School for children entering Kindergarten through fifth grade).

Willistown residents are also served by a wide variety of local recreational programs including special community events, organized sports programs, arts and crafts, nature activities, social activities, and pedestrian trails. The recreational sports opportunities are offered mostly by quasi-public agencies in the area. The most significant of these (from the standpoint of public participation by Willistown



The Paoli Battlefield Regional Recreation Corridor, classified as undeveloped, extends from Ridley Creek east along Paoli Pike to Malvern Borough, and from there up Crum Creek to the County Chester Valley Trail. The portion of the Paoli Battlefield Corridor north of Malvern Borough would provide Willistown residents with a two-mile long trail link to the County Chester Valley Trail. Township residents could also access Valley Forge National Historic Site via the lower end of the Schuylkill Corridor. The portion of the Paoli Battlefield Corridor south of Malvern Borough extending along Paoli Pike in Willistown Township would provide Willistown residents' access to East Goshen Township Park.

The County Seat Corridor, classified as undeveloped, extends from the East Branch of Brandywine Creek into West Chester Borough, and then northeast through Immaculata College, and from there to the County Chester Valley Trail. The completion of this corridor, and that of the Paoli Battlefield and Ridley Creek Corridors would create a trail loop of 19 miles in length, part of which would border Willistown Township.

The Chester Creek Rail-Trail Project extends along an abandoned rail line from just west of I-95 in Chester Township to the old Wawa train station east of US Route 1 in Middletown Township. This trail is currently in the planning phase. This trail is a potential link through the Ridley corridor.

The Rocky Run Trail and the Darlington Trail are constructed and extend from north of US Route 1 near Chester Creek northeast to Tyler Arboretum and adjacent Ridley Creek State Park. These trails would link to Willistown Township through the Ridley Creek Recreation Corridor.

Willistown Park and Recreation Program Services

The Parks and Recreation staff of Willistown Township currently includes a full-time Director of Parks and Recreation. The Director oversees the operation of the Township's recreation programs and the management of the Township's park properties and permitting. Permitting from the Parks and Recreation Department includes field use and pavilion rental processing for the Willistown park system (the Township administration manages the payment process and the pavilion rentals). Willistown residents are offered a lower rate of rental than nonresidents. Willistown Summer Camps are overseen, scheduled, and coordinated by the Department. While a third party runs the registration and day-to-day operations of the camp, the Director collaborates on the theming



are 2,000 feet wide. This width is much wider than the right of way needed for a single trail or path. These extra-wide corridors are useful because they allow municipal planners flexibility in locating the final alignment of a trail or path. The recommended Regional Recreation Corridors have been classified into 3 categories; undeveloped, informally used, and partially developed. Those corridors pertinent to Willistown Township are as follows and are depicted on Map 13.

The Ridley Regional Recreation Corridor, classified as undeveloped, extends from the Chester County-Delaware County Border, up Ridley Creek to its headwaters just west of Immaculata College. This corridor crosses into Chester County and Willistown Township from the south near the Route 3 parking entrance to Okehocking Preserve, where Ridley Creek crosses into Chester County. The corridor then follows the main stem of the creek in a northwesterly direction through the Preserve and then privately owned land until crossing over into East Goshen Township. The primary purpose of this Corridor is to provide the communities in East-central Chester County with access to Ridley Creek State Park in nearby Delaware County. It would also have the added benefit of providing greater access to trails at Willistown's Okehocking Preserve. One of the exciting benefits of the Ridley corridor is that the northern terminus is within four miles of the County Chester Valley Trail, via the County Seat Corridor. If these 2 corridors were complete, Willistown residents would have access to a 13 mile long trail connecting Ridley Creek State Park with the County Chester Valley Trail.

destinations.

Sugartown Elementary School serves the residential area adjacent to it as a neighborhood park. General Wayne Elementary School could serve the residential area east of the Sugartown service area if safe pedestrian linkage could be attained across Warren Avenue and/or Paoli Pike and Devon Road. Safe travel for this neighborhood to General Wayne should be pursued.

