

THORNBURY TOWNSHIP

COMPREHENSIVE PLAN

MARCH 2023



COMPREHENSIVE PLAN TOWNSHIP OF THORNBURY

MARCH 2023



This Comprehensive Plan update was funded by Thornbury Township

Prepared for the Citizens of Thornbury
by the:

Delaware County Planning Department
1055 East Baltimore Pike
Media, PA 19063



Cover Photo: Glen Mills Train Station

Acknowledgments

Delaware County Council

Dr. Monica Taylor, Chair
Elaine Paul Schaefer, Vice Chair
Kevin M. Madden
Christine A. Reuther
Richard R. Womack, Jr.



County Executive

Howard S. Lazarus

Delaware County Planning Commission

Claudia S. Cueto, Chairman
Kathy Bogosian Vice Chairman
John Gillespie, Secretary
James P. Gallagher
Kenneth Hemphill
David A. Petrucci, Jr., P.E., PTOE, RSP2I
Brian Razzi
Peter Rykard
William T. Smith

Delaware County Planning Department

Sam Haber, Project Manager
Rebecca Ross, Principal Planner
Mercedes Harrington, Project Planner
Amanda Taylor, Senior GIS Specialist
Anne Stauffer, Senior Environmental Planner
Rebecca Yurkovich, Project Planner*

* Former staff member, municipal official, or task force member

TOWNSHIP OF THORNBURY

Officials

Jeffrey T. Seagraves, Township Manager & Zoning Officer

Kenneth D. Kynett, Solicitor

Michael Ciocco, P.E., Township Engineer

Wayne Grafton, Land Planner

Peter Barsz, Township Treasurer

Michael Imms, Zoning Hearing Board Solicitor

Geoffrey Carbutt, Municipal Secretary

Keystone Municipal Services, Code Enforcement Officer & Building Inspector

Board of Supervisors

James P. Kelly, Chairman

Sheri L. Perkins, Vice Chairman

Michael Mattson, Supervisor

Planning Commission

Jim Quinn, Chairman

Robert Ferrara, Vice Chairman

James Bulkley

Jim Falcone

John Ibach Jr.

Sam Yim

Ken Zitarelli

[INSERT THORNBURY BOARD OF SUPERVISORS RESOLUTION]

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION	1-1
Comprehensive planning in Pennsylvania.....	1-1
<i>Thornbury Township Comprehensive Plan, 2004</i>	1-1
Local Government Organization	1-2
<i>Planning Commission</i>	1-2
<i>Historical Commission</i>	1-3
<i>Environmental Advisory Council</i>	1-3
<i>Parks and Recreation Board</i>	1-3
<i>Zoning Hearing Board</i>	1-3
<i>Sewer Advisory Committee</i>	1-3
<i>Board of Health</i>	1-3
Citizen Participation.....	1-4
How to Use this Comprehensive Plan	1-5
 CHAPTER 2: COMMUNITY PROFILE	 2-1
Regional Setting.....	2-1
Physical Characteristics	2-1
Demographic Analysis	2-2
<i>Methodology</i>	2-2
<i>Population Trends and Projections</i>	2-9
<i>Age Distribution</i>	2-11
<i>Race and Ethnicity</i>	2-12
<i>Education</i>	2-13
<i>Income</i>	2-14
<i>Employment</i>	2-15
Community Character	2-16
<i>Community Character Goal</i>	2-16
Summary	2-16
 CHAPTER 3: HISTORIC PERSPECTIVE AND PRESERVATION	 3-1
Historic Perspective.....	3-1
Historic Resource Inventory, 2001	3-3

Criteria for Inclusion.....	3-4
Resource Classification.....	3-5
Historic Resource Map	3-5
Historic Resource Preservation Ordinance.....	3-6
Historic Preservation Plan.....	3-9
Historic Preservation Goal.....	3-9
Summary	3-10
 CHAPTER 4: COMMUNITY FACILITIES AND SERVICES	 4-1
Utilities	4-1
Water Service.....	4-1
Sanitary Sewer.....	4-1
Waste Collection and Recycling	4-5
Public Safety	4-5
Police	4-5
Fire.....	4-5
Medical.....	4-5
George W. Hill Correctional Facility.....	4-6
Education	4-6
Public Schools and Pre-School Learning	4-6
Other Institutions.....	4-6
Libraries.....	4-7
Recreation and Programming.....	4-7
Parks and Open Space	4-7
Open Space and Recreation Study, 2007.....	4-7
Recreation Standards	4-11
Programming.....	4-11
Environmental Advisory Council.....	4-11
Parks and Recreation	4-11
Community Facilities and Services Plan	4-12
Community Facilities and Services Goal.....	4-12
Summary	4-12
 CHAPTER 5: LAND USE PLAN	 5-1
Planning Requirements.....	5-1

Delaware County 2035.....	5-1
Existing Land Use.....	5-1
Township Zoning.....	5-2
Future Land Use.....	5-7
Trends & Outlook.....	5-7
Agricultural Preservation.....	5-8
Future Land Use Plan.....	5-11
Future Land Use Classifications.....	5-11
Future Land Use Analysis.....	5-15
Future Land Use Goal.....	5-17
Summary.....	5-17
CHAPTER 6: HOUSING PLAN	6-1
Housing Occupancy and Tenure.....	6-1
Household Characteristics.....	6-2
Dwelling Unit Types and Densities.....	6-3
Housing Outlook.....	6-4
Housing Plan.....	6-4
Housing Considerations.....	6-5
Housing Goal.....	6-6
Summary.....	6-6
CHAPTER 7: NATURAL RESOURCES AND OPEN SPACE PLANS	7-1
Natural Resources.....	7-1
Topography.....	7-1
Hydrology and Surface Waters.....	7-1
Soils.....	7-5
Biotic Resources.....	7-5
Natural Resources Plan.....	7-6
Natural Resources Goal.....	7-6
Open Space Resources.....	7-9
Scenic Resources.....	7-9
Public Open Space.....	7-9
Private Open Space.....	7-10
Conservation Easements and Land Trusts.....	7-10

Open Space Plan	7-11
<i>Open Space Goal</i>	7-11
Summary	7-11
CHAPTER 8: TRANSPORTATION	8-1
Existing Traffic Patterns	8-1
<i>Regional Transportation Pattern</i>	8-1
<i>Local Transportation Pattern</i>	8-1
Roadway Problems and Conditions	8-6
<i>Vehicular Crashes in Thornbury</i>	8-6
<i>Intersection Crashes</i>	8-6
<i>Road Crashes</i>	8-7
<i>Other Roadway Concerns</i>	8-8
Non-vehicular Traffic.....	8-9
<i>Public Transit</i>	8-10
Transportation Improvement Program.....	8-15
<i>Transportation Goal</i>	8-15
<i>Summary</i>	8-16
CHAPTER 9: MUNICIPAL FINANCES	9-1
Revenues.....	9-1
<i>The General Fund</i>	9-1
<i>Liquid Fuels Fund</i>	9-2
<i>Grants</i>	9-2
Expenditures	9-3
<i>Financial Planning</i>	9-3
<i>Finance Goal</i>	9-5
Summary	9-6
CHAPTER 10: PLAN IMPLEMENTATION	10-1
Chapter 2: Community Character	10-1
Chapter 3: Historic Preservation.....	10-2
Chapter 4: Community Facilities and Services	10-3
Chapter 5: Land Use Plan	10-5
Chapter 6: Housing.....	10-7

Chapter 7: Natural Resources and Open Space.....	10-8
Chapter 8: Transportation	10-10
Chapter 9: Finances.....	10-12
Planning and Coordination	10-13
Summary	10-14
CHAPTER 11: PLAN INTERRELATIONSHIPS	11-1
Environmental.....	11-1
Energy Conservation	11-1
Fiscal Management.....	11-2
Economic Development.....	11-3
Social.....	11-3
Summary	11-4
APPENDIX A: STATEMENT OF COMPATIBILITY	A-1
Statement of Compatibility Of Surrounding Land Uses.....	A-1
<i>Regional Setting</i>	A-1
<i>Compatibility</i>	A-1
LIST OF FIGURES	
Figure 2.1: Regional Population Forecasts, 2020 – 2050.....	2-10
Figure 2.2: Age Distribution, 2020	2-11
Figure 2.3: Median Home Value, 2020.....	2-11
Figure 2.4: Regional Racial and Ethnic Composition, 2020.....	2-12
Figure 2.5: Educational Attainment, 2020	2-13
Figure 2.6: Median Household Income, 2010-2020.....	2-14
Figure 2.7: Employment by Industry, 2020	2-15
Figure 6.1: Housing Tenure, 2020	6-2
LIST OF MAPS	
Map 2.1: Regional Setting.....	2-3
Map 2.2: Steep Slopes	2-5
Map 2.3: Wooded Area	2-7
Map 3.1: Historic Resources.....	3-7

Map 4.1: Sewer Districts.....	4-3
Map 4.2: Parks and Open Space.....	4-9
Map 5.1: Existing Land Use.....	5-3
Map 5.2: Zoning	5-5
Map 5.3: Prime Agricultural Soils on Undeveloped Land.....	5-9
Map 5.4: Future Land Use.....	5-13
Map 7.1: Wetlands, Floodplains, and Hydrology.....	7-3
Map 7.2: Natural Heritage Inventory.....	7-7
Map 8.1: Roads and Bridge.....	8-3
Map 8.2: Sidewalk Inventory	8-11
Map 8.3: Trails.....	8-13

LIST OF TABLES

Table 2.1: Regional Population Trends, 2020	2-9
Table 2.2: Group Quarters Population, 2010 - 2020.....	2-9
Table 2.3: Thornbury Township, Racial and Ethnic Composition, 2010-2020	2-12
Table 4.1: Sewer Distribution.....	4-2
Table 4.2: Thornbury Township, Open Space Inventory.....	4-8
Table 5.1: Existing Land Use	5-2
Table 5.2: Thornbury Township Zoning.....	5-2
Table 5.3: Important Farmland in Thornbury	5-8
Table 6.1: Housing Units and Housing Occupancy, 2000 to 2020	6-1
Table 6.2: Thornbury Households, 2020	6-2
Table 6.3: Residential Zoning District Standards	6-3
Table 6.4: Change in Household Population	6-4
Table 8.1: Thornbury Township Road Segment Traffic Counts, 2020	8-2
Table 8.2: Thornbury Township Highest Traffic Volumes, 2020	8-5
Table 8.3: Intersection Crashes, 2012 – 2017	8-6
Table 8.4: Crashes by Road Segment, 2012 – 2017	8-7
Table 9.1: Thornbury Township’s Revenue Breakdown, 2016-2020.....	9-1
Table 9.2: State Liquid Fuels Fund Allocations, 2016 - 2020.....	9-2
Table 9.3: Thornbury Township’s Expenditure Breakdown, 2016-2020	9-4

Chapter I: Introduction

A comprehensive plan is a long-range planning tool used to guide the future growth and development of a community. It expresses a community's vision and goals for the future, sets forth strategies and recommendations to achieve them and a plan for implementing them. This comprehensive plan for Thornbury Township is an update to the Township's 2004 Comprehensive Plan. This plan utilizes the current demographic trends and development patterns of the Township to prescribe contemporary planning concepts and growth management strategies for the future. This plan also addresses the goals and objectives of *Delaware County 2035*, the County Comprehensive Plan, which was adopted on November 27th, 2013. Once adopted, this Township comprehensive plan will serve as a guide for the Board of Supervisors' future decisions concerning development and redevelopment, as well as for implementing or amending municipal ordinances, projects, and programs.

The structure of this comprehensive plan has been formulated to provide background information on the current and historical conditions of the Township, so they may then be used as a guide for the development and implementation of future plans. Topic-specific goals will be provided at the end of each chapter. Implementation tools will be provided at length in the final chapter, relating to the established goals. Further, it is the intent of this plan to develop those strategies within the planning policies and requirements of the Pennsylvania Municipalities Planning Code (MPC).

COMPREHENSIVE PLANNING IN PENNSYLVANIA

The Pennsylvania Municipalities Planning Code (MPC) (Act of 1968, P.L. 805, Act 247) empowers municipalities in Pennsylvania to individually, or jointly, prepare plans for their future development. Article III, Section 301, of the MPC, requires that municipal comprehensive plans include the following basic elements:

- Community Development Objectives
- Plan for Land Use
- Plan for Housing
- Plan for Transportation
- Plan for Community Facilities and Utilities
- Interrelationships of Plan Components
- Implementation Strategies
- Regional Plan and Development Relationships

In addition to these required plan elements, this plan contains sections about the Township's history, demographic characteristics, natural resources and open space, municipal finances, and technical assistance to accomplish the plan's objectives. Under the MPC, all municipal plans must be submitted for review and comment to the county in which the municipality is located, as well as to the surrounding municipalities and the local school district. The MPC requires that all counties within the Commonwealth prepare and adopt comprehensive plans and that the municipal plans be "generally consistent" therewith. This document is advisory in nature, meaning no action or proposed action of the Township Board of Supervisors may be declared invalid, challenged, or appealed because it might be inconsistent with any provisions of this plan.

Thornbury Township Comprehensive Plan, 2004

The last comprehensive plan update for Thornbury Township was prepared by The Grafton Association in 2004. Formally adopted on September 7, 2005, this plan contained evaluations of the Township's existing conditions for land use, transportation housing, natural features, community facilities, and population and demographics, as well as plans for the future for each of these components of the community. A chapter on goals and objectives identified areas of concern within the Township and defined actions for moving forward.

Chapter I: Introduction

One apparent theme within the goals section was the emphasis on inventorying the Township's natural features, historic resources, open spaces, and agricultural lands. This theme of gaining insight into the existing resources of the Township was coupled with objectives for preserving them. For example, it was proposed that regulations be developed to facilitate preservation or adaptive reuse of historic resources.

The theme of preservation and appreciation for the natural features of Thornbury was continued when discussing land use. Future development plans were reviewed with cluster development being highly encouraged. The plan recognized that increasing building density in exchange for open space would allow the Township to continue to develop housing to meet the growing need while also taking steps to preserve open spaces and wildlife. Preservation of the Township's character was also a large part of the 2004 plan. The land-use plan recognized that many of the open spaces that are suitable for development are concentrated around the villages of Glen Mills and Thornton. To address this, the plan encouraged development in these areas with the stipulation that the projects be built in keeping with the character of the historic villages.

The 2004 comprehensive plan presented goals and objectives formulated by the community as being areas of concern warranting strategies for preservation, stabilization, and innovation. The topics included:

- Community Character
- Natural Resources
- Community Facilities and Services
- Open Space Preservation
- Agricultural Preservation
- Transportation
- Land Use
- Housing and Non-Residential Buildings
- Historic Preservation
- Finances
- Planning and Coordination

Across the various topics, identification and preservation of the unique resources of Thornbury was the main theme. The value placed on the identification and preservation of these resources emulated the value and appreciation that Thornbury feels for its history and culture. This appreciation for the elements that make Thornbury special was incorporated into the concepts and chapters of this comprehensive plan update.

LOCAL GOVERNMENT ORGANIZATION

Thornbury Township is managed by a three member-elected Board of Supervisors, consisting of a Chair, Vice Chair, and Supervisor. The Chair of the Board of Supervisors is elected by the Board membership, and each member serves a six-year staggered term. This board is responsible for the financial management of the Township, the approval of all land development plans, and the general coordination of all aspects of municipal governance. The Board of Supervisors can create commissions and committees to address specific areas of concern. Thornbury currently has a Planning Commission, Historical Commission, Environmental Advisory Council, Parks and Recreation Board, Zoning Hearing Board, Sewer Advisory Committee, and Board of Health, all to meet the specialized needs of the Township. Each of these groups meets on a regular schedule which is posted on the Township website. The structure and responsibilities of each commission and board are discussed below.

Planning Commission

The Planning Commission is comprised of a Chair, Vice Chair, and five additional members. Each member is appointed by the Board of Supervisors to serve staggered four-year terms. Their responsibility, as an advisory board, is to prepare draft ordinances, review and make recommendations on land development plan applications, and complete other specialized tasks as assigned by the Board of Supervisors. Individuals wishing to develop land in the Township coordinate with this Commission to ensure compliance with local development regulations, prior to seeking final approval from the Board of Supervisors.

Historical Commission

The Historical Commission is made up of a Chair, Vice Chair, and three additional members. Members are appointed by the Board of Supervisors to serve three-year terms. These individuals are residents who have a strong interest and/or training in the area of historic preservation. Their responsibilities include making recommendations regarding renovations to historic structures, establishing and maintaining historic districts, applying for grants for renovations and completing surveys of historic structures. The Commission is an advisory board and has a primary focus on preserving the unique historical heritage of Thornbury.

Environmental Advisory Council

The Environmental Advisory Council consists of a Chair and six additional members. Each member serves in three-year staggered terms and is appointed by the Board of Supervisors. This Council serves to identify environmental problems, promote community environmental initiatives, maintain an index of all open areas within the Township, and undertake other environmental tasks requested by the Board of Supervisors. Typical areas of concern for Council include wetlands, floodplains, areas with steep slopes or other environmentally sensitive areas.

Parks and Recreation Board

The Parks and Recreation Board is comprised of a Chair and five additional members. Each member is appointed to a four-year term by the Board of Supervisors. This advisory board makes recommendations regarding the planning, location, and development of Township parkland. The Parks and Recreation Board also develops and promotes recreation programs for residents of all ages, utilizing the facilities available within the Township.

Zoning Hearing Board

The Zoning Hearing Board is made up of a Chair, two additional members, and an alternate. Each member serves a four-year staggered term after appointment from the Board of Supervisors. The obligation of this board is to conduct public hearings on appeals of validity to elements of the Township Zoning Ordinance, its Zoning Map and any decision of the Zoning Officer. In its decision-making process, the Board may grant or deny a variance or special exception, as stipulated in the Zoning Ordinance. The Board operates in a quasi-judicial capacity, and, unlike other appointed Township organizations, has the ability to make a final decision without the involvement of the Board of Supervisors. This board is also unique in that its members are compensated for their work.

Sewer Advisory Committee

The Sewer Advisory Committee is an advisory committee that serves the sanitary sewer needs of the residents of Thornbury Township. It is comprised of a Chair and four additional members. Each member is appointed by the Board of Supervisors. Residents may attend meetings if they are interested in public sewer for their homes or if they have any other sewer or onsite system inquiries.

Board of Health

The Board of Health is comprised of the Chair and four members. Each member is appointed to a 5-year term by the Board of Supervisors. The Board of Supervisors also appoints two professionals, the Health Officer and the Sewage Enforcement Officer, both of whom are certified by the State of Pennsylvania. The Health Officer performs health inspections to ensure the safety eating/drinking establishments and meets with the Board of Health on a monthly and/or as needed basis. The Sewage Enforcement Officer performs on-lot septic duties and also meets with the Board of Health.

Chapter I: Introduction

While each commission, council, and board serve to meet a specific area of concern, the Board of Supervisors oversees the broader operational aspects of the Township, in addition to managing Township employees. Thornbury Township has a staff of seven full-time and multiple part-time employees who work to provide municipal services. The Township Manager is responsible to the Board of Supervisors as a whole, for proper and efficient administration of the affairs of the Township, in addition to the supervision of other Township staff. The Township Administrator, also known as the Township Secretary/Treasurer, serves to oversee the day-to-day business of the Township, with the functions of the Treasurer being provided by a third party contractor. The Zoning Officer serves to enforce the provisions of the Zoning Ordinance, the issuance or denial of zoning permits for all land development or conversions within the Township, and the identification and registration of all non-conforming uses. In addition to these positions, the staff is comprised of a Code Administrator and Assistant, Public Works Director, Subdivision Coordinator, Right to Know Officer, two Skilled Laborers, several Secretaries and an Animal Control Officer, all of whom are involved in municipal administration, code enforcement and public works. These employees act as resources for the above-mentioned commissions, committees, and boards, all while performing the operational responsibilities and data management essential to administering a municipality. In addition to the full and part-time staff mentioned above, the Board of Supervisors also employs various professionals who serve as consultants to provide expertise in law, accounting, engineering, and planning. First, the Solicitor guides the Board of Supervisors on matters relating to the legal interpretation of the Township Code and other legal requirements. The Township also has three elected Township Auditors, a Tax Collector, and an Emergency Management Officer. The Auditors are responsible for the certification of the financial records of the Township, and the Tax Collector and Emergency Management Officer serves in a dual capacity regarding the collection of Township tax revenues and emergency management issues.

The Township Engineer reviews land development plan applications, on behalf of the Township, as well as provides recommendations on infrastructure issues such as public sewer and water systems, transportation facilities and other engineering concerns. A Planning Consultant is employed to provide land use planning guidance in the review of land development plans and to assist in the preparation of ordinances and plans. Lastly, the municipality has several contractors to perform other services, such as public safety, emergency response, recycling, snow plowing, and road repairs.

Organizationally, all of the Township's employees, boards, committees, and commissions are responsible for and are supervised by the Board of Supervisors. More information about the Township, its organization, meeting schedules, services and notices can be found on the Thornbury Township website at www.thornbury.org.

CITIZEN PARTICIPATION

As recognized in previous plans for Thornbury Township, citizen participation is essential. The process of developing this comprehensive plan has involved public input at several levels. Thornbury Township has involved many of its residents on boards, commissions, and committees. Their input has been sought regarding various aspects of the content of this plan throughout its preparation. There have also been numerous opportunities for the general public to observe discussions and contribute comments at regularly scheduled review meetings of the Planning Commission and the Board of Supervisors. The Township issues periodic newsletters and regularly updates its website to include the progress of local initiatives like the updating of the Comprehensive Plan.