Kirkwood-Okehocking Trail Corridor

The Kirkwood-Okehocking Trail Corridor is a proposed project of the Willistown Conservation Trust ("Trust"). In partnership with the Township, the Trust seeks to establish a public pedestrian and equestrian natural surface trail corridor beginning at the Trust's Kirkwood Preserve, located on Grubbs Mill Road, continuing through the Trust's Rushton Woods Preserve on Goshen and Delchester Roads, and terminating at the Township's Okehocking Preserve on Delchester Road and Route 3. It is proposed that the majority of the trail would be created by utilizing existing protected trails on lands preserved by conservation easement, donations by private landowners of additional trail easements, or where feasible and safe, public road rights-of-way. This proposed trail will link to and in some sections overlay the Township's proposed Sugartown-Delchester North-South Arterial Trail Corridor and the Township's proposed Okehocking-Plumsock and Goshen Road East-West Arterial Trail Corridors. The Trust envisions that the Kirkwood-Okehocking Trail will also branch off to connect to the Trust's Ashbridge Preserve in East Goshen on Strasburg Road (what is known as Goshen Road in Willistown Township).

Chester County's Regional Recreation Corridors

The Chester County Planning Commission has identified regional and county scaled Regional Recreation Corridors in *Linking Landscapes*, a number of which are located within and adjacent to Willistown Township. A Regional Recreation Corridor is a conceptual planning zone that *Linking Landscapes* has identified as a prime location for the construction of a multi-municipal trail. The corridor is defined as a linear area of land that includes points of interest or recreational destinations – like state parks and historic villages – and the trails, paths and bike routes that link them. *Linking Landscapes* is careful to note that Regional Recreation Corridors are not presumed to be the only logical locations for multi-municipal trails. The recommended Regional Recreation Corridors

residents) are the Upper Main Line YMCA (located approximately a mile from the Willistown boundary), the Chester Valley Little League (comprised of Willistown and Malvern Borough residents; this group is the sole user of Willistown's Mill Road Park ball fields and maintains the baseball infrastructure at their cost with the Township maintaining the Park infrastructure and grounds), the Greater Chester Valley Soccer Association (an extensive regional soccer and lacrosse program located adjacent to Willistown's Serpentine Preserve), and Great Valley Middle and High School sports programs (the public school district that serves Willistown Township).

Local *community* recreational programs that serve Willistown Township include events hosted by Malvern Borough Parks and Recreation, the Malvern Business Association, the Upper Main Line YMCA, and East Goshen Township Parks and Recreation.

Public Outreach

The Willistown Township Parks and Recreation Department communicates information about its recreation services and facilities to residents, businesses, and visitors through the following channels: www.willistown.pa.us, the Township website the *WillisTowne Crier*, the Township newsletter (Parks and Recreation related articles are written by the Parks and Recreation staff), the Township memo boards, located at the corner of Cedar Hollow Road and Paoli Pike at Good Samaritan Church, and at the Township Administration Building at 688 Sugartown Road (the memo boards are used for parks and recreation event announcements and Township holidays); the Willistown Township Parks and Recreation E-newsletter, *Breaking Good News*, is distributed to the parks and recreation email database; and finally, events may be announced on community social media and E-newspapers at no charge.

Maintenance and Security

The Willistown Township Public Works Department, as of 2023, is responsible for maintaining and overseeing parks and recreation facilities and grounds. Public Works also assists with special events, as needed, such as erecting Parks and Recreation event tents, etc. The Director of Public Works is the contact for the Okehocking farmhouse tenant on all issues pertaining to the house and utilities, and contacts contractors for the annual maintenance and event specific maintenance. All other grounds maintenance is contracted through public bid and

the Director of Public Works is the liaison to these contractors. The Public Works Department conducts informal safety inspections of the playground equipment approximately twice per week and keeps record of these inspections. Where the public notifies the Parks and Recreation Department of maintenance issues, the Department passes the information on to the Public Works Department. Park signage is managed by the Parks and Recreation Department. For security purposes, the Willistown Township Police Department patrols all parks on a regular basis.



Barbara C. Vincent

Budgeting

The Director of Parks and Recreation along with Township Manager and Chairman of the Board of Supervisors review a budget proposed by the Director for initial approval prior to the Manager's budget submission for approval to the Board of Supervisors. The Director is responsible for managing the budget and approving all parks and recreation invoices. Parks and recreation activities and staff are funded through the Township general fund. Fees collected from recreation program participants and selected athletic field users help offset costs. Willistown has been successful in acquiring grants from the Chester County Municipal Grant Program, the Department of Conservation and Natural Resources, and the Department of Environmental Protection to offset costs of significant parks and recreation projects. The summer camp programs pay for themselves from user fees and provide revenue. Currently, the Township hosts ten events at two of its six accessible parks that are free to the public.

Willistown Township Surveys

The 2020 Comprehensive Plan Update Survey and the Parks and Recreation feedback therein, along with previous Parks and Recreation-specific surveys of 2009 and 2004, have been important components in formulating a strategy to address parks and recreation needs and services. More detail regarding the Township's 2020 Survey can be found in Appendix 1 (Survey Top Line Report and power point presentation).

The 2020 Comprehensive Plan Update Survey includes the Top 5 Focus Areas & Initiatives for Preservation, Recreation, and Circulation. These are:

1. Secure land to preserve open space, protect the environment, and provide passive recreation.
2. Secure land for preservation and development of walking/hiking trails.
3. Develop a Township-wide trail/sidewalk circulation plan (including connections to Malvern, Paoli, etc.).
4. Develop a traffic calming and improvement plan.
5. Secure land for developing neighborhood parks.

The establishment of a Township trail network and improved sidewalk networks derives its priority in part from the results of the 2020 Comprehensive Plan Update Survey and prior Parks and Recreation resident surveys in 2009 and 2004. In fact, there is consistency in the current and past surveys. In the 2004, 2009, and 2020 surveys, the number one overwhelming favorite 'favored activity' was hiking/nature walking. In 2020, sidewalk use was second, and third was dog walking. Trails, bike paths, and sidewalks were the top three infrastructure items residents request more of when it comes to circulation, recreation, and transportation. In the 2009 survey, the number one and number two recreational inadequacies were the Township's lack of sidewalks and need for more walking and hiking trails. When asked what the Township needs more of in the 2020 survey, the number one response was walking/hiking trails, tied with bike paths. Across all surveys, the highest priority recreational service is providing hiking and walking trails, with sidewalks ranking third in 2020. The Township recreation service with the lowest satisfaction rating (2020) was pedestrian circulation (also viewed as the number one inadequacy in 2009), specifically lack of sidewalks. The highest ranked 'important Township initiative' to the residents in 2020 is to "secure land to preserve open space, protect the environment, and provide passive recreation", and second is to "secure



Cindi Myers

land for preservation and development of walking/hiking trails." The 'top service priorities for improvement' are traffic management/circulation; pedestrian circulation (paths and trails); pedestrian circulation (sidewalks); and bicycle circulation.

A top five initiative regarding circulation is a Township-wide trail/sidewalk circulation plan that includes connections to adjacent municipalities. Notable increases in traffic traveling at higher speeds argues for safe and accessible pedestrian and bicycle trails. Although trails are designed to conform with the area in which they are located, it is important to recognize that accessibility is not possible everywhere and should be provided to the best extent possible despite limitations. Obstacles such as narrow roads, restricted right-of-way, higher speed roadways, high traffic volumes, and traffic intersections can block potential paths and may be safety concerns for pedestrian, equestrian, and bicycle circulation. Additional trail planning, including the feasibility of Township-wide interconnections, should be undertaken as part of a Township-wide trail/sidewalk circulation plan that incorporates opportunities for pedestrians, equestrians, and bicycles. Trails provide sustainable infrastructure for local pedestrians and bicyclists and can also be seen as part of an overall strategy to expand the transportation network.

The Township also looked to the 2020 Survey to assess public sentiment on bicycling. The top ranked responses pertaining to bicycling included the need for traffic management/circulation and improved bicycle circulation. Bike Paths ranked third when residents were asked what the Township needs more of.