The importance of citizen involvement in the planning process cannot be overstated. The purpose of a Comprehensive Plan is to express the goals of the community as a whole and formulate recommendations and techniques to ensure their implementation. While the Plan cannot promote every diverse interest of

concern, it should address consensus and reflect, to as great a degree as possible, the aspirations of the Township.

HOW TO USE THIS COMPREHENSIVE PLAN

This plan is intended to be used as a reference guide and read from cover to cover. Topic-based chapters allow for ease of use and direct readers' focus to one specific aspect of the Township at a time. Each chapter begins by exploring the existing conditions of the municipality. Next, trends or meaningful observations are cited. Each chapter then has a plan for the future, defining goals and objectives for the Township. Following the goals, a brief rationale is provided as to why the Township hopes to pursue each objective. Lastly, each chapter concludes with a summary of the plan and a brief vision of what the community would look like once the goals are met. Overall, this plan contains valuable information on how to approach, address, and make decisions on important issues that Thornbury may face. In using this plan as a reference tool and guide, the municipality will be able to work toward deliberate goals in a clear, concise manner.

Chapter 2: Community Profile

REGIONAL SETTING

Thornbury Township is situated on the western boundary of Delaware County, Pennsylvania. **Map 2.1: Regional Setting**, illustrates its location on the border between Delaware and Chester Counties. Interestingly, there is also a Thornbury Township in Chester County, which is contiguous to the west of the subject township. Within Delaware County, The Township is bordered by Edgmont Township, to the northeast; Middletown Township, to the east; Chester Heights Borough, to the southeast; Concord Township, to the south; and Chadds Ford Township, to the southwest. Thornbury Township is also adjacent to three municipalities in Chester County: the other Thornbury Township, to the west; Westtown Township, to the northwest; and Birmingham Township, at one point of intersection where the Chester County municipalities of Thornbury and Birmingham Townships, meet the Delaware County municipalities of Chadds Ford and Thornbury Townships. By virtue of its location on the County boundary, there is a complex pattern of municipalities surrounding Thornbury Township.

Thornbury Township lies, generally, between West Chester and Media Boroughs, the county seats of Chester and Delaware Counties. On a larger scale, Center City Philadelphia is about 25 miles to the east and Wilmington, Delaware is about 15 miles south of Thornbury. With this location, Thornbury Township is considered part of the Delaware Valley region, which falls within the area managed by the Delaware Valley Regional Planning Commission. This commission oversees the nine counties in the Greater Philadelphia area between New Jersey and Pennsylvania. Thornbury Township's position on the County boundary, direct contact with eight other municipalities, and proximity to two cities allow the Township to play an important role within a regional context.

PHYSICAL CHARACTERISTICS

Much like Thornbury's role within the region, the physical characteristics of the Township are very unique. Thornbury Township is characterized by rolling terrain, dotted with the remnants of historic farms. The topography of Thornbury has both shaped and been shaped by land use throughout the Township. Many of the steep slopes, shown in **Map 2.2: Steep Slopes**, are the product of mining and quarrying operations, which occurred in two parts of the Township; an abandoned quarry location on Chester Creek across from Old Gradyville Road and adjacent to the Southeastern Pennsylvania Transportation Authority (SEPTA) West Chester Line, is one such example. The Township's steepest slopes however are found naturally along the Chester Creek, with some of the slopes having a sixty-five percent grade. These parcels have historically been vacant due to the difficulty of farming or developing on very steep slopes.

In addition to causing some of the Township's steepest slopes, Chester Creek also serves as the primary surface water system in the Township. Located in the eastern portion of the Township, Chester Creek is characterized by narrow, well defined, floodplains. In the western portion of the Township, the West Branch of Chester Creek forms a large impoundment known as Brinton Lake, before meeting the main branch of Chester Creek just east of the Township boundary. Chester Creek and its tributaries are largely bordered by wetlands on the outskirts of their floodplains. The wetlands play a vital role in the area's ecology by filtering and purifying the surface water runoff and by providing highly productive zones for wildlife and fish. Many of these productive zones are skirted by wooded areas that have escaped development due to their wet soils or steep slopes. Some of the wooded areas are in public ownership as open space, while others are in stream valleys, along rights-of-way or in private ownership. Regardless of their location, these wooded areas, as shown in **Map 2.3: Wooded Areas**, provide a significant habitat for wildlife. Many biotic resources have been maintained in the Township; however, the interjection of single-family developments has impacted these wooded areas by disrupting their contiguous nature.

The wooded areas of the Township, along with the meandering streams, act as a scenic resource to the Township, as well. The visual characteristics of the area have combined to create desirable places for residential and recreational uses. As the area continues to develop, it is increasingly important to retain these scenic elements as they provide relief from the concentrated development pattern. For this reason, among many other benefits of maintaining the Township's ecological diversity, many residential land developments have utilized smaller lot sizes and clustered development patterns to maintain wooded areas and other open spaces.

Thornbury Township is a bucolic municipality with many unique natural and topographical features. While some quarrying operations have transformed the topography over the years, the Township has generally let the rolling hills and steep slopes dictate its settlement patterns and permitted uses. The Chester Creek is one of such geographic features that has influenced Township activities through time. Today, the Creek serves as a scenic resource which has also contributed sustenance to wetlands and wooded areas that house much of the Township's wildlife. The physical characteristics of Thornbury reflect the history of the area and continue to make the Township a desirable place to live, work, and play.

DEMOGRAPHIC ANALYSIS

The use of demographic data in the planning process is essential in order to assess both the current population status and the forecasted condition. An examination of Thornbury's demographic and economic trends provides insight into the types of facilities and services Township residents may want or need. Additionally, comparing the Township's population data to that of surrounding municipalities and the County, as a whole, helps to better define Thornbury Township in a regional context, which is vital due to its central location.

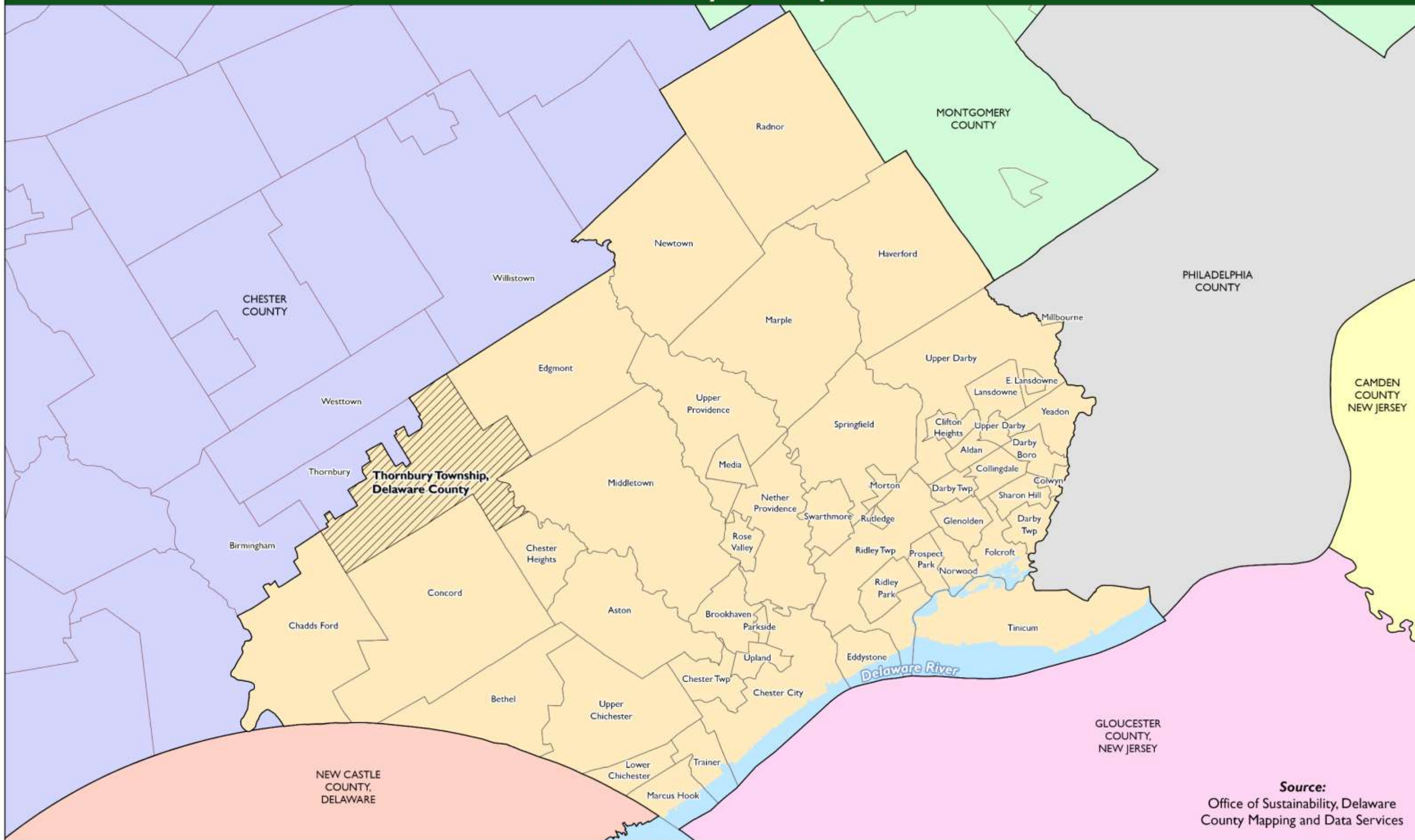
Methodology

A variety of demographic and economic characteristics were analyzed to gain a better understanding of the current character and culture of the Township. Data from the U.S. Census Bureau, the U.S. Department of Commerce, and the Delaware Valley Regional Planning Commission were used. When evaluating the data, it is notable that population totals for Thornbury Township, as cited by the U.S. Census Bureau, contain discrepancies. The original population total for Thornbury Township, as found in the 2010 Census, was corrected from 8,028 residents to 7,782. To address any potential discrepancies created by this adjustment, much of the analysis in this plan focuses on comparing trends and relative percentages in the data rather than hard numbers.

Population data from the 2000 Census also had a similar discrepancy. The original population total for Thornbury Township in the 2000 Census was 7,093. This population figure included the institutionalized population at the George W. Hill Correctional Facility, otherwise known as the Delaware County Prison, that sits on the border of Concord Township and Thornbury. After coming to a consensus, Concord and Thornbury contested their population figures, determining that the prison population should be included in Concord Township and excluded from Thornbury Township due to the housing facilities for the institution exclusively being in Concord. Upon the acceptance of this change, Thornbury's population total was then adjusted to 5,787, decreasing by 1,306, while Concord's population figure was increased by 1,306. While the institutions located in Thornbury Township, such as the George W. Hill Correctional Facility, Cheyney University, and the Glen Mills Schools, often cause discrepancies in population data, their presence is important to recognize during analysis. While the individuals housed in these institutions have non-traditional living arrangements, the institutions, as a whole, impact the Township, making Thornbury a diverse and unique place to live.

Map 2.1: Regional Setting Thornbury Township

0 1 2 4 Miles



Source:
Office of Sustainability, Delaware
County Mapping and Data Services

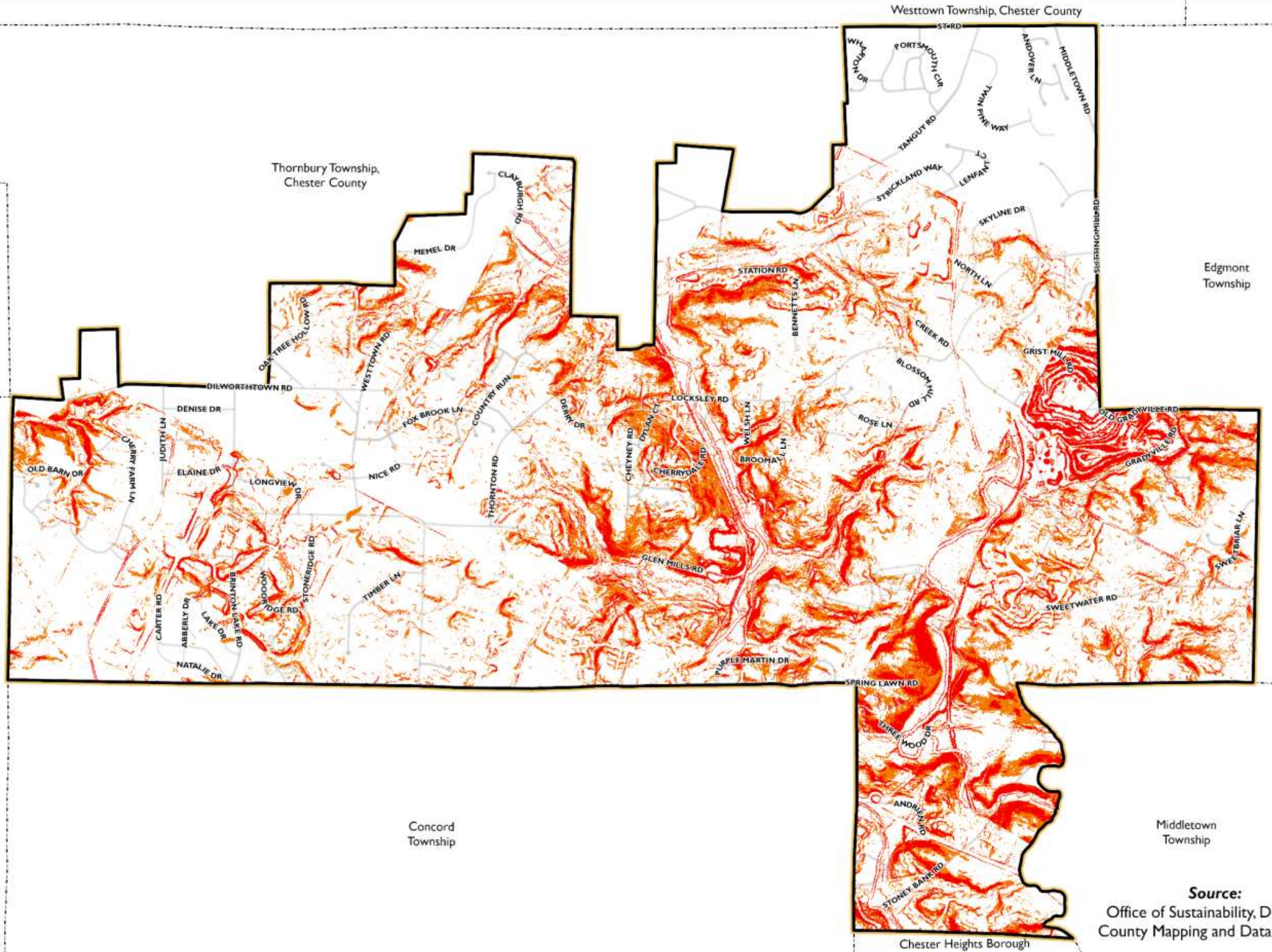
This page intentionally left blank for printing purposes.

Map 2.2: Steep Slopes Thornbury Township

0 1/4 1/2 1 Miles



- Municipal Boundary
- Slope Percentage (%)**
- 15-25% Steep Slopes
 - 25% + Very Steep Slopes

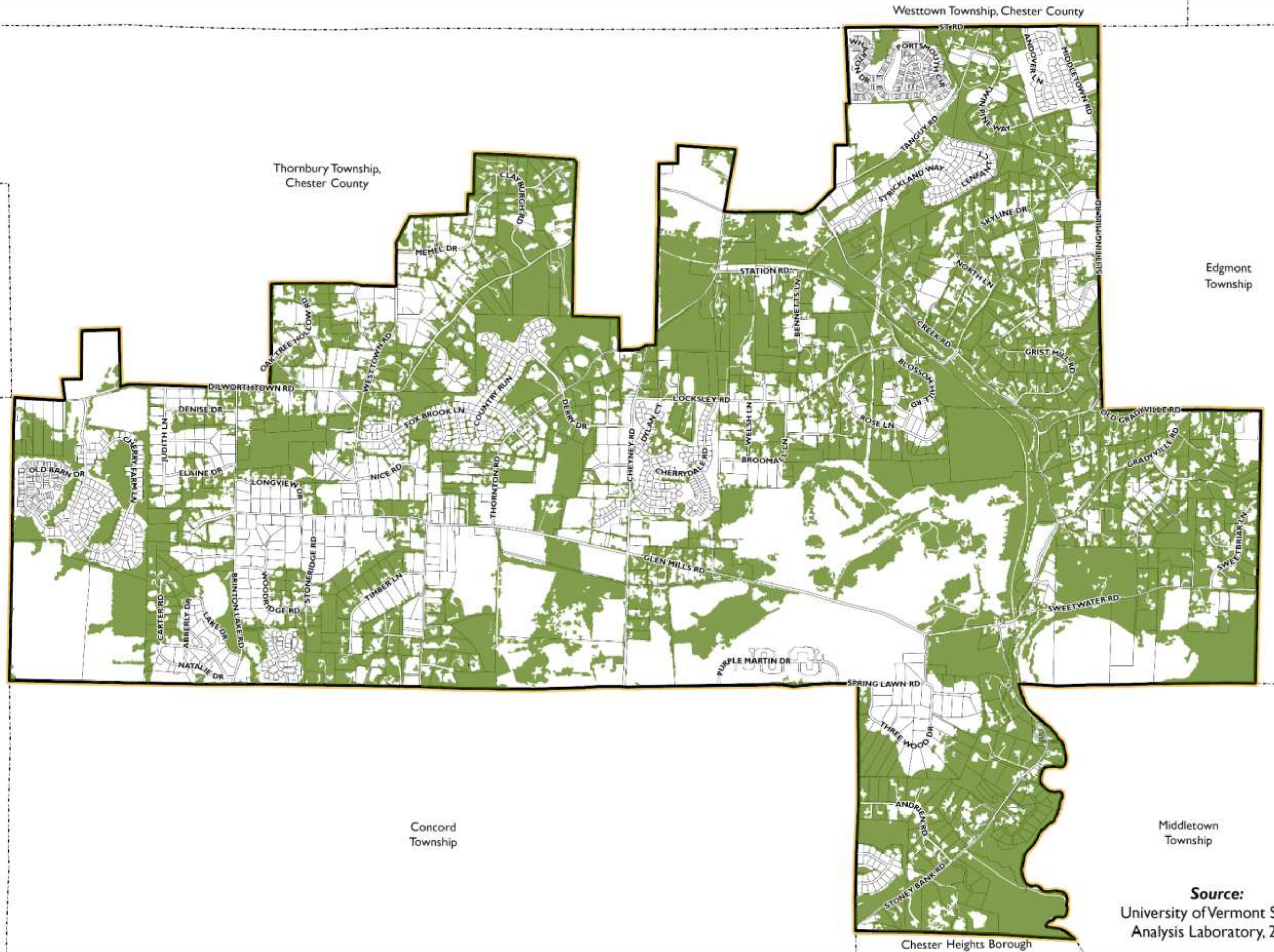


Source:
Office of Sustainability, Delaware
County Mapping and Data Services

This page intentionally left blank for printing purposes.

Map 2.3:Wooded Areas Thornbury Township

- Municipal Boundaries
- Wooded Areas



Source:
University of Vermont Spatial
Analysis Laboratory, 2013

This page intentionally left blank for printing purposes.

Population Trends and Projections

Population trends for Thornbury Township, as compared to surrounding municipalities and Delaware County, are highlighted in **Table 2.1: Regional Population Trends**.

Table 2.1: Regional Population Trends, 2020

Year	1970	1980	1990	2000*	2010*	2020	Change 2010 - 2020
Thornbury (DC)	3,284	3,653	4,728	5,787	7,782	6,904	-11.3%
Chadds Ford	1,281	2,057	3,118	3,170	3,640	3,972	9.1%
Chester Heights	597	1,302	2,273	2,528	2,531	2,897	14.5%
Concord	4,592	6,437	6,933	9,933	17,321	18,295	5.6%
Edgmont	1,368	1,410	2,735	3,918	3,987	4,283	7.4%
Middletown	12,878	12,463	14,130	16,064	15,807	16,373	3.6%
Thornbury (CC)	803	1,323	1,131	2,731	3,017	3,177	5.3%
Delaware County	603,456	555,023	547,323	550,864	558,979	576,830	3.2%

Source: U.S. Census Bureau Decennial Census 1970, 1980, 1990, 2000, 2010, 2020,

*These figures represent the U.S. Census Bureau adjusted population totals for Thornbury Township for 2000 and 2010

From the 1970s until 2010, Thornbury Township grew rapidly. During this period the large availability of undeveloped land allowed the western portion of Delaware County to undergo a population boom, while the eastern portion of the County faced a declining population. In the 1980s through 2000, the population of the Township saw steady growth of just over 1,000 people per decade, with this number increasing to almost 2,000 residents from 2000 to 2010. Subsequently the Township's population decreased by 878 from 2010 to 2020.

The higher growth experienced by Thornbury between 2000 and 2010 can be largely attributed to several residential development projects that increased the housing stock in the area. In comparison, the relative decline in Thornbury's population from 2010 to 2020 can be entirely attributed to the loss of group quarter populations including the closure of the Glen Mill School in 2019 as well as a decrease in the residential population at Cheyney University. This decrease is displayed in **Table 2.2: Group Quarters Population**.

Table 2.2: Group Quarters Population, 2010 - 2020

Group Quarters Population	2010	2020	Difference (2010 to 2020)
Institutionalized Total	721	0	-721
Correctional facilities for adults	0	0	0
Juvenile facilities	721	0	-721
Nursing facilities/Skilled-nursing facilities	0	0	0
Other institutional facilities	0	0	0
Noninstitutionalized Total	999	562	-437
College/University student housing	980	548	-432
Military quarters	0	0	0
Other non-institutional facilities	19	14	-5

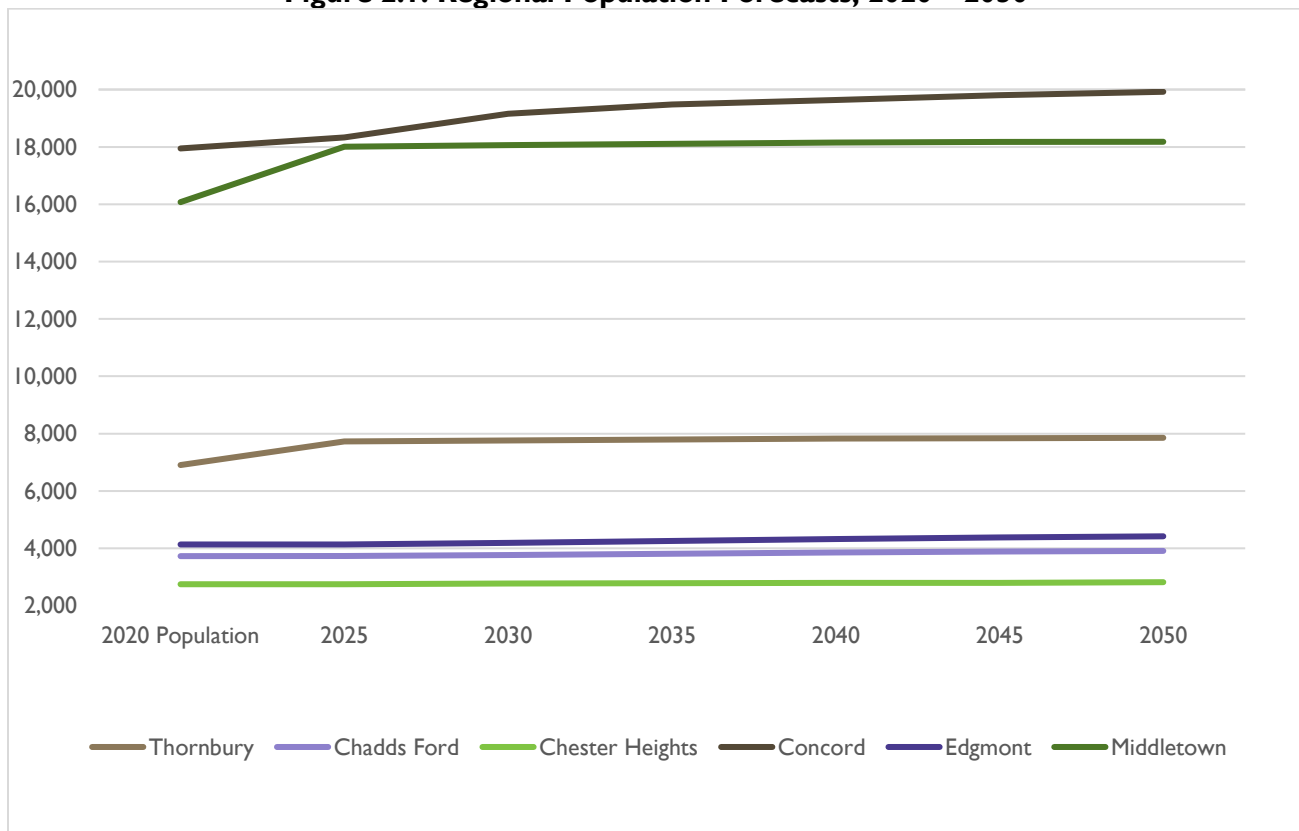
Source: U.S. Census Bureau Decennial Census 2010, 2020,

Chapter 2: Community Profile

Thornbury had a combination of institutionalized and non-institutionalized group quarter populations totaling 1,720 in 2010. By the year 2020, group quarters shrunk by 1,158 individuals to 562. As noted above, the closure of the Glen Mills School in 2019 accounts for the loss of 721 institutionalized individuals. However, the non-institutionalized population also drops by 432 college students, and 5 others, bringing the group quarters total population to a mere 562 for the year 2020, a significant loss overall. It is possible that many students at Cheyney University were not residing on campus during the 2020 Census count, due to the COVID-19 pandemic when many students paused or continued their education virtually.

While overall Thornbury has experienced an influx of new residents over the past several decades, population forecasts from the U.S. Census Bureau and the Delaware Valley Regional Planning Commission predict that the growth will slow over the next 30 years. Between 2020 and 2050 it is projected that Thornbury will add about 950 residents, a 13.8% increase over the next few decades which will influence housing needs in the future. This trend of slowed growth is not unique to Thornbury, as it is predicted that neighboring townships will also see slowed growth rates and eventually level off by the year 2050. **Figure 2.1: Regional Population Forecasts, 2020** highlights these trends across the region.

Figure 2.1: Regional Population Forecasts, 2020 – 2050

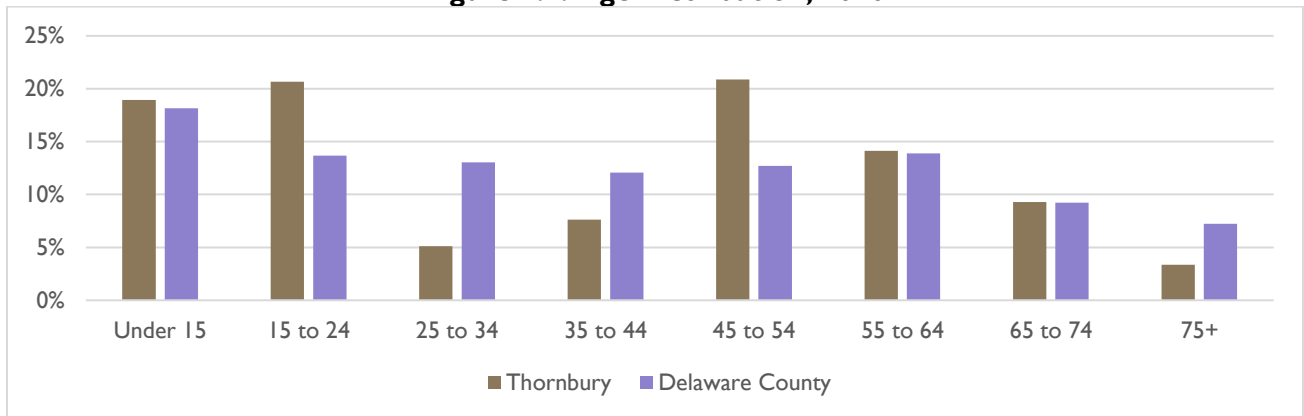


Source: Delaware Valley Regional Planning Commission

Age Distribution

In evaluating the age distribution of a community, a picture is painted not only about the people who live there, but also about their needs. **Figure 2.2** compares the age distribution of Thornbury Township and Delaware County, in 2020.

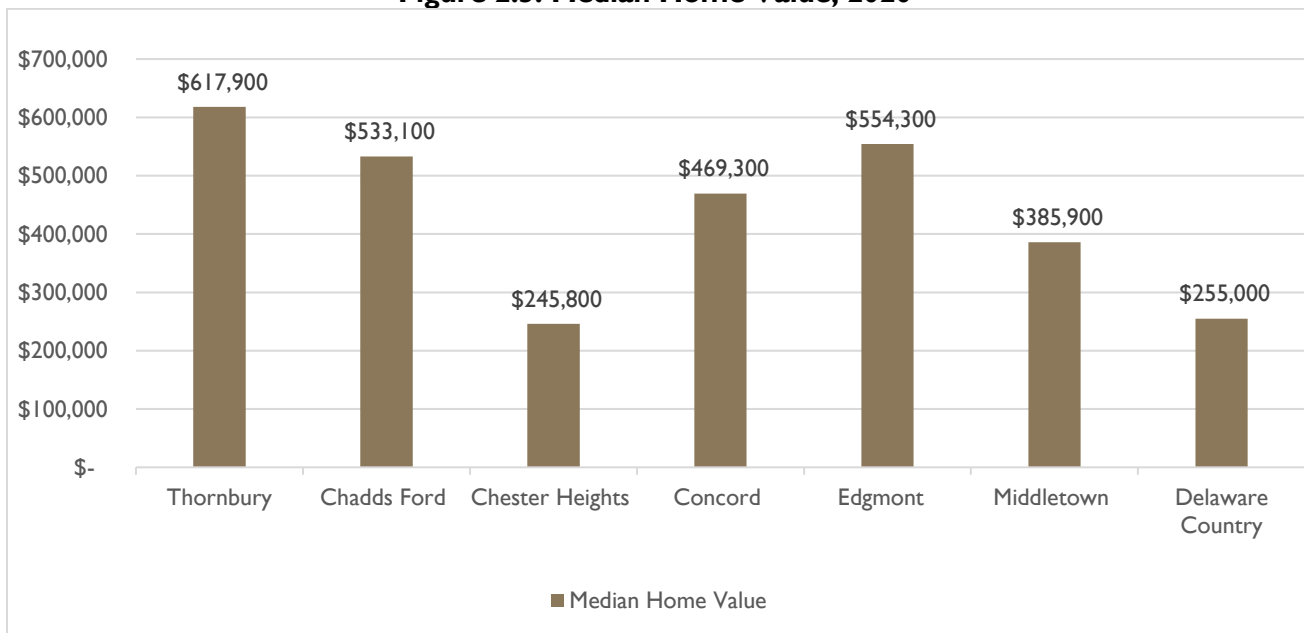
Figure 2.2: Age Distribution, 2020



Source: U.S. Census Bureau (2020), 5 Year American Community Survey

When evaluating Thornbury Township's age distribution, the first notable observation is the large number of younger residents ages 15 up to 24. This is likely representative of the student population at Cheyney University as well as the relatively large number of middle-aged families residing in the Township. Conversely, there is a significant drop in residents ages 25 to 34 in Thornbury, as compared to the County profile in **Figure 2.2**. One explanation for this discrepancy may be that the median home value of owner-occupied housing in Thornbury Township was \$617,900, in 2020, while the median value for Delaware County was \$255,000, almost half that of Thornbury shown in **Figure 2.3: Median Home Value, 2020**. This high home value in Thornbury may have contributed to the lower percentage of residents between the ages of 25 to 34, as this is typically the age of first-time homeowners.

Figure 2.3: Median Home Value, 2020



Source: U.S. Census Bureau (2020), 5 Year American Community Survey

Another factor to consider when looking at the age distribution in both Thornbury Township and Delaware County is a large number of residents between the ages of 45 and 54. As this demographic begins to age, a greater emphasis should be placed on ensuring adequate resources and personnel to meet changing needs.

Race and Ethnicity

Table 2.3: Thornbury Township, Racial and Ethnic Composition, 2010-2020

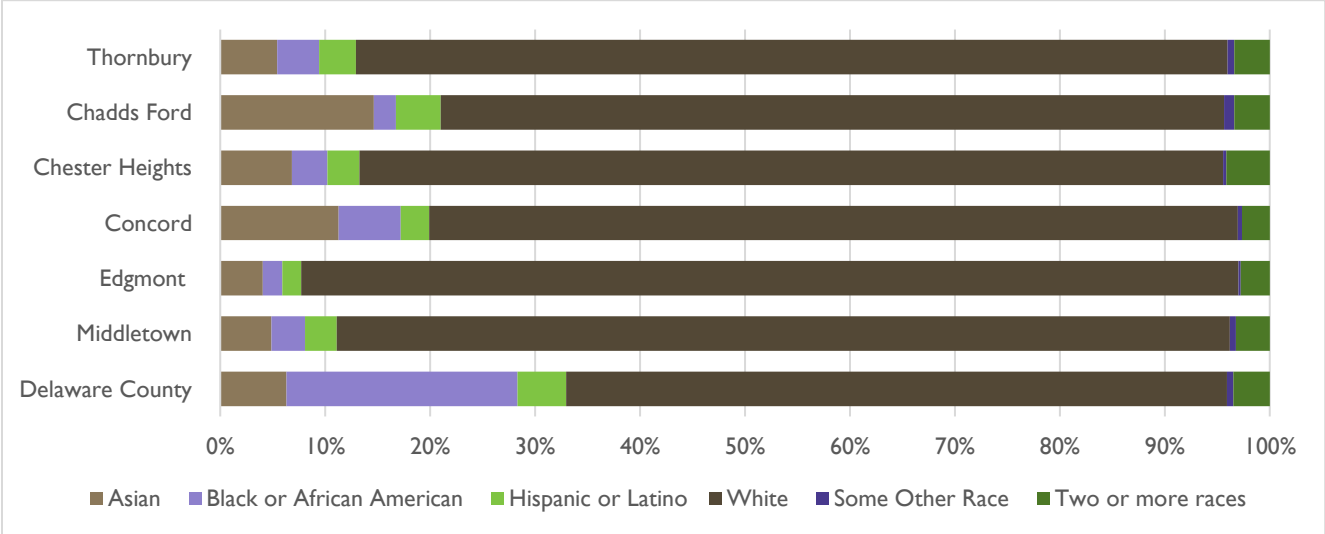
Racial and Ethnic Composition	2010	2020
Asian	4.1%	5.4%
Black or African American	20.2%	4.0%
Hispanic or Latino	2.4%	3.5%
White	71.6%	83.1%
Some Other Race	0.3%	0.6%
Two or more races	1.4%	3.4%

Source: U.S. Census Bureau Decennial Census, 2010, 2020
*The category “Other” includes Native Americans, Alaskan Natives and Aleuts, Pacific Islanders and other races and ethnicities not defined by another category

An analysis of the racial and ethnic composition of Thornbury Township, as shown in **Table 2.3: Racial and Ethnic Composition** reveals a multi-racial community with increases in the Asian, Hispanic or Latino, Some other race, and Two or more races population groups, but with a loss of black residents between 2010 and 2020. The Township’s demographics emulate that of the entire County with only a few discrepancies. Both

Delaware County and Thornbury have populations that are primarily White with representation from many minority groups. Thornbury has previously seen higher numbers of diversity, however, the shift in demographics may be due to the racially diverse population decreasing substantially in 2020 due to the Glen Mills School closure and a drop in students residing on campus at Cheyney University, an historically black college or university (HBCU). **Figure 2.4** below displays the regional racial composition of western Delaware County municipalities and the County as a whole. Despite the large decrease in the Black population of Township, **Figure 2.4: Regional Racial and Ethnic Composition, 2020** reflects that the Township still maintains a diverse population.

Figure 2.4: Regional Racial and Ethnic Composition, 2020

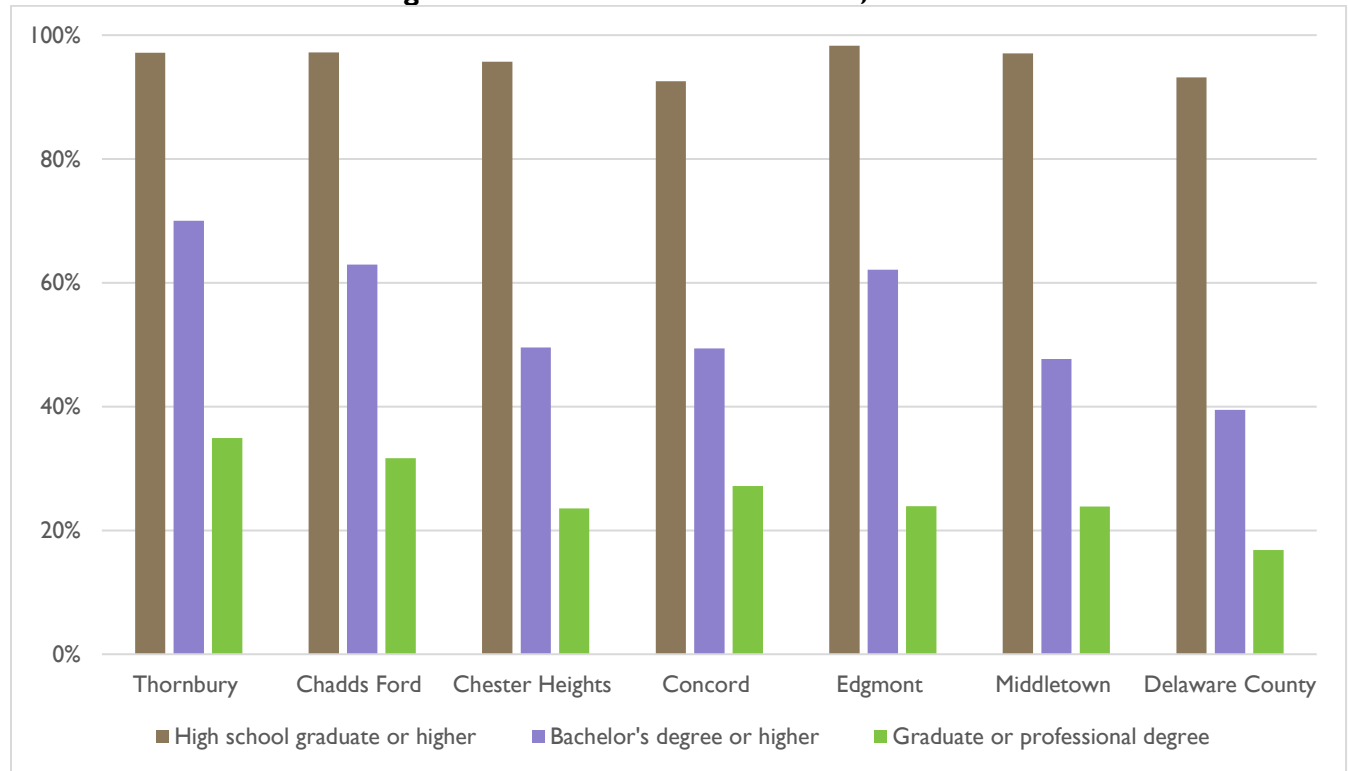


Source: U.S. Census Bureau Decennial Census 2020
*The category “Other” includes Native Americans, Alaskan Natives and Aleuts, Pacific Islanders and other races and ethnicities not defined by another category

Education

Figure 2.5: Educational Attainment, 2020, displays the educational attainment levels of Thornbury residents 25 years of age and over, as compared to surrounding municipalities within Delaware County.

Figure 2.5: Educational Attainment, 2020



Source: U.S. Census Bureau (2020), 5 Year American Community Survey

In 2020, Thornbury Township had the second-highest number of high school graduates out of all adjacent municipalities within Delaware County, at 97.2%. Another 70% of the Township's residents also boasted a bachelor's degree or higher, a higher percentage than any of its neighboring communities. The township also had the highest percentage of residents with a graduate or professional degree at 34.9% of residents. Thornbury doubles the County's percentage of graduate or professional degrees highlighting the township residents to overall be exceptionally well educated. This due in part to the Township's proximity to universities, private schools, medical facilities and professional offices, which makes it a desirable bedroom community for Glen Mills, West Chester and Wilmington Delaware.

Income

Income is frequently used as an indicator of the vitality of a community. Income directly relates to job availability and education levels, and can largely influence local economies. According to the U.S. Census Bureau, household income is the income of the householder and all other individuals 15 years old and over in the household, whether they are related or not. For this analysis household incomes will be considered rather than family incomes, as household incomes are more inclusive; family income statistics only represent family households, whereas household incomes consists of single-member households, joint-member households, and family households.

Figure 2.6: Median Household Income, 2010-2020



Source: U.S. Census Bureau (2010, 2020), 5 Year American Community Survey

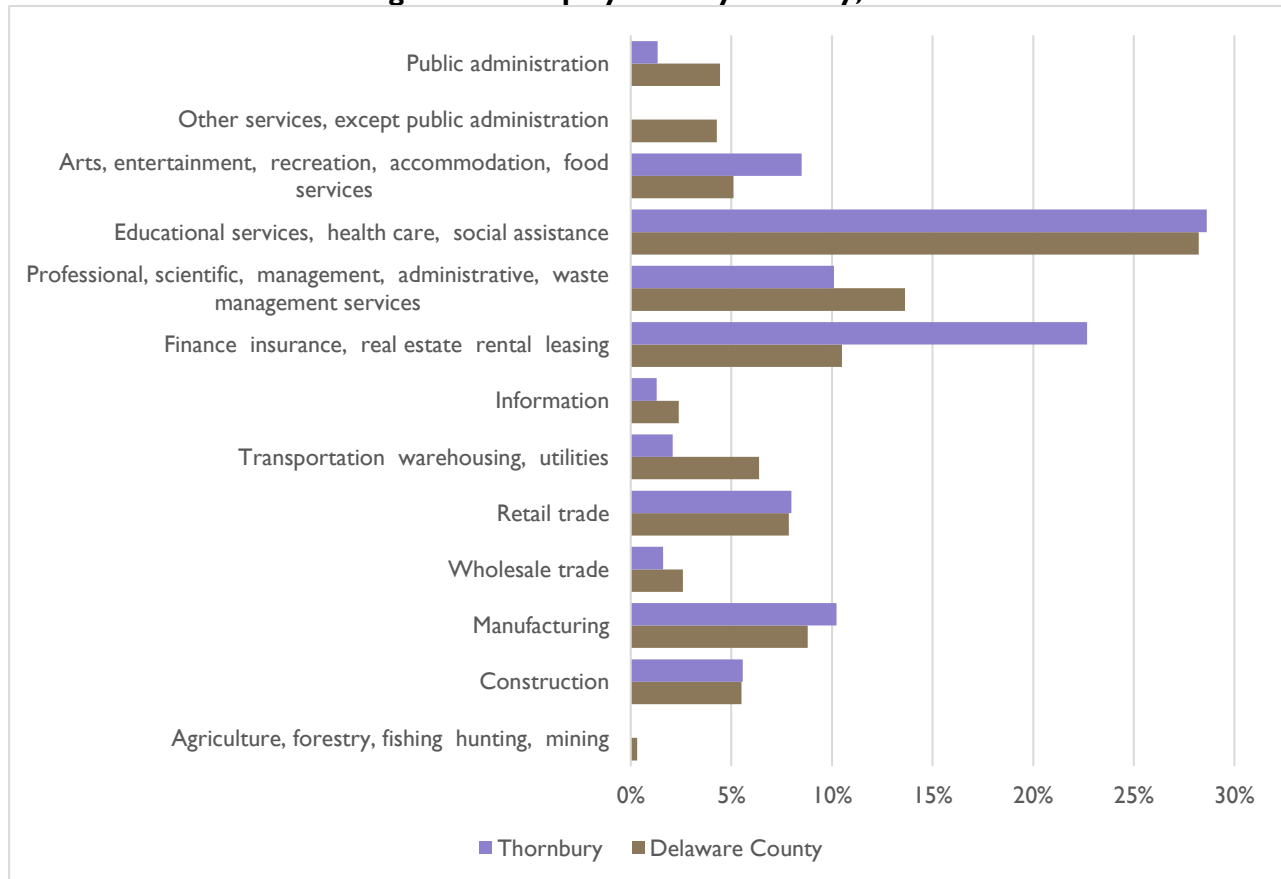
Between 2010 and 2020, Thornbury Township saw a 39.2% increase in median household income, the second largest increase out of all adjacent municipalities. This change moved Thornbury from the second-highest median household income in 2010 to the highest household income out of adjacent municipalities in 2020, as shown in **Figure 2.6: Median Household Income, 2010-2020**. With a median income of \$156,081, Thornbury sustained the highest median household income despite Chadds Ford seeing the largest percentage change of 50.2%. Delaware County and other municipalities generally saw increases from 20-30% with the exception of Edgmont where there was a decrease in household income.