Bicycling also ranked sixth in terms of its importance to residents. The two biggest challenges to bicyclists in Willistown are road conditions (old, narrow country roads without shoulders and high-speed state roads) and traffic volume. Safety is also a concern regarding equestrian circulation alongside increasing motorist traffic and speed. The 2020 survey notes that comments related to bike paths are weighted heavily towards safety issues as opposed to desire for bike paths. Safety is also a concern regarding equestrian circulation alongside increasing motorist traffic and speed. The third ranked Township initiative after “Securing land to preserve open space, protect the environment, provide passive recreation”, and “Secure land for walking/hiking trails” is “Traffic Calming and Improvement Plan”. The highest support for this plan was in northeastern Willistown with 52% of resident support. All other planning areas showed strong interest.

A Trail Classification System for Willistown Township with Proposed Corridors

Ideally, trails will occupy suitable natural corridors such as stream valleys or woodlands, or suitable man-made corridors such as railroad rights-of-way, utility easements and scenic, low-traffic-volume roadways. Off-road rights-of-way are preferable to roadside rights-of-way routes and should be made permanent where possible. Trails can be made permanent through public acquisition or through establishment of easements. Lacking such opportunities, locations parallel to public roadways, yet separated from them, should be formalized. In higher density northern and some southern residential areas, trails should connect to existing sidewalks; trails in such areas will need to handle heavy use. Minimum design standards required for intended trail use type(s) should be developed and adhered to. Multi-use trails must have sufficient width and clearance to accommodate all permitted uses. Ideally, bicycle routes will be separated from pedestrian routes and must be separated from equestrian routes.

Pathways or trails only occupy a narrow, linear land area, yet frequently are the primary means of access, both physical and/or visual, to the broad open space and recreational landscape. Trails may be geared to one or more types of trail use, including hiking, jogging, running, bicycling, equestrian, cross-country skiing, baby strollers, etc.

Partnering with neighboring municipalities and local organizations will be a critical component to the success of a Township comprehensive trail network.

In order to use Township and PennDOT rights-of-

way, the Township and its partners should work with local landowners and respect right-of-way setbacks where impeding critical trail corridors are to be located. Conservation easements and trail easements will be an important tool in creating trail connections; this process may involve working with private, quasi-public and public land owner agreements or easements.

As a basis for the creation of a Township Comprehensive Trail Network, the following designations should be considered:

COMPREHENSIVE TRAIL NETWORK: A destination-based network of interlinking trails and paths throughout the Township that are designated for transportation and recreation purposes.

The information included in Map 6: Existing Recreation Sites, Publicly Accessible Open Spaces, and Trails, and Map 13: Park and Recreation Plan form the foundation for a comprehensive trail network and should be used by the Township to create a comprehensive trail plan for the Township.

TRAIL: A corridor through which passes, or will pass, a pedestrian or equestrian accessway or a bikeway as part of the Willistown Township Comprehensive Trail Network or as otherwise authorized or designated by the Township. Trails are intended to serve transportation, commuting, and/or recreational functions as part of an inter-modal transportation system. Trails shall exclude all motorized vehicles except motorized wheel chairs or as authorized by the Township for maintenance, management, and emergency purposes. In general, the Township’s trails offer low-speed transportation and recreation opportunities to pedestrian, and/or bicycle, and/or equestrian users.

DESTINATION: Locations in Willistown Township or neighboring municipalities that are linked through the Willistown Township Comprehensive Trail Network; included are parks, designated open spaces, neighborhoods, schools, historic areas, business districts, churches, town centers, libraries, sports facilities, government services, and community organizations, among others.