These rankings parallel the educational levels as displayed in **Figure 2.5: Education Levels of the Population, 2020**. The municipalities with the highest numbers of residents with bachelor’s degrees and graduate or professional degrees, such as Thornbury and Chadds Ford, were also the municipalities with the highest median household incomes. When analyzing median household incomes, Thornbury is one of the wealthier municipalities.

Employment

While most residents of Thornbury Township commute outside of the municipality for work each day, an assessment of the most prevalent employment sectors of Township residents can provide important insight that may be used when deciding which businesses a municipality might want to attract in the future. Industries with semi-skilled and skilled employees typically yield higher wages; they include manufacturing, construction, professional services, finance, insurance, real estate, education, health, and public administration. **Figure 2.7: Employment by Industry, 2020**, demonstrates the breakdown of employment by industry among Thornbury Township residents over the age of 16, as compared to the entirety of Delaware County.

Figure 2.7: Employment by Industry, 2020



Source: U.S. Census Bureau (2020), 5 Year American Community Survey

As shown in **Figure 2.7** the highest percentage of the labor force for both Thornbury Township and Delaware County consists of employees in the educational, health, and social services sector, with 28.6% for Thornbury and 28.2% for the County. Thornbury Township distinguishes itself from the County, with higher percentages of workers in the finance, insurance, real estate, and rental and leasing; 22.7% compared to 10.5%. This is the largest difference between Thornbury's workforce and the County. Another industry that stands out is manufacturing. Within the township, 10.2% of residents are employed in manufacturing compared to 8.8% within the County as a whole. Additionally, the Township has a higher proportion of residents employed in in the arts entertainment, recreation, accommodation and food services, at 8.5% compared to the County with 5.1%. Overall, the labor force in Thornbury can be classified as diverse, with a significant amount of workers in higher-skilled and higher-wage industries.

COMMUNITY CHARACTER

In understanding the make-up of the community, Thornbury Township recognizes the importance of maintaining certain characteristics of the Township while working to improve or change others. To actively pursue this effort, the Township has established the following goal and objectives, to actively continue their efforts in preserving the Thornbury Township that residents continue to call home.

Community Character Goal

To preserve and enhance beneficial aspects of the Township, as expressed by the community.

Objective 1	Evaluate beneficial or positive community characteristics and seek means to perpetuate them.
Objective 2	Identify negative characteristics of the Township and seek remedies to correct and improve them.
Objective 3	Encourage growth management that sustains and expands positive community characteristics.
Objective 4	Strengthen the sense of community by promoting citizen engagement on a local and Township level.
Objective 5:	Encourage the protection of scenic vistas identified in 2007 Open Space Plan.

The established goal and objectives serve to maintain the community character that Thornbury Township has come to be known by. In committing to further this goal, the Township is recognizing the importance and value that residents have placed on the features that make Thornbury unique.

SUMMARY

Thornbury Township plays an important role in the region, due to its location on the border of Delaware and Chester Counties. The scenic landscapes of rolling hills and meandering streams, along with the proximity to Wilmington, DE and Philadelphia, PA, has made Thornbury Township a very desirable place to live. Over the last few decades through to 2010, the Township experienced steady population growth. With this influx of new residents, the Township continued to maintain multi-racial population when compared to neighboring municipalities. While there was a decrease in the population of multi-racial residents from 2010 to 2020, due in part to the closing of the Glen Mills School and decreases in Cheyney University’s residential student population, the Township still retains a healthy degree of diversity. Thornbury ranked near the top for the most educated and highest income earning residents. Further analysis showed that these figures could be attributed to Thornbury residents primarily serving in highly skilled high wage positions. In understanding the current conditions of the municipality, Thornbury Township has committed to preserving the beneficial aspects of the community into the future. This goal, along with an understanding of the Township’s current conditions, will serve to guide decisions for the future.

Chapter 3: Historic Perspective and Preservation

HISTORIC PERSPECTIVE

“A Brief History of Thornbury Township and its Architecture,” which appears below, was prepared in 2001 as part of the Historic Resource Inventory created by the Brandywine Conservancy, Inc. and Wise Preservation Planning. This Inventory has served as the framework for the Township’s preservation efforts over the past decade, with the history of Thornbury acting as the motivation.

Thornbury Township was founded in 1687 during a time of European settlement. Speculators purchased large parcels of land that, over time, were subdivided. While most of the Township was suitable for farming, the land along Chester Creek offered opportunities for water-powered mills and mining. Farming and milling dominated the economy of Thornbury Township throughout the first two centuries of its existence.

The milling operations were one of the more important sources of Thornbury Township’s architecture. Early in the eighteenth century, a settlement began to grow at Sarum, where Glen Mills Road – laid out between 1687 and 1688 – crossed Chester Creek. Iron ore in the area attracted a group of investors who helped John Taylor to construct a water-powered mill to roll iron. By 1724, Taylor had opened the Sarum Forge. This milling operation was the first of its kind in the commonwealth of Pennsylvania and served as an early magnet for immigration. In 1750, the Lieutenant Governor of Pennsylvania, James Hamilton, wrote to London, “there is but one mill or engine for slitting and rolling iron within the County... which is situated in Thornbury Township.” Two early businesses at Sarum were a store owned by Taylor (1742) and a tavern operated by Obadiah Russell (1743).

In 1777, during the American Revolution, the contending armies fought the Battle of the Brandywine just to the west of Thornbury Township. Following the defeat of the American army, a contingent of British troops headed to the home of Captain Persifor Frazer, a prominent citizen, and owner of the Sarum Forge operations. Frazer was captured after the battle and held at the Walnut Street Prison in Philadelphia. During a visit to him, his wife smuggled some of his maggot-ridden bread away and showed it to the American army; General Washington sent a letter to General Howe about the treatment of American prisoners and helped to bring about improved conditions.

Following the American Revolution, the milling industry became more active. In 1766, Richard Cheyney purchased a sawmill on Chester Creek; this mill later became the property of the Frazer family who owned the old Taylor farmstead (now the Taylor/Frazer Ruin). Two decades later, John Edwards built a new forge in the northeastern portion of the Township; this forge became a slitting mill in 1816 and produced seven tons of sheet iron per month. Although the mill was quite profitable, in 1829, it was converted into a cut nail factory. In 1836, some of the iron mills at Sarum were converted into paper mills; this conversion may be connected to a famous strike in the Chester Creek mills in the spring of 1836 in which the workers sought shorter hours. The Sarum settlement was renamed Glen Mills about this time. Of all the mills, only the Locksley Mill remains today, although the ruins of other milling operations remain in some locations along Chester Creek.

Today, the Chester Creek Historic District encompasses the extent of the milling operations along Chester Creek. In the northern reaches of the Historic District are the Locksley Mill and Miller’s House and the Taylor/Frazer Ruins. The Glen Mills settlement is anchored by later buildings, the railroad station, and store, but also includes a pair of late nineteenth-century mill workers’ houses. The district continues south along Stony Bank Road and includes a series of more mill workers’ houses and stone ruins of older milling operations. A large portion of the houses in the Chester Creek Historic District consist of stone dwelling from the nineteenth century; these vernacular dwellings are two- and three-story buildings built on the western slope

of hills rising from Chester Creek. One prominent example is the Wilcox Mills Workers' House on Stony Bank Road, a large three-story, eight-bay frame building. This house began as a Penn Plan house, as did another nearby mill house that was built of stone.

The boundary of Thornbury Township was changed twice following the American Revolution. When Delaware County was formed in 1789 out of Chester County, farmers in Thornbury and Birmingham Townships were allowed to choose whether they wanted their farms to remain in Chester County or be attached to the new Delaware County. As a result, the boundary between the two counties through these townships is quite irregular. Most farms chose to be included in the new Thornbury Township in Delaware County, at this time. Then in 1842, a portion of Aston Township, south of Glen Mills, was attached to Thornbury Township; this area includes many of the mill houses along Chester Creek.

Meanwhile, the land suitable for cultivation to the north and west of Glen Mills, became settled with farms. With the passage of years, the large tracts were subdivided into smaller parcels, leading to the creation of farmsteads such as the Thomas Brinton Farm. Although only one "working" farm exists today – the Craig Farm on Route 202 in the southwestern corner of the Township – there are several intact farmsteads, some with acreage being reserved for farming or grazing. One of these smaller farmsteads is the John Cheyney Tenant House and Farm on Station Road, which includes a large farmhouse, barn, forge, and spring house. Many of these farms had associated tenant houses, such as Maple Springs Farm on Glen Mills Road. Barns in the Township are generally of single-decker variety, although a double-decker barn is present at the Thomas Brinton Farm. The Thomas Brinton Barn is significant not only for its architecture but also for its interior silo, a common practice of the late nineteenth century.

Remnants of farms dot the landscape throughout the Township. The Pyle family was prominent in the western portions of the Township, and many men from the family-built houses that bear their names today (e.g., Israel, Eli, Jacob, and John Pyle Houses). Most of the agricultural outbuildings associated with these houses have disappeared since the owners have discontinued the farm operations. The Prospect Hill Farm on Tanguy Road is an example of a farmhouse that was enlarged and converted into a stylish Italianate residence during the middle of the nineteenth century. Further evidence of the extended viability of farming is the large Second Empire farmhouse on Tanguy Road with a mansard roof dating to c. 1870. In addition, a farmhouse on lower Stony Bank Road was enlarged in the early twentieth century; this house began as a small Penn Plan house with a detached kitchen, both of which are extant.

Thornton, the second settlement in Thornbury Township after Glen Mills, did not coalesce until 1830. By that time, a small cluster of buildings existed at the intersection of Glen Mills Road and Thornton Road (now the Thornton National Register Historic District). This cluster of buildings was anchored by the "Yellow House" which was built by John King. This building became a post office in 1832 and is one of the oldest post offices in the United States still using its original space. A weaver rented a portion of the Yellow House about this time and produced manufactured cloth, coverlets, linen, towelings, and "linsey-woolsey", a coarse twill or plain-woven fabric woven with a linen warp and a woolen weft. Most resources in the district are two-story houses, either stone or frame. Many of the houses in this area have since been stuccoed.

Thornbury Township has been the location of few religious congregations throughout its history. In the early years, settlers apparently attended religious services in adjacent townships, such as Birmingham Friends Meeting. Perhaps the earliest Thornbury congregation was the Stony Bank Methodist Church, which began c. 1810. Later in the century, three other congregations were formed: Wayside, Bethlehem, and Thornbury AME. In an interesting turn of events, three of these four congregations built new facilities in 1871. Bethlehem and Wayside reflect a more pronounced Gothic architectural influence, whereas Stony Bank has a simpler and more vernacular building. Thornbury AME rebuilt its facilities in 1958 and followed the trends of that decade, with a small front-gabled building attached to a cross-gabled classroom wing.

The arrival of the railroad in Thornbury Township fostered economic growth during the nineteenth century. Thornbury's paper mills and nail factories produced much-needed goods for the Philadelphia market, and the railroad facilitated the exchange of goods. The Philadelphia, Baltimore, and Washington Railroad connected Philadelphia to West Chester and stopped at Glen Mills, Locksley, and Cheyney. The construction of the train station at Glen Mills in 1882 and the accompanying station store represent some of the more significant architectural trends of the latter quarter of the nineteenth century. Today, all three train stations in the Township (Glen Mills, Locksley, and Cheyney) remain.

As the industry in Thornbury began to slow during the later nineteenth and early twentieth centuries, one of the more important events in the Township occurred: Cheyney University, one of the oldest African-American institutions of higher learning in the United States, was located in the northern portion of the Township. A series of buildings in the Colonial Revival style were constructed on a large quad in the center of the campus in the early years of the twentieth century. As such, the core of the University is perhaps one of the most impressive collections of Colonial Revival style architecture in the western Philadelphia suburbs.

Contemporary architectural trends were also reflected in the construction of new schools around the turn of the twentieth century. In 1889, the Glen Mills Schools, a boarding school for delinquent youth located to the west of Glen Mills, was founded in the Township. The school reflects the Queen Anne style with its Richardsonian arches, flared eaves, and expressive chimneys. The Township built two smaller public school buildings in 1901: Teresa Hall School and Thornbury School Western. The Teresa Hall School, formerly the Eastern School, is a Colonial Revival building located to the north of Glen Mills with a pyramidal roof and cupola, with arched-head windows. Thornbury School Western on Westtown Road has a large Queen Anne porch and balcony, and expressive keystones about each window and arch. Each school makes it evident that the Township was not isolated from the prevailing architectural trends of the time.

Throughout the twentieth century, the Township's economy shifted away from the industry; however, farming continued as a major economic force into the 1970s. One by one, the mills closed and most of them collapsed into ruin. A large quarrying business replaced the industry in the southeastern portion of the Township. Eventually, railroad service through Thornbury Township ceased, and the Cheyney and Glen Mills train stations were converted for other uses. With farming still profitable in the area, people interested in Homestead Associations created the Brinton Lake and Tanguy Homesteads. Houses in both of these associations have been much altered over the years. During the past two decades, much of the farmland in Thornbury Township has been developed as population pressure from Philadelphia moved westward. As a result, several of the old farms have become isolated houses and barns in the midst of larger development.

Looking back, Thornbury Township has always provided great value to the County. Beginning as a milling town in the 1700s, Thornbury has a rich history that largely reflects its image today. While Thornbury has evolved over the past several centuries, its historic character, agrarian charm, and rich architecture has allowed it to remain a desirable place to live, through time.

HISTORIC RESOURCE INVENTORY, 2001

In 2000, Thornbury contracted the Brandywine Conservancy, Inc. and Wise Preservation Planning to develop a planning strategy that would enable the Township to protect its historic resources. The demolition of several historic resources for residential development acted as a catalyst for this preservation effort. Once completed, the Historic Resource Inventory incorporated three strategic preservation elements: drafting a Township-wide historic resource protection ordinance, surveying the Township and documenting historic resources, and considering historic resources throughout future land development reviews.

The draft ordinance was designed to encourage the preservation and reuse of historic resources. Following the development of the draft, the Township's Historic Resource Inventory, last compiled by the Delaware

Chapter 3: Historic Perspective and Preservation

County Planning Department in 1984, was updated and expanded. This prompted the execution of the second strategic preservation element of surveying the entire Township and documenting all historic resources. In the Fall of 2001, the survey was completed and compiled over 195 properties. Although a single file was created for the Tanguy Homestead, which consists of several properties. Documenting all of them was beyond the scope of the survey project. The master property list and resource selection process were determined by using Thornbury's Historical Society's Historic Inventory from 2001. The project also included drafting a brief history of the Township, which can be found on pages 3-1 through 3-3 of this plan. The final preservation element included the careful review of development plans as they relate to the impact of the Township's historic resources. These reviews would encourage collaborative preservation efforts throughout the development process.

The Thornbury Township Historic Resource Inventory is the result of a series of historic resource field surveys undertaken in the late winter and spring of 2001. The work was specifically undertaken by Wise Preservation Planning (formerly Robert Wise Consulting) with help from the members of the Thornbury Township Historical Commission and funded equally between the Township and a historic preservation grant from the Pennsylvania Historical and Museum Commission (PHMC). The purpose of the project was to ascertain the extent and architectural significance of the historic resources throughout Thornbury Township.

The project began with a review of background data on the Township and of the 1984 Delaware County Planning Department survey. Next, all 161 properties with extant historic resources listed on the 1984 historic survey list were re-surveyed. The field survey discovered that 14 properties from the 1984 inventory had since been demolished or otherwise lost. In addition to the properties listed on the 1984 survey, 41 additional properties were also visited and added to the list. Each of these additional resources was given a Historic Resource Property (HRP) number, beginning with the number 162. As stated earlier, the Tanguy Homestead, though consisting of several properties, was assigned one HRP number. Aside from the 41 properties added to the 1984 survey list, the inventory was also expanded due to subdivisions of earlier historic properties. Three of the properties from the original survey had been subdivided, one of which was split into three parcels. In these cases, the assigned HRP number was altered by using letters (e.g., the spring house from HRP #46 was subdivided into a new parcel, so its designation changed to HRP #46a).

After HRP numbers were assigned, information for each property, including a photograph of the primary resource (such as a farmhouse), site plan, architectural description, and address, was then entered onto a Pennsylvania Historic Resource Survey Form. This survey was selected as the method for logging information because it is the official form used by the Pennsylvania Historical and Museum Commission (PHMC) to document historic resources throughout the state. Once completed, each form and its accompanying materials were placed in an individual manila folder. Properties with demolished or lost resources were given empty folders to indicate that the historic resources disappeared between 1984 and 2001. This information can be updated at any time, as all forms are on the Township's computer system, and all files are kept within the Township's historic preservation file system. In the final analysis, the 2001 Inventory included documentation for 195 properties containing approximately 487 historic resources. In 2013, Thornbury Township updated the HRP Inventory to include a total of 204 properties containing 488 associated historic resources.

Criteria for Inclusion

To be included in the Historic Property Inventory, a property or structure was required to possess the following qualities: significant architectural quality, represents a specific model or style of architecture, structurally intact, greater than 50 years of age, and/or historically significant. Guidelines for inclusion were based on the criteria for listing resources on the National Register of Historic Places. The review and determination of each property were completed by the consultant and the Historical Commission.

Resource Classification

Each property meeting the criteria for inclusion was then assigned a classification, per the proposed ordinance. Properties were classified as Class I, Class II, Demolished, or New Historic Resources. Specifications on both Class I and Class II are provided below.

Class I Historic Resources meet at least one of the following parameters:

- All buildings, sites, structures, and objects listed individually in the National Register of Historic Places;
- All buildings and structures classified as “certified historic structures” by the Secretary of the Interior;
- All buildings, sites, structures, and objects documented as “contributing resources” in a National Register Historic District;
- Any resources that have received a Determination of Eligibility (DOE) from the Pennsylvania Historical and Museum Commission (PHMC);
- Contributing resources within a historic district that has received a DOE from the PHMC; and
- Other resources of similar historical significance added to Class I by the Board of Supervisors.

There are three historic districts in Thornbury Township listed or eligible for the National Register: Chester Creek (1972), Chester Creek Boundary Increase (1997), and Thornton (1993). Additionally, there are eight individual properties listed or eligible for the National Register: Cheyney University (1997), John Cheyney Log Tenant House (1978), Glen Mills Schools (1976), High Hill Farm (1986), Melrose (Cheyney President’s House – 1986), Paulownia (1993), Thatcher-Painter Farm (1995), and the Wayside Church (1980).

Class II Historic Resources include:

- All other resources in the Historic Resource Inventory and shown on the Historic Resources Map that do not meet the Class I parameters.

In addition to those resources classified as Class I or II, the survey identified several resources that are currently classified as Class II, per the ordinance language but have the potential to be Class I resources based on their architectural and/or historical significance.

Historic Resource Map

A major planning tool resulting from the Inventory is **Map 3.1: Historic Resources**, on page 3-7. Each property containing historic resources, as identified in the Inventory, has been indicated on the Township’s 2022 Historic Resource Map. The Map, designed using Geographical Information Systems (GIS), displays all 204 properties per their classification. The Map shows each tax parcel in the Township and indicates the location of the historic resources. Concentrations of resources appear in larger scale inset maps, in order to provide additional information about their locations. **Map 3.1: Historic Resources**, a summary of the Township’s Historic Resources Map shows the distribution of historic resources throughout the Township,

HISTORIC RESOURCE PRESERVATION ORDINANCE

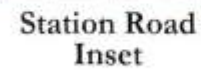
Following the 2001 inventory, the Township continued its momentum by working to enact the three main elements of the inventory. The first preservation element, drafting a Township-wide historic resource protection ordinance, was created to provide a means for the continued preservation of all historic structures within the Township. The 2004 Thornbury Township Comprehensive Plan reiterated this effort by defining the objective of “developing procedures within Township regulations which facilitate preservation...”. Since the adoption of the 2004 plan, the Township has enacted Ordinance 3-2005, the Historic Resource Preservation Ordinance, as Article 28 of its Zoning and Planned Residential Development Code. This ordinance declares, “as a matter of public policy that the preservation and protection of buildings, structures, and sites of historic, architectural, cultural and archeological merit are public necessities and are in the interests of the health, prosperity, and welfare of the residents of the Township of Thornbury.”

The Ordinance goes on to recognize its applicability as a “historic overlay concept” which renders it relevant to all Class I and Class II Historic Resources, as defined in the Township Historic Resource Inventory and approved by the Board of Supervisors, regardless of the zoning district. The article further describes the process for adding or removing resources from the HRI, as well as changing their classification. To remove a resource from the inventory, written notification stating that the resource is no longer meeting classification criteria is required from the Pennsylvania Historical and Museum Commission (PHMC) or the National Register. The decision then falls on the Township for consideration to amend the Inventory. The same process occurs for adding a resource, but the notification from the PHMC or the National Register recognizes a resource is meeting classification criteria.

Additional use and adaptive re-use opportunities are also detailed in the Ordinance. Where eligible, resources should include permitted uses as defined in their underlying base zoning district; however, where the resource is not considered part of a land development project, it may also include uses as a residential conversion, home occupation, or bed and breakfast, by conditional use approval. Additional provisions for resources looking to operate under conditional uses are also highlighted in the Ordinance. These requirements serve to meet the Township’s goal of “develop procedures within Township regulations which facilitate preservation and/or adaptive reuse of historic buildings,” as cited in the 2004 comprehensive plan.

Arguably, the most important factor within the article, is the provision for a Historic Resource Impact Study. A Historic Resource Impact Study is required for all subdivisions, land developments, land disturbances, and exterior structural alterations (including applications for demolition) within the Township that meet the following criteria:

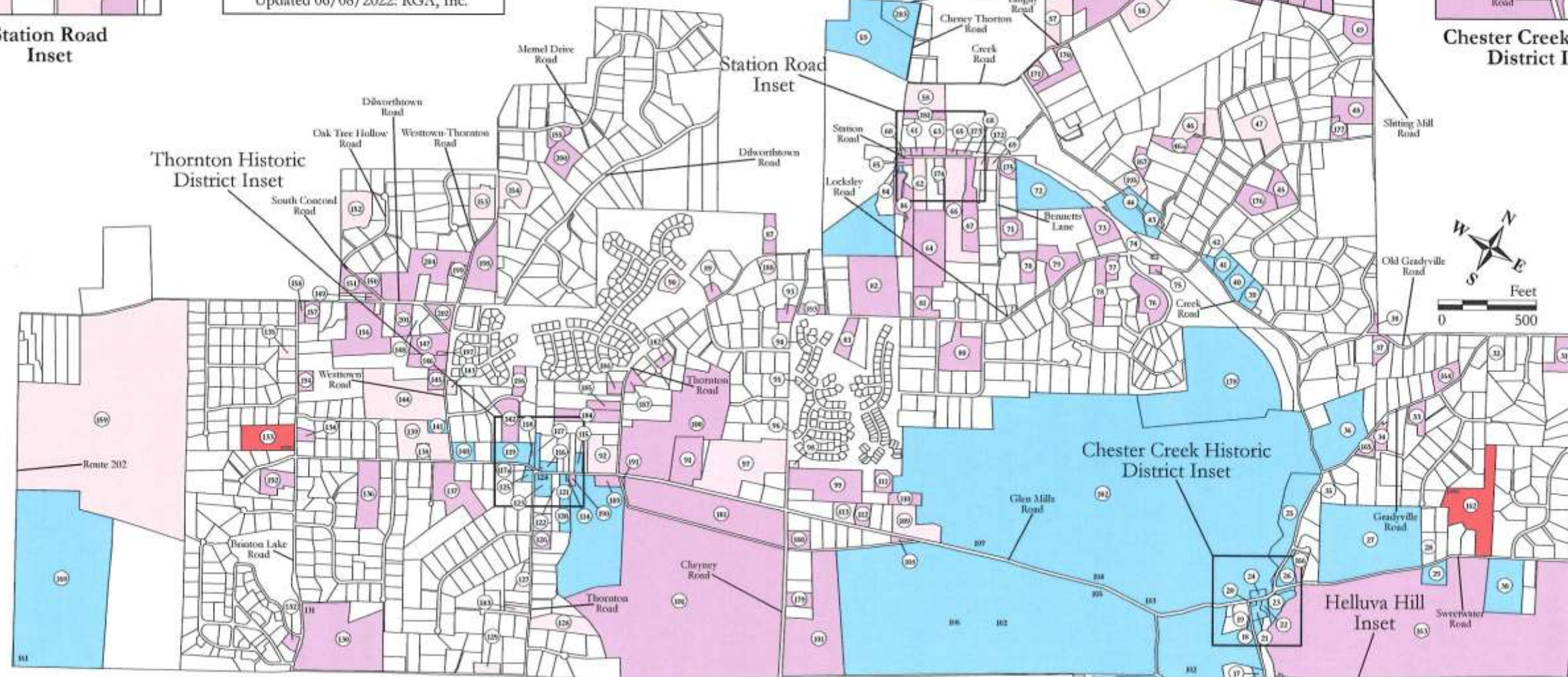
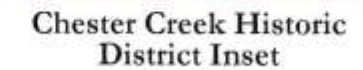
- Within 250 feet of the exterior walls of an identified historic resource or an identified historic district within the Township.
- Within 200 feet of the boundary of any identified historic district within the Township.
- Within 200 feet of the exterior walls of an identified historic resource or 200 feet of the boundary of any identified historic resource in an adjacent municipality.



 Class I
 Class II
 Class II Rec to CI-I
 Declassified (see file)
 Other Properties

Original Map 2001:
Brandywine Conservancy
Updated 06/08/2022: RGA, Inc.

**Historic Resources
Thornbury Township
Delaware County
06/08/2022**



Resource Numbers and Addresses

- | | | | | | | |
|---------------------------------|-----------------------------|--------------------------|---------------------------|------------------------------|--------------------------------|--------------------------------|
| 1: 39 Stony Bank Road | 32: 50 Gradyville Road | 60: 143 Station Road | 91: 359 Glen Mills Road | 121: 370 Glen Mills Road | 152: 16 Oak Tree Hollow Road | 183: 300 Thornton Road |
| 2: 35 Stony Bank Road | 33: 86 Gradyville Road | 61: 139 Station Road | 92: 355 Glen Mills Road | 122: 372 Glen Mills Road | 153: 86 Westtown-Thornton Road | 184: 420 Thornton Road |
| 3: 68 Stony Bank Road | 34: 110 Gradyville Road | 62: 140 Station Road | 93: 646 Cheyney Road | 123: 378 Glen Mills Road | 154: 97 Westtown-Thornton Road | 185: 422 Thornton Road |
| 4: 96 Stony Bank Road | 35: 57 Creek Road | 63: 133 Station Road | 94: 637 Cheyney Road | 124: 357 Thornton Road | 155: 16 Merrel Drive | 186: 434 Thornton Road |
| 5: 98 Stony Bank Road | 36: 48 Creek Road | 64: 130 Station Road | 95: 609 Cheyney Road | 125: 346 Thornton Road | 156: 176 Dismuthstown Road | 187: 434 Thornton Road |
| 6: 305 Stony Bank Road | 37: 236 Old Gradyville Road | 65: 127 Station Road | 96: Cheyney Road | 126: 325 Thornton Road | 157: 192 Dismuthstown Road | 188: 495 Thornton Road |
| 7: 128 Stony Bank Road | 38: 237 Old Gradyville Road | 66: 124 Station Road | 97: 594 Cheyney Road | 127: 322 Thornton Road | 158: 485 Brinton Lake Road | 189: 356 Glen Mills Road |
| 8: 117 Stony Bank Road | 39: 305 Creek Road | 67: 120 Station Road | 98: 593 Cheyney Road | 128: 295 Thornton Road | 159: 258 Dismuthstown Road | 190: 366 Glen Mills Road |
| 9: 125 Stony Bank Road | 40: 115 Creek Road | 68: 119 Station Road | 99: 589 Cheyney Road | 129: 31 Merrel Road | 160: 1525 Route 202 | 191: 548 Glen Mills Road |
| 10: 136 Stony Bank Road | 41: 119 Creek Road | 69: 134 Station Road | 100: 345 Glen Mills Road | 130: 381 Brinton Lake Road | 161: Route 202 | 192: 430 Brinton Lake Road |
| 11: 149 and 142 Stony Bank Road | 42: 127 Creek Road | 70: 29 Bennetts Lane | 101: Cheyney Road | 131: 389 Brinton Lake Road | 162: 53 Sweetwater Road | 193: 643 Cheyney Road |
| 12: 150 Stony Bank Road | 43: 151 Creek Road | 71: 23 Bennetts Lane | 102: 185 Glen Mills Road | 132: Brinton Lake Road | 163: 32 Sweetwater Road | 194: 463 Brinton Lake Road |
| 13: 17 Hellbula Hill Lane | 44: 159 Creek Road | 72: 90 Station Road | 103: 167 Glen Mills Road | 133: 446 Brinton Lake Road | 164: 75 Gradyville Road | 195: 363 Creek Road |
| 14: 11 Hellbula Hill Lane | 45: 52 Taxis Lane | 73: 305 Lockoley Road | 104: 203 Glen Mills Road | 134: 451 Brinton Lake Road | 165: 112 Gradyville Road | 196: 21 Nice Road |
| 15: 3-7 Hellbula Hill Lane | 46: 59 Skyline Drive | 74: Lockoley Station | 105: 206 Glen Mills Road | 135: 476 Brinton Lake Road | 166: 4 Watersmeet Road | 197: 36 Westtown Road |
| 16: 156 Stony Bank Road | 46a: 57 Skyline Drive | 75: 48 Lockoley Road | 106: 168 Glen Mills Road | 136: 430 Glen Mills Road | 167: 167 Creek Road | 198: 59 Westtown-Thornton Road |
| 17: 168 Stony Bank Road | 46b: 57a Skyline Drive | 76: 90 Brinton Hill Road | 107: 257 Glen Mills Road | 137: 408 Glen Mills Road | 168: 194 Middletown Road | 199: 69 Westtown-Thornton Road |
| 18: 178 Stony Bank Road | 47: 45 Lockoley Road | 77: 104 Lockoley Road | 108: 250 Glen Mills Road | 138: 415 Glen Mills Road | 169: 65 Tangay Road | 200: 19 Merrel Drive |
| 19: 140 Glen Mills Road | 48: 118 Slitting Mill Road | 78: 110 Lockoley Road | 109: 251 Glen Mills Road | 139: 4 Westtown Road | 170: 96 Tangay Road | 201: 160 Dismuthstown Road |
| 20: 178 Stony Bank Road | 49: 109 Slitting Mill Road | 79: 119 Lockoley Road | 110: 11 Long Lane | 140: 3 Westtown Road | 171: 102 Tangay Road | 202: 150 Dismuthstown Road |
| 21: 132 Glen Mills Road | 50: 76 Slitting Mill Road | 80: 158 Lockoley Road | 111: 14 Long Lane | 141: 10 Westtown Road | 172: 118 Station Road | 203: 48 Township Drive |
| 22: 130 Glen Mills Road | 51: 180 Middletown Road | 81: 167 Lockoley Road | 112: 273 Glen Mills Road | 142: 20 Nice Road | 173: 121-125 Station Road | 204: 64 Westtown-Thornton Road |
| 23: 128 Glen Mills Road | 52: 179 Middletown Road | 82: 183 Lockoley Road | 113: 277 Glen Mills Road | 143: 23 Westtown Road | 174: 132 Station Road | |
| 24: 131-157 Glen Mills Road | 53: 252 Street Road | 83: 194 Lockoley Road | 114: 360 Glen Mills Road | 144: 20 Westtown Road | 175: 5 Bennetts Lane | |
| 25: 26 Creek Road | 54: Tangay Road | 84: 703 Cheyney Road | 115: 365 Glen Mills Road | 145: 26 Westtown Road | 176: 52 Lockaley Road | |
| 26: 8 Watersmeet Circle | 55: 20 Tangay Road | 85: 709 Cheyney Road | 116: 373 Glen Mills Road | 146: 32 Westtown Road | 177: 13 Lockoley Road | |
| 27: 91 Sweetwater Road | 56: 22 Tangay Road | 86: 704 Cheyney Road | 117: 377 Glen Mills Road | 147: 40 Westtown Road | 178: Lockoley Road | |
| 28: 75 Sweetwater Road | 56: 69 Tangay Road | 87: 496 Thornton Road | 117a: 375 Glen Mills Road | 148: 156 Dismuthstown Road | 179: 545 Cheyney Road | |
| 29: 72 Sweetwater Road | 57: 87 Tangay Road | 88: Thornton Road | 118: 379 Glen Mills Road | 149: 171 Dismuthstown Road | 180: 565 Cheyney Road | |
| 30: 50 Sweetwater Road | 58: 240 Creek Road | 89: 472 Thornton Road | 119: 381 Glen Mills Road | 150: 1955 South Concord Road | 181: 719 Cheyney Road | |
| 31: 28 Gradyville Road | 59: 740 to 744 Cheyney Road | 90: 468 Thornton Road | 120: 368 Glen Mills Road | 151: 1992 South Concord Road | 182: 5 Bennet Lane | |



This page intentionally left blank for printing purposes.

Projects falling within the described criteria are required to submit background information about the resource and the proposed project, including physical characteristics of the site and descriptions of each of the historic resources; descriptions of the proposed change, including general information about the project and potential impact of the project on the identified historic resource; and mitigation measures. The study must be prepared by qualified historic preservation professionals or other professionals in related fields. The adopted provisions for Historic Resource Impact Studies fulfill the third element of the 2001 Historic Resource Inventory, which expressed the goal of considering historic resources throughout future land development reviews.

To further fulfill the Township's goals for historic preservation, Ordinance 3-2005 also provided oversight and procedures for the demolition of historic resources. The applicability of demolition first highlighted that no Class I or Class II Historic Resources may be demolished, unless a permit is obtained from the Township and other outlined standards are met. For the purpose of this article, demolition by neglect is also recognized as a willful failure to maintain the resource, which is considered a violation. Procedures for obtaining a demolition permit are then discussed; unique to historic resources, the Historical Commission reviews and provides recommendations for demolition permits. The Board of Supervisors also has the right to delay demolition for up to 90 days, in order to engage the applicant about alternatives to demotion. Violations and penalties for all provisions of the Ordinance are provided at the end of the article.

HISTORIC PRESERVATION PLAN

The large number of historic resources within Thornbury Township is indicative of the Township's extensive history, as well as the community's appreciation for its heritage. Over the past few centuries, preservation efforts have occurred on an individual basis without much guidance from regulatory authority; however, in the early 2000s, Thornbury Township recognized this lack of oversight as a detriment to its historic resources. The Township largely dedicated the last decade to remediating the lapse in participation. Goals established by the 2001 Historic Resource Inventory and the 2004 Thornbury Township Comprehensive Plan have served as guides, providing a clear vision for the future. With many of those major preservation goals achieved, the Township now transitions into an era of continual momentum and maintenance of the framework they have built for protecting historic resources.

Historic Preservation Goal

Recognize the value of the historic heritage to the community and its role in establishing the Township's image.

- | | |
|-------------|--|
| Objective 1 | Educate Thornbury residents on existing regulations which facilitate preservation and/or adaptive reuse and encourage compliance with the Township Historic Resource Protection Ordinance. |
| Objective 2 | Consider an update and further study of the historic resource inventory in conjunction with property owners. |
| Objective 3 | Continue with communication strategies and educational initiatives, highlighting the importance and impact of historic resources to residents and other local stakeholders. |
| Objective 4 | Cooperate with neighboring municipalities in Delaware and Chester Counties to address the preservation of the Brandywine Battlefield and associated troop movements. |

The established preservation goal and objectives for Thornbury, serve to further educate residents, enhance existing preservation frameworks, and promote the Township's rich history and heritage. These goals, if met, will not only maintain the value placed on historic resources within the Township but will also further the breadth and appreciation for Thornbury's history.

SUMMARY

Thornbury Township has a rich history dating back to the 17th century. The Township's heritage has largely driven the land use patterns, community organization, and values in which Thornbury still operates today. The 2001 Historic Resource Inventory laid the foundation for historic preservation in the Township, acting as one of the first organized Township-wide efforts to documenting historic resources within the Township. This document inspired the 2004 comprehensive plan to establish specific and attainable goals that would further preservation efforts. From those goals, the Township created and adopted an ordinance to protect historic structures and resources. With the goals from the 2004 Comprehensive Plan completed, Thornbury established four more objectives for the future to ensure the preservation of the municipality's past. The Township's active pursuit of historic preservation over the past decade has exemplified the value of Thornbury's heritage while solidifying a promising future.

Chapter 4: Community Facilities and Services

Municipalities, such as Thornbury Township, have many responsibilities; among the most important is the provision of facilities and services to meet the needs of its residents. In general, the needs of a community are proportional to the population of residents and businesses, increasing as growth occurs. With Thornbury Township experiencing tremendous growth over the past decade, as discussed in Chapter 2: Community Profile, larger demands have been placed upon the Township's facilities and services. An analysis of the current municipal facilities and services has been conducted to ensure that they are meeting accepted standards and local needs. For the purposes of this chapter, similar services and facilities will be grouped into the following categories: Utilities, Public Safety, Education, and Recreation and Programming. Upon exploring the existing conditions of municipal facilities and services, goals for the future will be discussed.

UTILITIES

Utilities are public services that are typically offered and/or provided to all buildings and parcels within a municipality, whether they are privately or publicly owned. For the purpose of this plan, Thornbury Township's utilities, whether they are provided through the Township or require private contractors, will be discussed to provide a better understanding of the existing conditions within the Township. Utilities discussed include water service, sewer service, and trash and recycling services.

Water Service

In Thornbury Township, residents are permitted to use on-site water supply systems, such as wells, or public water systems. Chapter 22 Article 6 of the Township Code recognizes that citizens may use on-site systems, as long as their parcel is of a size and shape allowing for a safe location of the well. The requirement for a safe location largely refers to the separation of wells and septic systems, both on the same lot or from adjacent lots. Minimum separation distances mandated by Title 25, Chapter 73 of Pennsylvania Codes, serve to identify safe locations for on-site systems to prevent the contamination of well water. Many residents of Thornbury do opt to use on-lot systems, as their lots are large enough to accommodate both a well and on-site septic system. This option is a necessity within the Township as some areas are not served by public water.

For areas that do have access, the Chester Water Authority (CWA) is the main provider of public water. Thornbury Township falls within the Chadds Ford/ Concord Township booster district that serves all three townships. Areas of Thornbury served by the CWA include Brinton Lake Road, Glen Mills Road, Cheyney Road, and the Cherry Creek development, to name a few. The main supply line for the Cheyney Road area is twelve (12") inches in diameter and runs along Cheyney Road to Cheyney University. The lines for Brinton Lake Road and Glen Mills Road are eight (8") inches in diameter and loop back to the main system located in Concord Township. Maintenance, replacement, and extension of the system is the responsibility of the Chester Water Authority; however, line extensions to new developments can be undertaken by developers, which are then turned over to become part of the Chester Water Authority's system. In addition to the Chester Water Authority, there are some areas of the Township that have water service provided by Aqua America Inc. These areas include the Greenbriar at Thornbury neighborhood, Cherry Creek Development, The Preserves at Squire Cheyney, and the Hawthorn development, all located in the northernmost portion of the Township.

Sanitary Sewer

For decades, Thornbury Township was dominated by land uses that were primarily dependent upon on-site sanitary sewer systems. These systems required soils that could adequately purify effluents to retain high-quality surface water and groundwater. To better understand the Township's sewerage structure, one must first understand the soil types and suitability for septic systems within the Township.

There are two major soil associations found in the Township: Glenelg-Manor-Chester association and the Neshaminy-Glenelg association. The Glenelg-Manor-Chester association consists of shallow to deep soils over grayish-brown schists and gneiss. It is silty and has fine particles with small, flat pieces of rock from the schist that has yet to be weathered to become part of the soil. The Neshaminy-Glenelg association has moderately-deep to deep, well-drained soils. These are similar to the first association in composition, with the added element of possible critical soils. The base rock tends to be gabbro and granodiorite, which are granular igneous rocks. The gabbro is notable for its iron content and granodiorite for its quartz.

There are numerous soil types found within the two major associations and they are classified by the Soil Conservation Service of the U.S. Department of Agriculture according to standardized criteria. One of the criteria that is important to an area, such as Thornbury Township, is suitability for septic systems. The characteristics that are related to this criterion include permeability of the soil, ability to cleanse effluent, depth of seasonal high water, the possibility of perched water tables, and nature of the underlying bedrock. The suitability for septic systems of any soil type is classified into three levels of constraint: slight, moderate and severe. The majority of soils in Thornbury Township are only slightly constrained; however, severe limitations are generally found in areas of wetlands near stream corridors. Obviously, the ability of wet soil to absorb additional moisture is limited. There are small areas that are unclassified in the Township due to quarrying or filling. These areas are subject to specific soil investigations due to the differences from the established pattern. Most of the constrained areas of the Township are located in the eastern sector, which is consistent with the presence of surface waters and steeper topography. The Brinton Lake area is also subject to areas of constraint for septic suitability. For more detailed information about soils within Thornbury Township, see **Map 5.3: Prime Agricultural Soils**, which can be found in Chapter 5: Land Use.