Destinations within Willistown are depicted in Map 13: Park and Recreation Plan, as are many sites adjacent to the Township. Willistown destinations include, among other things, all Willistown Parks, Kirkwood Preserve, Willisbrooke Preserve, Rushton Woods and Farm, Willistown Conservation Trust, Historic Sugartown Village, Willistown Township Administration Building, Willistown Township



Police Department, Sugartown and General Wayne Elementary Schools, Greater Chester Valley Soccer Association fields and churches (including St Thomas Mar Thoma of Delaware Valley, Willistown United Methodist, Christ Memorial Lutheran, Good Samaritan, Paoli Presbyterian, St. Francis-in-the-Fields; and Willistown Friends Meeting). Among the destinations in neighboring municipalities are the following: East Goshen Township, the Township Park and Ashbridge Preserve; Malvern Borough, Burke Park, Quann Park, Paoli Battlefield, Chester Valley Little League fields at Monument Park; Edgmont Township, Ridley Creek State Park, Tyler Arboretum; Newtown Township, Bartram’s Bridge; Tredyffrin Township, the Upper Main Line YMCA; Chester County facilities, the County Chester Valley Trail, and Delaware County facilities: the Chester Creek Rail-Trail, the Rocky Run Trail and the Darlington Trail.

NORTH-SOUTH ARTERIAL TRAIL CORRIDORS: Such trail corridors provide the principal connecting routes between northern and southern Willistown, linking destinations within the Township, as well as multi-municipal and regional trail networks and destinations beyond the Township.

The North-South Arterial Trail Corridors include: 1) The Sugartown-Delchester Corridor, and 2) the South Warren Avenue-Plumsock Road Corridor.

EAST-WEST ARTERIAL TRAIL CORRIDORS: Such trail corridors provide the principal connecting routes between eastern and western Willistown, linking destinations within the Township, as well as multi-municipal and regional trail networks and destinations beyond the Township. These corridors also connect to the North-South Arterial Trail Corridors at appropriate junctures.

The East -West Arterial Trail Corridors include: 1) The Malvern-Willistown Greenway Corridor; 2) Sugartown-General Wayne School Corridor; 3) Spring Road

Corridor; 4) Goshen Road Corridor; and, 5) Okehocking Preserve Corridor (Garrett Mill Park on Garrett Mill Road to Plumsock Road) (See Map 13: Park and Recreation Plan for corresponding numbered corridors.)

CONNECTOR TRAILS: A type of improved or unimproved trail that provides a means of connection to the North-South or East-West Trail Corridors or Destinations in Willistown and beyond and offers low-speed transportation and recreation opportunities to pedestrian, and/or bicycle, and/or equestrian users. Improved trails (sidewalks or other trails with surfacing) are mainly located in the more densely developed northeastern corner of the Township. Unimproved (natural grass or soil trails) are largely located in the southern portion of the Township and are mainly equestrian trails, lightly used by pedestrians.

An example of a Connector Trail is the planned Kirkwood-Okehocking Trail Corridor being spearheaded by the Willistown Conservation Trust (“Trust”). This Connector Trail will link the following destinations: The Trust’s Kirkwood Preserve, the Trust’s Rushton Woods Preserve, Willistown Township’s Okehocking Preserve, and the Trust’s Ashbridge Preserve in East Goshen Township. This proposed corridor will also link into the greater Willistown trail network.

CONNECTOR PATHS: A type of informal foot path that provides a means of close radius inner-neighborhood connections in the more densely developed residential areas of the Township. These trails are not currently documented, but provide a significant service to Willistown residents.

BIKEWAY: A type of trail corridor designed primarily for bicycle traffic. Bikeways may serve transportation and/or recreational functions. Except where a designated bikeway route is contained within a road cartway or road shoulder, bikeways shall exclude all motorized vehicles except motorized wheel chairs or as authorized by the Township for maintenance, management, and emergency purposes.

OBSTACLES: Any type of hindrance to safe or general progress along a designated trail.

Obstructions include stream crossings; road crossings where speed is a safety factor, road crossings where site distances are a factor, road crossings that do not have any traffic regulation such as a stop sign or traffic light; bridges; lack of right-of-way; steep slopes; etc. (see Maps 6 and 13 for existing and potential obstacles).

Appendix 8:

A SELECTION OF FUNDING PROGRAMS CURRENTLY AVAILABLE FOR PLAN IMPLEMENTATION

Given the planning horizon for this comprehensive plan and the recognition that funding sources change and evolve over time, this appendix is intended as a sampling of the types of funding programs currently available. By nature, no such list can be exhaustive, nor are they intended to be; rather, they

are intended to acknowledge the type of funding opportunities available and the potential for shared opportunities for plan implementation.