With most of the Township having suitable soils, on-lot septic-systems have historically been the method of sewage treatment within Thornbury. Sanitary sewer systems in the Township were primarily reserved for non-residential or group housing, such as the Glen Mills Schools, Cheyney University, and the Delaware County Prison. However, since the 2004 comprehensive plan, the Thornbury Township public sewer system has been altered. The Township has established more public sewer lines and has broken the Township into two public sewer districts: The East Side Sewer District (ESSD), which is served by the Thornbury Township Treatment Plant, and the West Side Sewer District (WSSD), which is served by the Concord Township Sewer Authority. The area covered by each sewer district is outlined in **Map 4.1: Sewer Districts**. The East Side Sewer line serves properties in the eastern portion of the Township, including developments such as Greenbriar at Thornton, Tall Trees at Thornbury, Cobblestones at Thornbury, Blantyre, and Thornbury Hunt. The West Side Sewer line serves the Cherry Farm and Concord Chase developments, as well as the Delaware County Prison. **Table 4.1: Sewer Distribution**, illustrates the full distribution of sewer service between the East and West Side Sewer treatment facilities.

In addition to the East and West sewer facilities, the Glen Mills Schools and Cheyney University operate on their own facilities in accordance with the Pennsylvania Department of Environmental Protection regulations.

Table 4.1: Sewer Distribution

East Side District	West Side District
Blantyre	Cherry Farm
Cobblestones at Thornbury	Concord Chase
Greenbriar at Thornton	Brinton Lea
Tall Trees at Thornbury	Fox Lair Lane
Thornbury Hunt	Highpoint Drive
Locksley Crossing	Thornhill
Andover Lane	
Twin Pine Way	
Hawthorne	
Black Bell	
Isabella Lane	
Old Gradyville Rd	
Thornton Road Extension	

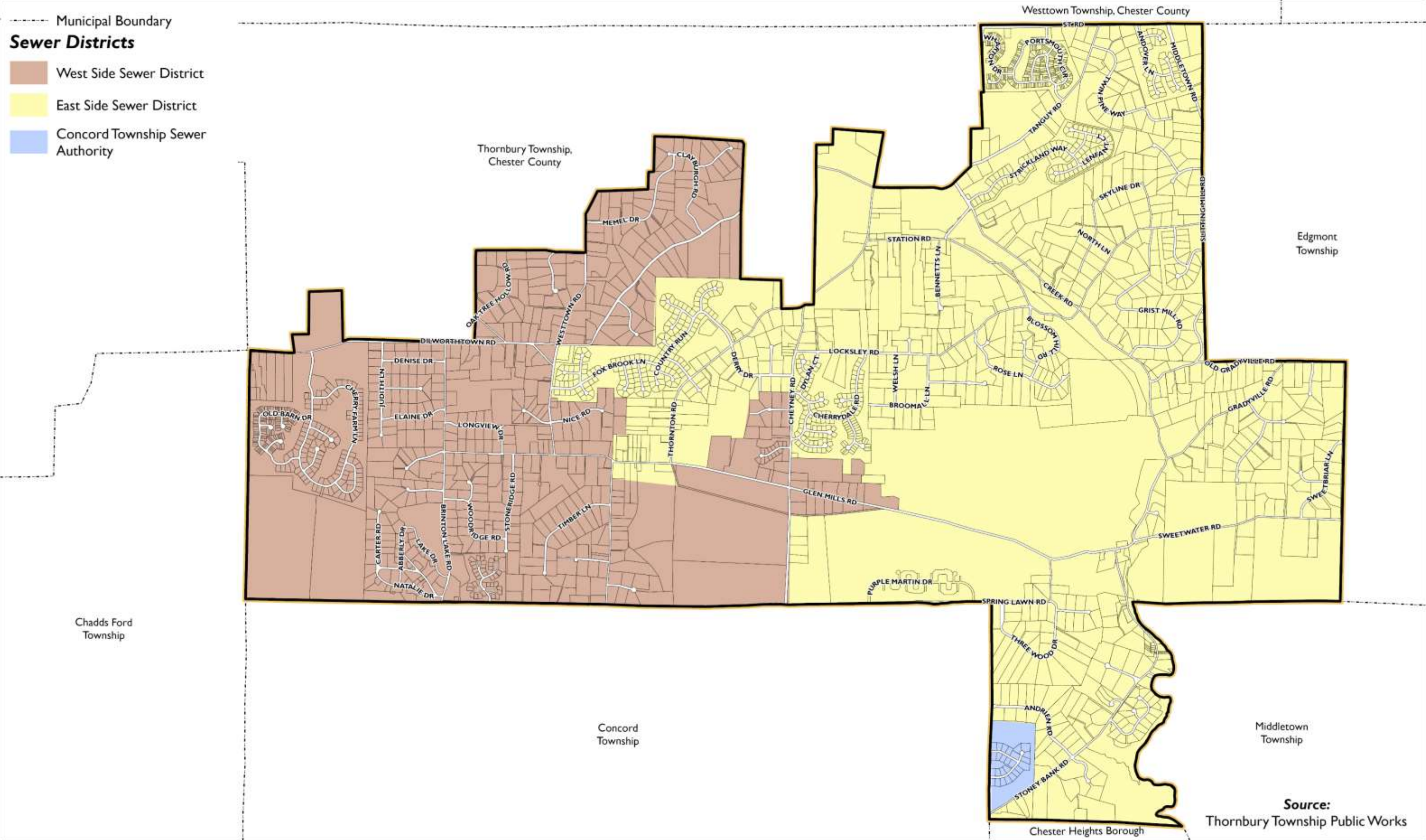
Source: Thornbury Township Records, 2020

Map 4.1: Sewer Districts Thornbury Township

----- Municipal Boundary

Sewer Districts

- West Side Sewer District
- East Side Sewer District
- Concord Township Sewer Authority



Source:
Thornbury Township Public Works

This page intentionally left blank for printing purposes.

Despite the vast improvements to the Thornbury sewer systems in recent years, the public lines are not currently accessible to every Township residence, and not every property that has access to the public sewer line is currently tied in. While on-site systems can serve as a very effective way of treating sewage when they are maintained properly, failure to properly maintain them can lead to hazardous conditions both on the lot and to underlying aquifers. The Township has, in the past, considered the possibility of requiring periodic pumping and inspections of on-site systems to mitigate these threats. In the meantime, at the time of property transfer, percolation tests and soils evaluation tests are required by Township ordinance and State code to ensure that the soils in the vicinity of the system are suitable for filtering effluent. Additionally, the Township has provided its residents with an extensive amount of information about on-site sewage systems on its website. Included are facts about the operation, pumping frequency, and general maintenance. Overall, Thornbury Township regularly updates its Act 537 Sewage Facilities Plan, which analyses the current sewage infrastructure, Township needs, and improvement projections, to ensure safe and efficient services for all residents.

Waste Collection and Recycling

In Thornbury Township, trash removal services are not provided by the Township. Residents are encouraged to contract with a hauler of their choice, whether it is Opedenaker, Trash Tech, Waste Management, or Laxton Trash Removal. Despite not offering trash removal services, Thornbury Township requires all residents to participate in the Township recycling program. Through this program, residents place a “Recycle Only” sticker, courtesy of Thornbury, on any container they wish to fill with recyclables. Recycling is then picked up curbside every Wednesday. In addition to the recycling program, Thornbury also schedules annual Christmas tree recycling, yard waste, and Bulk Trash pick-up days for residents’ convenience.

PUBLIC SAFETY

Thornbury Township is dedicated to protecting the health, safety, and well-being of its residents. Information about Thornbury Township’s police, fire, and medical resources are listed below. Information about the George W. Hill Correctional Facility, housed within the Township, is also included.

Police

Thornbury Township does not have its own police force, but it currently employs two part-time community safety officers. The safety officers’ role is to patrol parks and other public spaces and act as a resource to residents regarding safety. For issues that cannot be resolved by the community safety officers, the Township relies upon the Pennsylvania State Police. The nearest State Police barracks is located at the Franklin Center in Lima, Delaware County, approximately 1.5 miles from the Township line.

Fire

As with the police services, Thornbury Township does not have any local fire companies located within its borders. There are, however, three volunteer companies that provide coverage to Thornbury according to service area jurisdictions. Concordville Fire and Protective Association is located on Concord Road, to the south of Route 1, near Conchester Highway (Route 322). Edgmont Township Station 64 is to the north, on Middletown Road (Route 352) in Gradyville. A third regional station, Chester Heights Fire Company, is located on Llewellyn Road and Valleybrook Road in Chester Heights Borough. Between the three stations, Thornbury Township is fully serviced, despite not housing any of the fire companies.

Medical

In addition to serving as a responding fire company for Thornbury Township, the Concordville Fire and Protective Association provides emergency medical services and transport for Thornbury residents. Riddle Memorial Hospital also offers ambulance services. Residents requiring medical attention are served by a variety

of medical services. These include Chester County Hospital, located in West Chester; Riddle Memorial Hospital, located on Route 1 between Routes 352 and 452; Paoli Memorial Hospital, near Malvern; and the Chester Crozer Medical Center, located on I-95, in Upland Borough. Within a reasonable distance, there are also many hospitals in the City of Philadelphia.

George W. Hill Correctional Facility

The George W. Hill Correctional Facility, also known as the Delaware County Prison, is located on Cheyney Road at Springlawn Road and straddles the border between Thornbury and Concord Townships. The prison facilities themselves are mostly located in Concord Township, while many of the facility's fields, open space, and a D.U.I. Center is in Thornbury Township. The prison is County-owned and operated. While the facility itself provides little benefit to local residents, it does provide open space and agriculture. Additionally, the facility does coordinate with the Township on security issues. For instance, there is a notification system for Township residents in the event of a security breach.

EDUCATION

Thornbury Township is unique in that it is served by both public educational facilities, including West Chester School District, as well as institutional education facilities, including Glen Mills Schools and Cheyney University. Details about each educational offering will be provided below, with the inclusion of the community library.

Public Schools and Pre-School Learning

For students too young for Kindergarten, Thornbury Township offers two private schools: Thornbury Preschool and the Malvern School for infants through kindergarten. The public education needs of Thornbury Township are served by the West Chester Area School District. There are no public schools located in the Township, requiring students to be bussed beyond its boundaries. Elementary Schools serving Thornbury residents include Westtown-Thornbury Elementary School, Penn Wood Elementary School, and Sarah Starkweather Elementary School. All Thornbury students then continue their education by attending Stetson Middle School, followed by Bayard Rustin High School.

Other Institutions

Thornbury Township has two major institutional uses within its boundaries: Cheyney University and the Glen Mills Schools. Cheyney University is an institution of higher education and a member of the Pennsylvania State System of Higher Education (PASSHE). The University is located in both Thornbury Township, Chester County and Thornbury Township, Delaware County, occupying over 275 acres. Originally founded in 1837 and located in Philadelphia for African American youth, it moved to the George Cheyney farm in 1902. Today, there are around 600 students enrolled in many degree programs and housed on the campus. The facilities include academic buildings, dormitories, athletic buildings, fields, and a stadium. Throughout the year, various cultural, educational, and athletic events are available for Thornbury residents to attend.

Glen Mills Schools is an 800-acre facility located on Glen Mills Road, west of the village of Glen Mills. It was established as a private residential rehabilitative institute for boys aged 12 to 18, housing students from all over the world. The facility was closed by the state in 2019; however, its license was restored in 2023. Unique to this facility is a publicly accessible 18-hole golf course that was operated and maintained by students at the Schools as training in golf course and turf management skills, but which continued to be accessible to the public during the school's closure. Other development of the site includes an area for single-family houses intended for the staff of the institution.

Libraries

While there are no public libraries located in Thornbury, residents have access to three library facilities. Thornbury Township provides an annual donation to the Rachel Kohl Public Library, in Concord Township, each year to receive access for its residents. The library is located on Smithbridge Road, directly in front of the Garnet Valley Middle School. The Township appoints one board member each year to serve on the library's governing board and to serve as a liaison to the Township. Thornbury residents are also permitted to use the Chester County Library System, as it is available to all residents of the West Chester School District. Finally, Cheyney University makes its library available to all Thornbury Township residents, throughout the year.

RECREATION AND PROGRAMMING

Thornbury Township's commitment to maintaining its rural character has largely gone hand-in-hand with its dedication to preserving open space. The Township serves to provide open space and recreational facilities to promote the general well-being of its residents. The Township's current parks and open space will be discussed and recognized for the recreational opportunities they offer citizens. Additional programming and recreational opportunities offered through the Township's Parks and Recreation Board and Historical Commission will also be recognized.

Parks and Open Space

In 2007, Thornbury Township prepared an updated Open Space and Trail System Map as well as a list of recent open space acquisitions and a priority ranking of other open spaces targeted for acquisition. The updated map and list effectively reiterated the goals and opportunities for expanding recreational facilities in the future, as outlined in the Township's 1996 Open Space Plan. A brief discussion of the 2007 update will serve to provide context to the Township's current recreational facilities and public open space.

Open Space and Recreation Study, 2007

Many of the Township's community facilities and services fall under the heading of recreation. The Township offers facilities oriented toward both active and passive recreational opportunities, as shown in **Map 4.2: Parks and Open Space**. *Delaware County 2035* describes active open space generally as recreation areas, "such as playgrounds or athletic fields that engage the public in the use of facilities and/or other improvements." The County comprehensive plan describes passive open space as "unimproved land used for natural conservation or interpretation. It is well suited for activities such as hiking, bird watching, and education." The 2007 Study refers to both forms of open space, reiterating the goals from the 2004 comprehensive plan, as many of them are related to open space preservation. As a product of those goals, the Township now has 1033.5 acres of land devoted to open space. While the parcels are in various forms of ownership, they all contribute to the goal of preserving open space. **Table 4.2: Open Space Inventory**, on pages 4-8, provides an inventory of all open space in the Township, including what type of ownership the land is operated under, as well as its use.

Of the parcels of open space located within the Township boundaries, there are 19 municipally-owned parks or open space areas totaling 280.78 acres. Only one of these, Thornbury Park, located in at the northeast corner of Glen Mills Road and Thornton Road, central to most parts of the Township, is developed with active recreation facilities. The park hosts diverse recreational activity areas for Township residents, including the following: Fitness stations, a disc golf course, two tennis courts with a practice backboard, basketball court, tot lot, baseball diamond, multi-use athletic field, half-mile trail, pavilion, and comfort station.

The County-operated site, known as Camp Sunshine, has limited use and the New Brinton Lake Club has restricted use. The three parcels of private open space associated with residential developments are included because of their value as visual open space. The Glen Mills School operates a golf course constructed over

235 acres of its land. This course is used for training purposes in golf course management but is also open for the general public to play on. In addition, there are two golf courses that are partially located within the Township, also providing limited value as open space. They are the Penn Oaks Golf Club (32 ac.) and the

Table 4.2: Thornbury Township, Open Space Inventory

Type	Name	Location	Acreage	Use
Municipal	Thornbury Park	354 Glen Mills Rd. and Thornton Rd.	41.00	Active Rec.
Municipal	Thornbury Park	419 Thornton Rd.	4.50	Active Rec.
Municipal	Thornbury Park	14 Glen Meadow Drive	2.25	Active Rec.
Municipal	Thornbury Park	594 Cheyney Rd.	13.00	Active Rec.
Municipal	Palmer Park	34 Westtown Rd.	7.79	Passive Rec.
Municipal	Lovalee Lane	14 Lovalee Lane	6.87	Conservation
Municipal	Creek Valley Land	92 Creek Rd	27.41	Conservation
Municipal	Martin Park	101 Stony Bank Rd.	41.00	Passive Rec.
Municipal	Martin Park	69 Stoney Bank Rd.	14.70	Passive Rec.
Municipal	Bonner Park	40 Blossom Hill Rd.	60.09	Passive Rec.
Municipal	Palmer Park	34 Westtown Rd.	14.35	Passive Rec.
Municipal	Luckenbach Trail	713 Cheyney Rd.	7.47	Passive Rec.
Municipal	16 Derry Dr.	16 Derry Dr.	2.00	Passive Rec.
Municipal	132 Creek Rd.	132 Creek Rd.	19.65	Passive Rec.
Municipal	Guilday	67 Creek Rd.	6.00	Passive Rec.
Municipal	39 Timber Ln.	39 Timber Ln.	5.80	Passive Rec.
Municipal	Barrett's Meadow	90 Station Rd.	1.60	Passive Rec.
Municipal	Gabries Easement	176 Dilworthtown Rd.	2.00	Other
Municipal	Glen Mills	140 Glen Mills Rd	3.30	Private O/S
County	Camp Sunshine	350 Glen Mills Rd.	24.21	Summer Camp
Homeowners	Tangy Dev't.	Twin Pine Way	18.30	Private O/S
Homeowners	Thornbury Hunt	Fox Brook Ln.	82.90	Private O/S
Homeowners	Cobblestones	Chelsea Ct.	50.00	Private O/S
Homeowners	Andover	Andover Ln.	20.70	Private O/S
Homeowners	Tall Trees	Strickland Way	81.30	Private O/S
Homeowners	Greenbriar	Portsmouth Cir.	43.00	Private O/S
Homeowners	Cherry Creek	101 Cherry Farm Ln.	97.50	Private O/S
Homeowners	Mill Creek	Dever Dr.	12.90	Private O/S
Homeowners	Hawthorne	Locksley and Slitting Mill Rds.	15.90	Private O/S
Homeowners	Concord Chase	Great Oak Dr.	24.75	Private O/S
Homeowners	Blantyre	Blantyre Ct.	10.60	Passive Rec.
Homeowners	Locksley Crossing	Rose Ln.	25.20	Passive Rec.
Club	New Brinton Lake	Brinton Lake Rd.	24.28	Passive Rec.
Institutional	Glen Mills G.C.	221 Glen Mills Rd.	235.00	Golf Course
Institutional/Residential	Glen Mills	126-148 Glen Mills Rd.	8.00	Private O/S

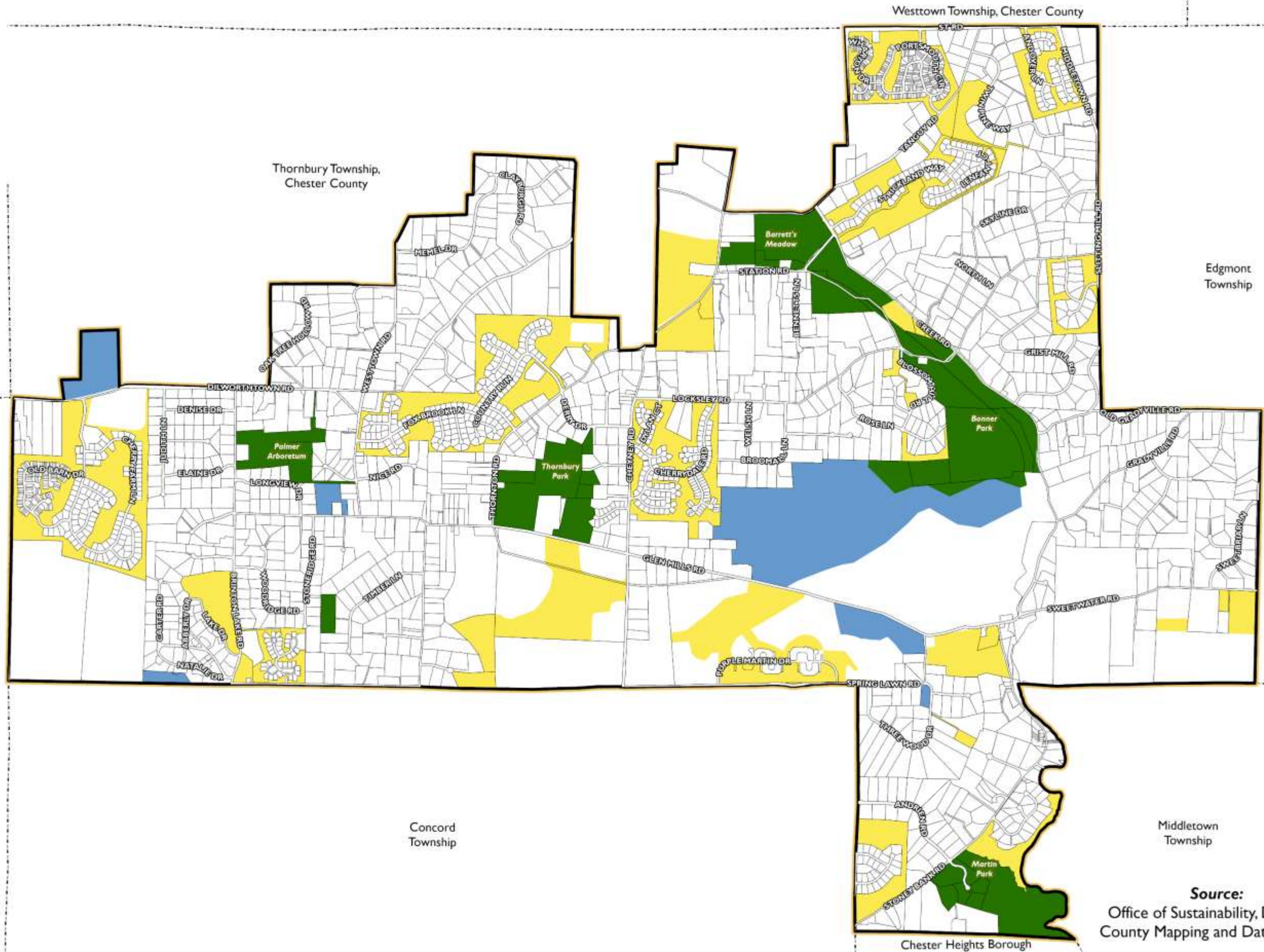
Source: Township records, 2020.

Map 4.2: Parks and Open Space Thornbury Township

--- Municipal Boundaries

Use Classification

- Private Open Space
- Private Recreation
- Township Parks & Open Space



Chadds Ford
Township

Concord
Township

Middletown
Township

Source:
Office of Sustainability, Delaware
County Mapping and Data Services

This page intentionally left blank for printing purposes.

Concord Country Club (5.0 ac.). These golf courses were not included in the Township open space inventory, as they are both primarily in adjacent municipalities (Penn Oaks in Thornbury Township, Chester County and Concord Country Club in Concord Township, Delaware County). Taken as a whole, the 1033.47 acres of open space, with its various purposes, is a significant resource for the Township. Thornbury's plans to expand its open space and parkland are further discussed in Chapter 9: Natural Resources and Open Space Plans.

Recreation Standards

National and regional parks and recreation organizations have formulated standards for the amount of public parkland a given area is required to have, as well as the numbers and types of facilities offered within those parks. These standards are generally based upon the population to be served and future population projections for that area. The 2007 Open Space Plan reflected the standards of the National Recreation and Park Association (NRPA). Using the amount of parkland currently owned by the Township and both current and projected populations, there is sufficient parkland by a factor of two or three times. This is based solely upon the acreage needs of the community. The distribution geographically and facilities in place are also factors to be considered, although they can be somewhat subjective. Service areas are typically used to define the area that may be properly served by a given size and type of park. The 2007 plan provided little detail on this factor, but it can be assumed that the distribution of the larger parks meets the needs of community parks. If there is a deficiency, it lies with the lack of neighborhood parks, which are usually accessed by walking.

Facilities within parks are determined by a municipality based upon the expressed interests and needs of the population. There are NRPA standards for virtually every form of recreation, both active and passive. For instance, a standard exists for the population that can be served by one softball field, as well as the size of the parking area required. While it is not expected that all facilities be provided in a park system, a municipality will survey the interests of a community, usually in a park master planning process. Even when a plan is determined, the needs of a community change over time, sometimes necessitating the redevelopment of the parkland.

Programming

One way that municipalities serve to better meet the changing needs and interests of a community, without needing to construct or change park facilities, is through programming. Thornbury Township offers recreational and educational programming through its Environmental Advisory Council and Parks and Recreation Board. These programs are offered as a service to community members. Typically, they are free of charge to Township residents and cover an array of topics.

Environmental Advisory Council

As recognized in Chapter 2, the main focus of the Environmental Advisory Council (EAC) is on Thornbury's natural resources and environment. As part of their mission, they offer educational environmental programs throughout the year, to engage the community in their natural scenery. Throughout the year, the EAC hosts monthly trail cleanings, bird walks, and hikes throughout their park and trail facilities. These events serve the community and encourage them to use Thornbury's open spaces.

Parks and Recreation

Similar to the EAC, the Parks and Recreation Board is tasked with getting citizens out and into Thornbury's parks and community spaces. One of the main functions of this board is to offer recreational programming to residents. The Board hosts annual events such as the Dog Show, Fourth of July Parade, Crab Festival, and Fishing Derby, among others. These annual events, with the addition of many seasonal activities, allow residents to find new uses for the existing community facilities and be more engaged within their Township.

COMMUNITY FACILITIES AND SERVICES PLAN

Since adoption of the 2004 comprehensive plan, Thornbury has experienced growth in the Township. During this time, the municipality worked very hard to continue to accommodate the growing need for services and Township facilities. The Township achieved much success in this endeavor and is now transitioning to a period of slower growth, in order to maintain the high-quality network of facilities and services the Township has created, Thornbury has established the following goals and objectives for the future.

Community Facilities and Services Goal

Provide public facilities and services for current and future Thornbury Township residents, businesses, and institutions consistent with the changing needs and demographics of the municipality.

- | | |
|-------------|--|
| Objective 1 | Inventory and assess current community facilities and services for effectiveness, location, and cost. |
| Objective 2 | Develop an integrated community facilities and services operations and maintenance plan providing for the changing demographics of the Township and the related facility needs, including utilities, human services, health, safety, recycling, educational development, and economic development. |
| Objective 3 | Evaluate the adequacy of Township meeting facilities in order to encourage public participation. |
| Objective 4 | Identify areas suitable for facilities expansion, including acquisition methods and scheduling. |
| Objective 5 | Ensure recreation and community facilities are adequate to meet the needs of a growing and diversifying Thornbury Township. |
| Objective 6 | Coordinate with utility companies to develop programs for Township residents to encourage their participation in recycling and conserving energy, water, and other resources. |
| Objective 7 | Monitor and evaluate the accessibility and utility of regional services for residents and businesses. |
| Objective 8 | Continue to coordinate with state and regional emergency services providers, including police, fire, emergency health, and disaster relief. |

The presented goals and objectives serve to enhance the facilities and services within Thornbury Township while keeping the needs of the residents and businesses in mind. In striving to meet these objectives, the Township is recognizing the important role that public facilities and services fulfill in building community. The commitment to provide the best services and facilities possible, reflects the Township's dedication to its residents and its focus on the future.

SUMMARY

Thornbury Township offers its residents a variety of facilities and services for their use. Residents within the municipality are free to choose on-lot or public sources of water and sewer, as well as which provider they would like to use for their waste removal. However, residents with sewer lines that experience a major fault or system failure, and that fall within 150 feet from a public sewer line, will be obligated to tie into the public sewer system. These options are unique to Thornbury, as they are one of the few municipalities in Delaware County which has the space to accommodate on-lot systems. While the Township does not currently house many public safety services within its borders, the Township's close relationship with several adjacent

municipalities and state entities allows residents to be served in their police, fire, and medical needs, with ease. A large network of trails and parks also act as a resource to residents; when paired with the recreational programming opportunities offered through the EAC and the Parks and Recreation Board, Thornbury residents have many options for leisure. As the Township continues to evolve, the changing facilities and services needs will need to be accommodated.

Chapter 5: Land Use Plan

While the comprehensive plan addresses many aspects of Township activity, one of its major goals is to provide policies and strategies for managing growth. Factors to be considered when managing growth include: the Township's natural conditions, current and projected demographics and housing needs, existing land uses, and the community's future aspirations on development. Each of these elements must come together to formulate a holistic land use plan that may be used to better guide and manage the future of the Township. With each of these elements discussed in more detail in other chapters, the goal of this chapter is to reflect on the existing pattern of development while identifying issues that may affect the future of the Township and projecting a sustainable pattern of growth, in accordance with community aspirations.

PLANNING REQUIREMENTS

Act 247, the Pennsylvania Municipalities Planning Code (MPC), requires that a comprehensive plan provide an analysis or study of land use. Section 301.2 recognizes that a land use plan should include provisions for the amount, type, general location and interrelationships of different categories of land use, as well as for the prospects for future growth in the municipality. The MPC also requires that the municipal comprehensive plan be consistent with the County comprehensive plan. The preceding considerations were made when evaluating the existing pattern of land use in Thornbury Township.

Delaware County 2035

On November 27th, 2013, Delaware County adopted a new comprehensive plan, *Delaware County 2035*. The plan emphasizes sustainable development patterns, a range of housing options, quality community facilities, multi-modal transportation, and historic and natural resource protection. Since its inception, several component plans have been published further detailing the County's vision. Component plans include the three volume *Open Space, Recreation, and Greenway Plan* (2015), the *Economic Development Plan* (2017), the *Transportation Plan* (2017), the *Historic Preservation Plan* (2018), and the *Housing Plan* (2020). The Thornbury Township Comprehensive Plan recognizes the goals and objectives of *Delaware County 2035* and was created to abide by and remain consistent with such goals.

EXISTING LAND USE

Thornbury Township has been in existence for several centuries, developing a pattern of land uses which has evolved. The adaptation of the land pattern has been reflective of natural, physical, social, economic, and technological changes through time. As noted in Chapter 3: Historic Perspective, the Township first developed in small concentrations centered around milling operations. As technology changed, the villages of Glen Mills, Cheyney, and Thornton were established. This created community centers for employment and social activities centered around the railroad, except for Thornton Village located just southwest of the Hanson Aggregates Quarry. These concentrated development centers allowed for the rural areas of the Township to be cleared and put into agricultural production, which yielded crops to be used at the local milling operations. This agrarian economy grew and sustained the population for many years until transportation improvements made Thornbury Township attractive for other uses. With the advent of the train station and an organized road system, families began to settle in the area. This accessibility is largely what has sustained Thornbury as a primarily residential place today, as residents can commute for work and other necessities with ease.

Today, the historic villages of Glen Mills, Cheyney, and Thornton remain; however, they are no longer the bustling economic centers they once were. Thornbury Township has transitioned into a primarily residential municipality with only a few outliers. **Map 5.1: Existing Land Use**, illustrates the current pattern of land uses within the Township. Single-family residential is the most predominant land use today, making up about 56% of all land area. This use is dominated by single-family residential detached dwellings. From 2000 to 2010,

this use has seen the largest increase, keeping up with the growing demand as shown in Chapter 2: Community Profile. **Table 5.1: Existing Land Use** inventories existing land use as depicted on the map and shows that the predominant land use in the Township is residential, largely comprised of single-family detached dwellings. This use makes up the majority of the land area in the Township. Institutional uses are also a major component of the pattern. To a lesser extent, the land use picture also includes a higher density housing, office, commercial, and industrial uses.

Three exceptions to the pattern of residential land uses are found in the northern, southern, and eastern sections of the Township. These are marked by the presence of three institutional uses, all of which provide housing for individuals. The George W. Hill Correction Facility, owned and operated by Delaware County, is located on Cheyney Road straddling both Thornbury and Concord Township. Also located on Cheyney Road is Cheyney University, an educational institution with facilities in Thornbury Townships of both Delaware and Chester Counties. This Historically Black College and University (HBCU) occupies 275 acres, mostly in Chester County, of which approximately 45 acres are in this Township with housing for about 600 students in its dormitories. Finally, Glen Mills Schools is located on Glen Mills Road and is a private rehabilitation institution for young men. The facility contains 800 acres of land, which include a golf course of 275 acres open to the public. Each of the three cited institutions occupies significant land within the Township and provide housing for individuals with little or no involvement with the Township community.

Table 5.1: Existing Land Use

Township Existing Land Use	Acreage	Percent
Single Family Detached	3,257.2	55.1%
Open Space	818.1	13.8%
Recreation	559.1	9.5%
Agriculture	494.1	8.4%
Institutional	258.4	4.4%
Roads	176.3	3.0%
Mining	119.8	2.0%
Vacant	63.1	1.1%
Prison	61.7	1.0%
Single family Attached	52.1	0.9%
Commercial	41.5	0.7%
Single family Semi-Detached	7.3	0.1%
Municipal Building	6.3	0.1%

Source: DVRPC Existing Land Use, 2015

TOWNSHIP ZONING

The adopted Thornbury Township Zoning Code and Zoning Map provide for a full range of development types. Graphically, the Zoning Map appears similar to the Existing Land Use Map, but the two are shown to illustrate the differences caused by the variety of uses permitted in some zoning districts. **Map 5.2: Thornbury Township Zoning**, is the Township's current Zoning Map. **Table 5.2: Thornbury Township Zoning Classifications** provides a list of the zoning districts in the Zoning Code and on the Zoning Map. The total land area for the combined zoning districts does not include roadways.

Table 5.2: Thornbury Township Zoning

Zoning Classifications	Abbreviation	Acreage	Percent
Residential 1	R-1	3,422.4	57.8%
Institutional	I	828.1	14.0%
Residential 2	R-2	468.4	7.9%
Institutional / Residential	I/R	286.8	4.8%
Planned Residential District 3	PRD-3	190.4	3.2%
Planned Residential District 1	PRD-1	167.1	2.8%
Planned Residential District 2	PRD-2	102.8	1.7%
Planned Apartment	PA	88.1	1.5%
Quarry 1	Q-1	80.8	1.4%
Limited Industrial	LI	79.5	1.3%
Mobile Home Park	MHP	70.4	1.2%
Residential 3	R-3	60.7	1.0%
Commercial	C	40.4	0.7%
Quarry 2	Q-2	38.8	0.7%

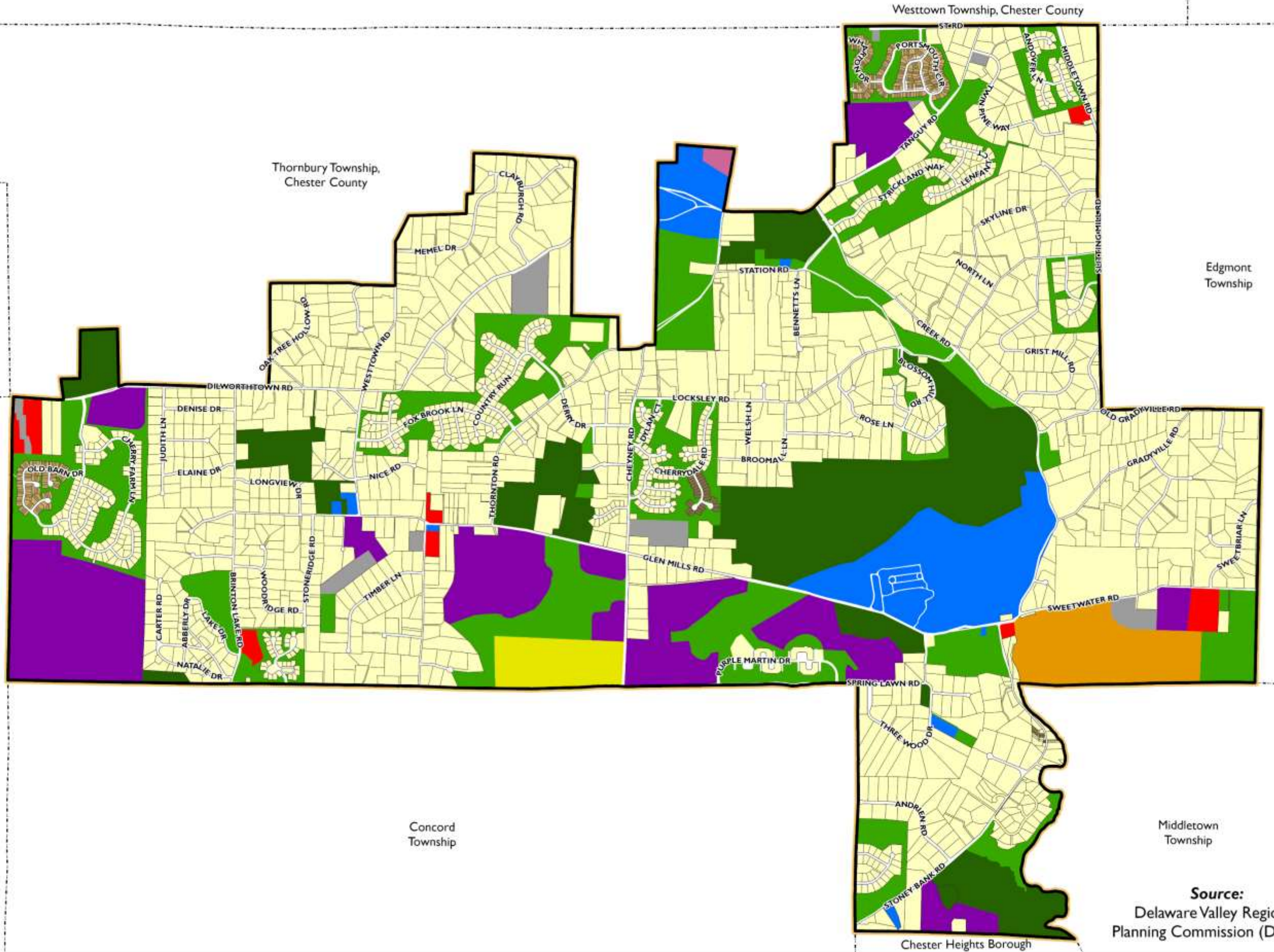
Source: Delaware County Planning Department

Map 5.1: Existing Land Use Thornbury Township

----- Municipal Boundaries

Land Use

- Agriculture
- Commercial/Office/
Light Industrial
- Institutional
- Mining
- Municipal Building
- Open Space
- Prison
- Recreation
- Single Family Detached
- Single Family Attached
- Single Family Semi-
Detached
- Vacant



Source:
Delaware Valley Regional
Planning Commission (DVRPC)

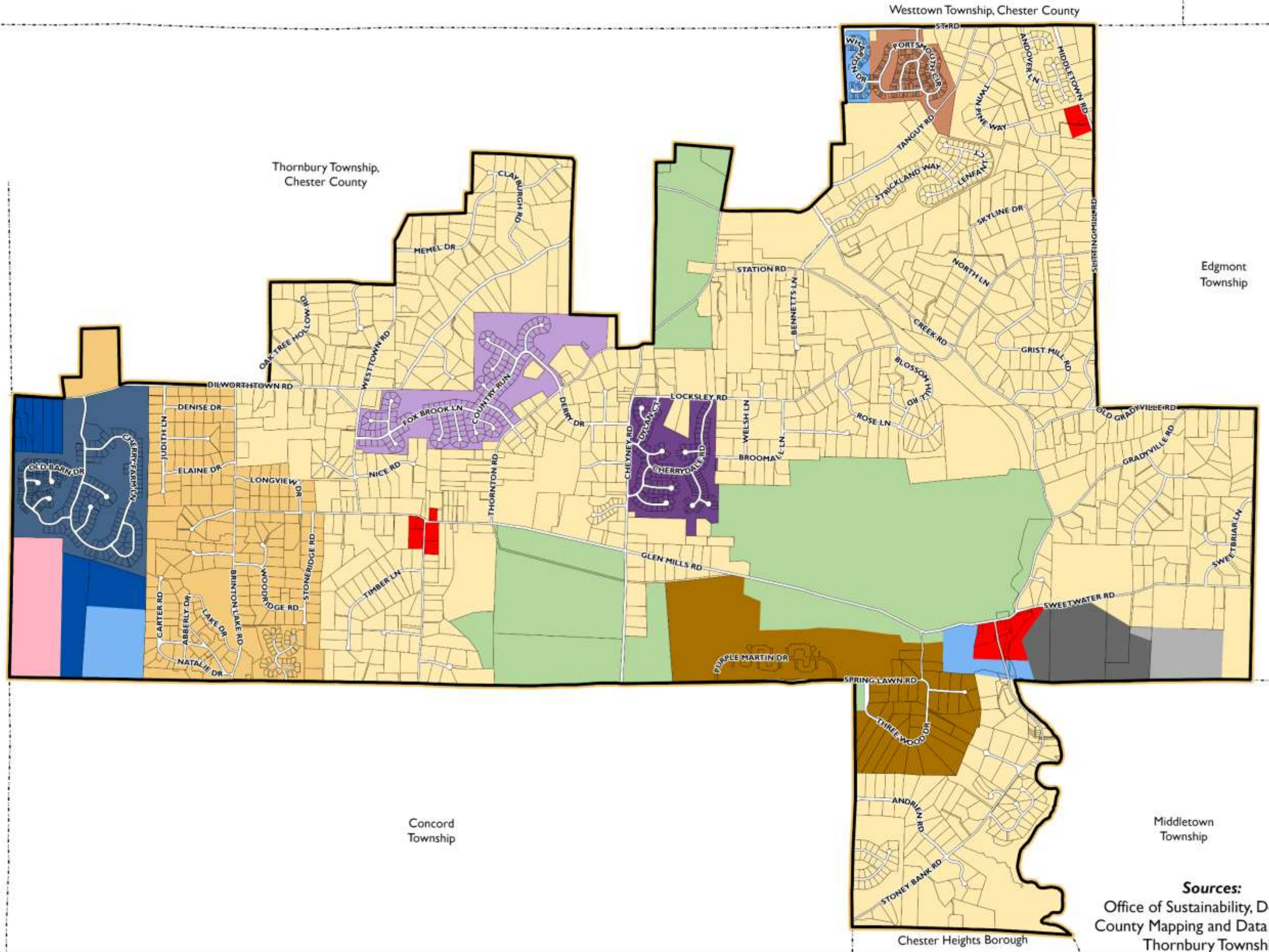
This page intentionally left blank for printing purposes.

Map 5.2: Zoning Thornbury Township

----- Municipal Boundary

Zoning Districts

- C - Commercial
- I - Institutional
- IR - Institutional/Residential
- LI - Limited Industrial
- MHP - Mobile Home Park
- PA - Planned Apartment
- PRD-1 - Planned Residential Development District
- PRD-2 - Planned Residential Development District
- PRD-3 - Planned Residential Development District
- Q-1 - Quarry-1
- Q-2 - Quarry-2
- R-1 - Residential-1
- R-2 - Residential-2
- R-3 - Residential-3



Sources:
Office of Sustainability, Delaware
County Mapping and Data Services,
Thornbury Township

This page intentionally left blank for printing purposes.

FUTURE LAND USE

Trends & Outlook

Three institutions found in the Township pose a unique set of circumstances for Thornbury. They occupy a considerable land area and present varied degrees of access to residents. The George W. Hill Correctional Facility is highly restricted, although the highest security residential portions of the facility are located entirely within Concord Township. The portion of the prison property within Thornbury is primarily open space and wooded land, but an audible siren and phone notification system still alert neighboring residents of breaches in security. The Glen Mills School, a juvenile rehabilitative and educational institution with substantial acreage and distinguished architecture, has light security for its residents and is generally open to visitors when the facility is in use. In 2000, a golf course was constructed on the property to be managed by the schools as an occupational training opportunity for young men housed there. The golf course is accessible to the public separate from the operations of the school, making it a recreational asset to the community. However, the Glen Mills School operations closed indefinitely in 2019 leaving the property with an uncertain future. Cheyney University is a complex of buildings, including dormitories, which accommodate students almost entirely from outside of the Township. The University brings sports and cultural events to the area which are available to the general community. In addition, the library is open to Township residents, an asset that would not be present in the Township otherwise.