The Township and other interested parties should also routinely check federal, state, regional, county, and foundation websites to determine grant application periods, deadlines, and changes to grant programs over time. While several funding options may not exist throughout the life of this plan, other funding programs may be created for similar purposes.

Examples of funding options currently available include:

Funding Source	Funding Agency	Funding Program Name
Federal (also state & county funding/administration)	CC Department of Community Development	CDBG (Community Development Block Grants), HOME (Investment Partnership Program – affordable housing, 1st time homebuyers)
	National Endowment for the Arts	Our Town Grants
	United States Department of Agriculture	Community Facilities Direct Loan & Grant Program in Pennsylvania
		Water & Waste Disposal Loan & Grant Program
	United States Department of Agriculture's Natural Resources Conservation Service-Pennsylvania	Emergency Watershed Protection
	United States Department of Energy	Community Geothermal Heating and Cooling Design and Deployment
	Pipeline and Hazardous Materials Safety Administration	Technical Assistance Grants (TAG)
	National Park Service	Land and Water Conservation Fund
	U.S. Department of Transportation	Recreational Trails Program
State	PA DCED	Land Use and Technical Assistance Program (LUPTAP)
		Keystone Communities Program
	PA DCNR	Community Conservation Partnerships Program (C2P2)
		Community Recreation and Conservation Planning Funding
		Community & Watershed Forestry Program
		Land Acquisition and Conservation
		Park Rehabilitation and Development Funding
		State and Regional Partnership Funding
		Motorized and Non-Motorized Trail Funding
		Rivers Conservation
	PA Dept. of Agriculture	Agricultural Lands Preservation
	PA Housing Finance Agency	Community Revitalization Fund Program
	Pennsylvania Department of Community and Economic Development	Keystone Communities Program

Funding Source	Funding Agency	Funding Program Name
		PA Small Water & Sewer Program
	PA Dept. of Environmental Protection	Growing Greener Plus
		Local Climate Action Program (LCAP)
	Pennsylvania Historical and Museum Commission	Keystone Historic Preservation Planning Grants
		Certified Local Government Grant Program (CLG)
		Keystone Historic Preservation Construction Grants
	Commonwealth Financing Authority	Marcellus Shale Legacy Fund Grants
		CFA Multimodal Transportation Fund
		Greenways, Trails, and Recreation Program
	PennDOT	PennDOT Multimodal Transportation Fund
		Transportation Alternatives Set-Aside (TA Set-Aside)
		Alternative Fuels Incentive Grant Program (AFIG)
		Green Light-Go: Pennsylvania's Municipal Signal Partnership Program
		Automated Red Light Enforcement (ARLE) Program
	PENNVEST	Homeowner On-Lot Sewage Disposal and Lateral Repair Loans
Regional	Delaware Valley Regional Planning Commission (DVRPC)	Transportation and Community Development Initiative (TCDI)
		Municipal Retro-Reimbursement Bridge Program
		Competitive Congestion Mitigation and Air Quality Improvement (CMAQ) Program
		Regional Trails Program
County	Chester County Planning Commission	Vision Partnership Program (VPP)
	Chester County Conservation District	TreeVitalize Watershed Grants
		Keystone Ten Million Trees Partnership
	Chester County Department of Parks and Preservation	Preservation Partnership Program
Other	Natural Lands	PECO Green Region Open Space Program
		Schuylkill Highlands Mini-Grant Program
		Schuylkill River Restoration Fund
		AARP Community Challenge
	National Fish and Wildlife Foundation (NFWF)	Delaware Watershed Conservation Fund (DWCF)
	National Wildlife Federation	Native Tree Seedlings
	Local and Regional Foundations	Planning, Acquisition and Construction Grants

References

Acres of Quakers, Willistown Township, Pennsylvania, Nagy and Goulding, June 2006.

Byway Beginnings: Understanding, Inventorying, and Evaluating a Byway's Intrinsic Qualities, Federal Highway Administration - National Scenic Byways Program, National Park Service – Rivers, Trails, and Conservation Assistance Program, with Whiteman & Taintor as consultant, 1999.

Census Reporter. <http://censusreporter.org/profiles/06000US4202985352-willistown-township-chester-county-pa/>

2020 United State Census Bureau
<https://www.census.gov/quickfacts/fact/table/willistowntownshipchestercountypennsylvania,chestercountypennsylvania/PST045221>
<https://data.census.gov/cedsci/profile?q=0600000US4202985352>
<https://data.census.gov/cedsci/profile?q=0500000US42029>
<https://data.census.gov/cedsci/all?q=population%20growth%20in%20Willistown%20township,%20Pennsylvania>
 U.S. Census Bureau (2019). American Community Survey 5-year estimates.
https://data.census.gov/cedsci/table?q=dp04&g=0600000US,4202985352_1600000US&tid=ACSDP5Y2019.DP04

Chester County – Geographical Information System (GIS) Services
 About GIS Services | Chester County, PA - Official Website (chesco.org)

Chester County Natural Heritage Inventory Update 2015, Pennsylvania Natural Heritage Program, Western Pennsylvania Conservancy, for the Chester County Planning Commission.

Chester County Planning Commission.
<https://chescoplanning.org/Resources/Census.cfm>
<https://www.chescoplanning.org/Resources/Data/06-6.cfm>
 chestercounty2010statspdf - U.S. Census Bureau, 2010 Census
 2010-2020-DecennialCensus-1213021

Crum Creek, Ridley Creek, and Valley Creek Watershed Action Plans, dated December 2002 by the CCWRA, CCPC, Camp Dresser and McKee and Gaadt Perspectives, LLC

Delaware Valley Regional Planning Commission (DVRPC).
<https://www.dvrpc.org/data>
<https://www.dvrpc.org/Demographics/>
<https://www.dvrpc.org/census>

Data USA. <https://datausa.io/>
<https://datausa.io/profile/geo/chester-county-pa#about>

Federal Emergency Management Agency (FEMA), [FEMA.gov](https://www.fema.gov)

Federal Highway Administration (FHWA) National Scenic Byways and All-American Roads
<https://fhwaapps.fhwa.dot.gov/bywaysp>

Guidelines for Growth, 2011 Comprehensive Plan, by Willistown Township.

Landscapes3, Chester County Comprehensive Policy Plan, adopted November 29, 2018.

Linking Landscapes, A Plan for the Protected Open Space Network in Chester County, PA, adopted February 26, 2002.

Our Common Future, The Report of the Brundtland Commission, published by Oxford University Press, 1987.

Pennsylvania Department of Conservation and Natural Resources, Natural Heritage Section – Bureau of Forestry, www.naturalheritage.state.pa.us

Pennsylvania Department of Transportation (PennDOT)
<https://www.penndot.pa.gov/ProjectAndPrograms/Planning/TrafficInformation/Pages/County-Functional-Class-Maps.aspx>
<https://crashinfo.penndot.gov/PCIT/welcome.html>
<https://gis.penndot.gov/tire>

Pennsylvania Stormwater Best Management Practices Manual, Pennsylvania Department of Environmental Protection, December 30, 2006.

Pennsylvania State University Data Center.
<https://pasdc.hbg.psu.edu/>

Pennsylvania State Water Plan, 2022.
<https://www.dep.pa.gov/Business/Water/PlanningConservation/StateWaterPlan/Pages/default.aspx>

2020-2024 Pennsylvania Statewide Outdoor Recreation Plan, Pennsylvania Department of Conservation and Natural Resources.

Watersheds, An Integrated Water Resources Management Plan for Chester County, PA and its Watersheds, adopted September 17, 2002. Conversations with County staff regarding pending *Watersheds* 2045.

Willistown Township Code, Zoning Ordinance, Subdivision and Land Development Ordinance, and Environmental Protection Ordinance, 2023, as amended.



Jennifer Jacobs



WILLISTOWN TOWNSHIP
PLANNING COMMISSION
688 SUGARTOWN ROAD
MALVERN, PA 19355

610-647-5300

WWW.WILLISTOWN.PA.US