These three institutions contribute to the community in varying ways, but it should be noted that all of them are exempt from taxation. Their impact on the township is primarily through their use and impact on the land and environment. Of the three, Cheyney University creates the most traffic as students and staff come and go from the campus, although a SEPTA bus route also serves the campus. This effect is much less evident at the other two institutions.

There are currently two areas considered villages remaining in Thornbury Township: Glen Mills on the Chester Creek and Thornton on Glen Mills Road. Both of these crossroads villages arose early in the development of the Township. They offer opportunities for the continuation and limited expansion of the communities using development and design standards that emulate the character and features of a traditional village. Traditional village features include a mixture of building types and uses, the proximity of buildings to each other, a pedestrian orientation and scale, and an historical architectural style. While the availability of land near the villages may be limited, the character of these villages could provide a model for future development in a village configuration elsewhere in the township, using elements of Glen Mills and Thornton as themes.

Glen Mills and Thornton themselves are worthy of preservation and the Township should create conditions through its zoning and subdivision and land development ordinances that allow for the continuance of these historic villages. At the same time, the Township should recognize the need to allow traditional village buildings to be used for purposes not necessarily envisioned when they were built. Adaptive and sensitive reuse of traditional buildings, as is currently allowed in many areas under Township zoning, can be a successful means of preserving significant structures.

The quarry located south of Sweetwater Road and East Chester Creek is one of the few truly industrial operations in the Township, making it unique. This business is currently owned by Hanson Aggregates. Although the extraction of mineral products is a relatively slow and ongoing process, it will end at some point in time. The township should address the future use of the quarry site and its implications for the surrounding area. When the quarry eventually discontinues operations, the site might have the potential for either residential or non-residential use, possibly as a planned residential community, or a commercial site. The site could also be appropriately reused as a recreational and open space area or be replanted to become a natural

area. The State currently requires quarry owners to prepare a decommissioning plan in the event of closure. While the quarry’s closure is not imminent, long-range planning for the site should be considered cooperatively between the quarry owners, Township officials, and representatives from the appropriate agency at the State.

There are numerous residential lots in Thornbury Township that exceed the prescribed lot size. As land in the Township that is suitable for development becomes more scarce, small development proposals involving the re-subdivision of large lots that exceed the minimum lot size of the existing zoning may become prevalent. While not necessarily a threat to the integrity of existing communities, such a trend should be monitored for its general compatibility with surrounding areas.

Agricultural Preservation

Thornbury Township is no longer the agrarian community it once was. Farms that were once the predominant land uses have given way to residential communities. Several active farming operations are remaining in the Township as well as some large parcels on which residents may keep domestic animals. Two of these are the Craig Property in the southwest corner of the Township and the Clinger tract near Thornton. **Map 5.3: Prime Agricultural Soils on Undeveloped Land** shows areas of prime agricultural soils on land that is currently in agricultural, open space, or recreational use, or currently vacant. Open spaces include reserved undeveloped areas surrounding cluster development in PUDs. The map also highlights prime soils on large institutional properties including the prison, Cheyney University, and Glen Mills School. **Table 5.3** below shows that of more than 3,000 acres of land in the Township determined by the U.S. Department of Agriculture to be important farmland, close to 60% remains undeveloped. Farming and residential communities have co-existed for many years and there continue to be no adverse conditions existing between them today. The obvious pressure to convert farmland to housing is readily evident. The Craig Farm is adjacent to Route 202 and is zoned Mobile Home Park, Planned Apartments, and Light Industrial. This land tract is planned to accommodate alternate land use opportunities for the Township in the future.

The MPC requires that a portion of a municipality’s Comprehensive Plan be devoted to the preservation of agriculture. Typical agricultural preservation techniques range from transfer of development rights and the establishment of conservation easements to granting of deed restrictions. As noted above, the Craig Farm is zoned for a variety of uses. Elsewhere in the Township, smaller agricultural uses should be retained through efforts to ensure compatibility of these uses within the surrounding residential land use pattern.

To that end, the Township should ensure that all zoning districts permit agricultural uses. Where there are opportunities for the Township to encourage small-scale agricultural uses through the Zoning Ordinance efforts should be made to create appropriate regulations. Through the use of buffers, setbacks, and minimum lot sizes, it should be possible to minimize conflicts between uses.

Table 5.3: Important Farmland in Thornbury

Total Important Farmland in Thornbury	Total in Thornbury (Ac)	Total Developed (Ac)	Total Undeveloped (Ac)	Total Undeveloped %
Farmland of Statewide Importance	899.7	395.3	504.5	56.1%
Prime Farmland	2,381.9	958.9	1,423.3	59.8%
Total	3,281.6	1,353.8	1,927.8	59%

Source: Natural Resources Conservation Service, USDA

Map 5.3: Prime Agricultural Soils on Undeveloped Land Thornbury Township

0 1/4 1/2 1 Miles



----- Municipal Boundaries

Soil Importance on Undeveloped Land

- Prime Farmland
- Farmland of Statewide Importance

Soil Importance on Large Institutional and Prison Land

- Prime Farmland
- Farmland of Statewide Importance



Sources:
Natural Resources Conservation
Service, U.S. Department of Agriculture

This page intentionally left blank for printing purposes.

FUTURE LAND USE PLAN

The Future Land Use Plan portrays in graphic and narrative form the current settlement and development patterns of the Township that will be critical factors to consider in planning for future growth. Additionally, the preservation of natural resources and mapping of water and sewer service areas will be instrumental in the creation of a growth management plan. **Map 5.1: Existing Land Use** is the origin of any plan to accommodate future development. Parcels and tracts that are not currently developed fall into categories such as natural resources, agricultural, public or private open space, and vacant. Assuming that the Township places a high value on the retention of all these lands, except vacant parcels, future development will be accommodated on land that is either currently vacant or could be redeveloped.

Map 5.4: Future Land Use highlights areas that are most appropriate to be considered for future development and illustrates land that is either developed or otherwise constrained. The plan is meant to be a guideline to decision-makers of the Township as they consider new development proposals and plan for infrastructure to accommodate them. The Future Land Use Map guides the township to make sure the land and its resources are used efficiently and to help prevent land-use conflicts. The following section provides descriptions of the future land use classifications shown in **Map 5.4: Future Land Use**.

Future Land Use Classifications

Agriculture

A category used primarily for the production of crops, keeping livestock, and/or the marketing of farm products.

The proposed locations of this land use category are the Stoney Bank Nursery located in the south portion of Thornbury, and The Inn at Grace Winery's fields to the west of Sweetwater Road and Sweetbriar Road. Additionally, the Squire Cheyney Farm Park in the northern corner of Thornbury located on Cheyney Road is designated as a future agriculture use.

Commercial

A category designed to accommodate local commercial retail and service uses such as convenience stores, drug stores, coffee shops, and small restaurants. This land use also includes larger commercial uses such as office buildings, restaurants, or stores in strip commercial, and small shopping centers. These uses are designed to serve the surrounding local neighborhoods as well as other parts of the Township and neighboring municipalities. They include independent retailers and businesses but also franchise establishments or chains.

The principal locations for the commercial designation are Duffers Tavern on Route 352 and the bed and breakfast house accommodations at the Inn at Grace Winery. In the vicinity of the intersection at Thornton Road and Glen Mills Road, there are a number of small-scale, independent retail establishments, and at Sweetwater and Stoney Bank Roads there is a family-owned restaurant; however, these establishments are classified under the Village designation.

Low-Medium Density Residential

A category designed to accommodate residential dwellings at a maximum of 3 units per acre, as well as agriculture uses.

The majority of residential uses within the Township fall within this category and can be found in all principal sectors of the Township east and west of Cheyney Road and north and south of Glen Mills Road.

High-Density Residential

A category designed to accommodate dwellings at a density of greater than 3 units per acre.

Proposed areas for high-density development are in the northeast corner of Thornbury Township where Andover community is currently located. A second location directly west of Andover is Greenbriar at Thornton. Cobblestones at Thornbury is located in the center of the Township and will be designated for future high density along with the neighboring community, Thornbury Hunt, which resides to the east of Cobblestones. Lastly, Cherry Creek, located furthest east, will also expand west as a future high-density land use.

Institutional

A category for governmental, educational, religious, and non-profit uses. It is primarily proposed for existing areas of institutional use.

The proposed locations for this category include the Glen Mills Schools on the North and Southside of Glen Mills Road from Gradyville Road to Cheyney Road and Cheyney University in the vicinity of the intersection at Cheyney Road and Creek Road.

Limited Industrial

A category set aside for light industrial uses, typically includes final-stage or “clean” manufacturing, wholesaling, warehousing and distribution, and the servicing of vehicles and equipment. Some limited industrial uses can be compatible with urban, mixed-use development.

The proposed locations for this category include parcels south of Dilworthtown Road near Wilmington Pike. Currently, this location includes a car lot, an office containing real estate agents and a crossfit gym, and a portion of Audi of West Chester which fronts onto Wilmington Pike. Also part of this category is the Hansen Aggregates quarry at Sweetwater Road.

Mixed-Use

A category that generally can include a range of commercial and office uses along with a residential component, and appropriate for a location along a major arterial road or highway. Residential uses could include two-family homes, townhouses or low- to mid-rise multi-story development that incorporates commercial use on the first floor with residential uses on the upper floors. This variety of uses allows for people to live, work, shop, and recreate in one place, which can lead to a mixed-use development becoming a destination for residents and visitors from nearby areas.

The proposed location for this category includes the southwestern corner of Thornbury Township, adjacent to Route 202, known as the Craig Farm tract.

Municipal

A category designated for local government buildings such as township municipal buildings, civic centers, courthouses, meeting and assembly rooms.

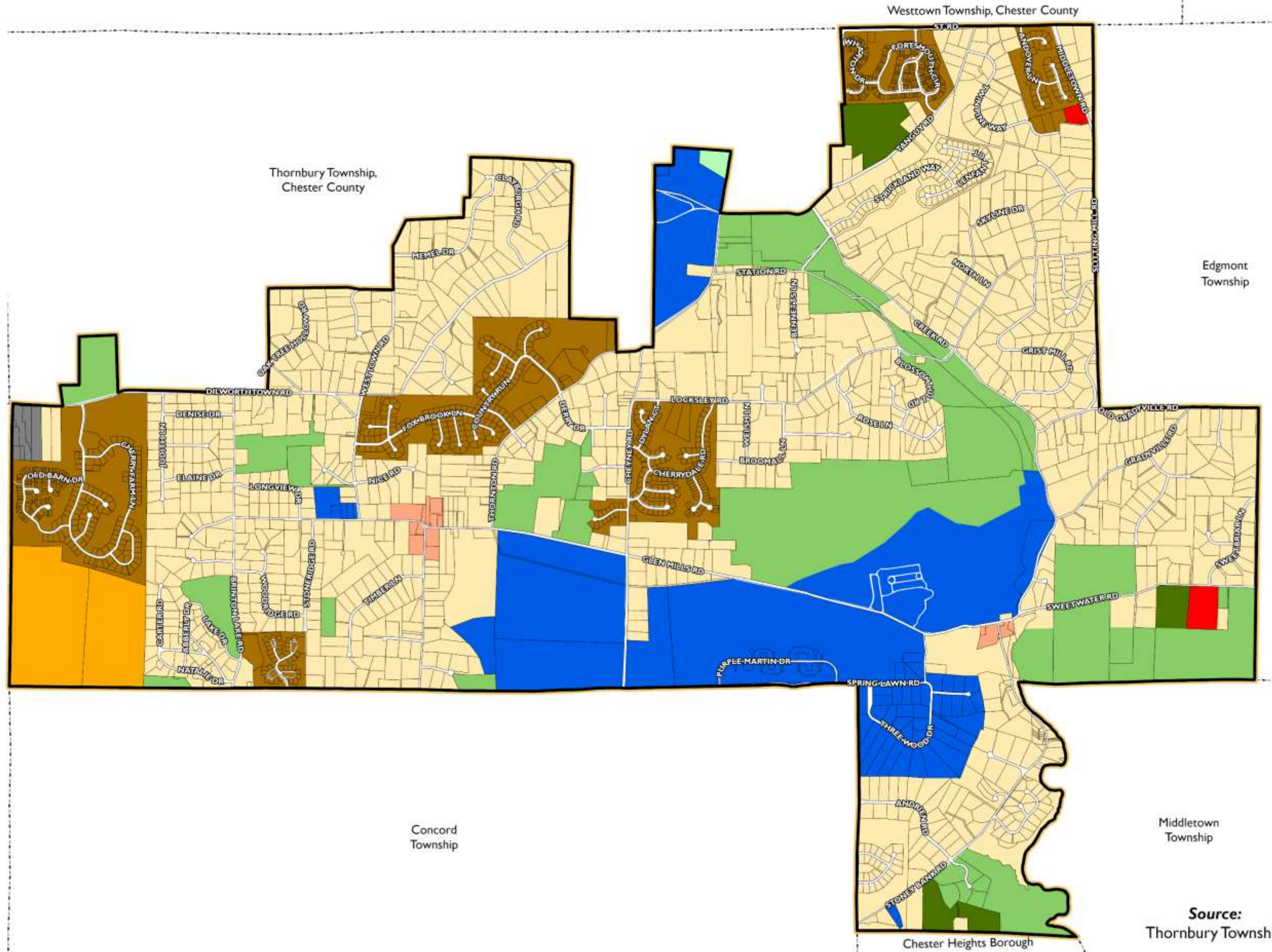
Currently the Township’s municipal buildings is designated as the only Municipal use. Municipally owned infrastructure associated with residential development is contained within Residential uses.

Map 5.4: Future Land Use Thornbury Township

----- Municipal Boundaries

Future Land Use

- Agriculture
- Commercial
- Low-Medium Density Residential
- High-Density Residential
- Institutional
- Limited Industrial
- Mixed-Use
- Municipal
- Parks, Recreation and Open Space
- Village



This page intentionally left blank for printing purposes.

Parks, Recreation, and Open Space

A category that encompasses private and public open space and recreational uses such as parks containing athletic fields, golf courses, arboretums, walking, biking, and hiking trails, as well as natural areas for conservation and open space.

The main areas proposed for Parks, Recreation and Open Space uses include Palmer Arboretum on Briton Lake Road, Thornbury Park located at Thornton Road and Glenn Mills Road, and Barrett's Meadow Park, Bonner Park, and Martin Park. Brinton Lake on Lake Drive in a private community and the private Penn Oaks golf club on Dilworthtown Road are both part of this category.

Village

A category to realize a village's center of civic life with a unique sense of place. More specifically, to create an attractive, vibrant, mixed-use town center for Thornbury. Offering retail, shopping, restaurants, entertainment, employment, and residential uses in a compact, pedestrian-oriented setting. As well as to support the design of building frontages, streetscapes, and public spaces that will create a lively and attractive public realm with a distinctive identity.

The proposed locations for this category include Thornton Village Historic District at Glen Mills and Thornton Roads and the historic village of Glen Mills at the at the Glen Mills Train Station.

Future Land Use Analysis

It is recommended that the Township review its Zoning as well as its Subdivision and Land Development Ordinance to ensure adequate provisions for the protection of natural features, such as floodplains, wetlands, and steep slopes. The identification and protection of these areas will yield developable sites that are not constrained by these environmentally sensitive features. Future development should be directed towards unconstrained lands that are either vacant or available for redevelopment. The consolidation of protected natural feature areas and other open space areas in corridors should be a planning goal. Such systems of open space are not only beneficial for recreational purposes but also for the movement of wildlife within natural habitats.

A key ingredient in future development will be the continued creation of protected open space. The interconnection of open spaces should be encouraged through public/private partnerships, for example by incorporating open areas created as part of Planned Residential Development (PRD) as part of the protected open space within the Township. The open space concept should continue to be encouraged, perhaps even mandated, in new development. Additionally, regulations affecting the preservation of natural resources need to be reviewed to ensure that they are being protected to the maximum extent possible.

Just as it is important to encourage the connectivity of open spaces within the Township, the location of new development must coordinate with both existing development and proposed infrastructure. The review of new land development plans must consider how each plan will expand upon and improve the pattern of development in the Township. The DVRPC population forecast in Chapter 2 anticipates that Thornbury Township will add about 950 residents by the year 2050, although this forecast assumed that a portion of the Township's population would include individuals in group quarters. Although this would be a smaller increase in population than in past decades, the Township would need to find appropriate locations to house this expanding population. Non-residential development may also occur in the Township, in the form of retail services or employment centers. In each case, the character of the Township and past development patterns would imply that any proposed non-residential development is of a scale to complement the local community and provide services to it. The Future Land Use Plan depicts areas that this Comprehensive Plan supports future growth in various categories.

What is readily evident, when considering where in the Township future growth will be located, are the vacant parcels which are scattered throughout the community and remaining large agricultural tracts. Additionally, lands previously subdivided may be re-subdivided to allow for additional dwellings, or previously developed lands may be redeveloped, such as under a “Brownfields” program.

Another means of accommodating future growth is through the redevelopment of lands currently being used for other purposes. In Thornbury Township such opportunities are limited. One location for potential reuse is the Glenn Mills quarry operated by Hanson Aggregates. Although the quarry is currently in operation, there is potential for long-range planning for its redevelopment. A beneficial aspect of the quarry location is its proximity to the village of Glen Mills and the potential for redevelopment to be done in a manner consistent in architectural character and scale with the village. An alternative option would be to preserve the site of the quarry as open space and natural, undeveloped lands.

Another village-oriented opportunity is Thornton. Currently, the Zoning Map of the Township categorizes this area around the intersection in Thornton as Commercial. The Township has conducted a detailed study for the village that examines those characteristics which make it unique, both architecturally and spatially. There are parcels near the intersections that could be incorporated into a planned community, zoned specifically to perpetuate the local village character of Thornton. One large parcel in this vicinity is the Clinger tract, currently in agricultural use and located south of Thornton and west of the prison lands. Should it become available for future development, it is recommended that it be done in coordination with village development standards relevant to the village of Thornton.

An area of the Township that is not subject to any current plan reviews, but offers potential in the future residential development, is the Craig Tract. This site, as noted above, is currently zoned for mobile homes, apartments and light industrial. Another area is a series of parcels located on the south side of Dilworthtown Road, immediately east of Route 202 and south of Penn Oaks Country Club. Collectively, these parcels are across from a shopping center and next to a Wawa convenience store and gas station. While not large in acreage, this area has the potential for medium-to high-density housing or a mixed-use development.

Map 5.4: Future Land Use graphically illustrates the preceding concepts and areas that have the potential to accommodate the Township’s future growth. These areas have the advantage of being located in different sectors of the Township and have the ability to balance future growth geographically. It should be noted that the two areas identified for possible future growth, the Villages of Thornton and Glen Mills, should be planned and implemented following design standards inspired by the character of each of the two villages. Each area should be subject to architectural standards, oriented to pedestrian circulation, and contain multiple residential and service uses.

The three major institutions found in the Township, the George W. Hill Correctional Facility, Glen Mills Schools, and Cheyney University have also been shown on **Map 5.4**, due to their magnitude and because of the potential for growth and change in each, based on the needs of the institution. Each institution has a physical presence in the community, with varying degrees of impact. As growth occurs around these three institutions in the future, efforts should be made to create large buffer areas in scale with the magnitude of the institutions. This can be done through the use of larger than normal setbacks and the location of open space. The Township should continue to maintain a collaborative relationship with each institution to be informed of and plan for changes in their status

Future Land Use Goal

Establish and maintain land use planning regulations and policies which preserve the beneficial aspects of the Township character and provide for management of future growth.

- | | |
|--------------|--|
| Objective 1 | Maintain a system of land use mapping to have available an inventory of Township land uses, infrastructure, open space, and transportation corridors. |
| Objective 2 | Evaluate Township ordinances and modify as necessary to encourage the location of future development in areas where adequate infrastructure exists. |
| Objective 3 | Encourage development that concentrates future growth near compatible land uses. |
| Objective 4 | Continue to develop programs and provide education to encourage conformity and compliance with Township Codes. |
| Objective 5 | Reinforce existing villages and create performance standards that encourage village development at new community locations. |
| Objective 6 | Encourage the development of commercial, industrial and institutional uses which service needs of Township residents, while enforcing applicable regulations, such as buffering of dissimilar uses. |
| Objective 7 | Monitor existing and future pipeline activity that may occur in the Township to mitigate its impact on its community. |
| Objective 8 | Coordinate with adjacent municipalities for compatibility of land uses and infrastructure. |
| Objective 9 | Ensure that future growth patterns are compatible with both the Chester and Delaware Counties Comprehensive Plans and other planning programs. |
| Objective 10 | Develop a Comprehensive Recreation and Open Space Plan to identify open space areas and tracts that are of high value to the Township and consider long-term approaches to the preservation and expansion of the open space network. |

The comprehensive planning process is dynamic and reflects the continuing changes in community needs and methods for accomplishing these needs. As the needs change, adjustments should be made to the goals and objectives, at a minimum during interim or complete updates to this Plan. Implementation of the goals is addressed in Chapter 11, where each objective is accompanied by a recommendation of actions, a suggested priority time frame, and the Township organization responsible.

SUMMARY

Thornbury Township seeks to maintain the rural character of its community while balancing its need to provide some additional housing for new residents. The majority of current land use is single-family detached. The Future Land Use Plan portrays areas that this Comprehensive Plan supports for future growth in various categories. The plan is meant to be a guideline as new proposals are considered by the Township. The Comprehensive Plan strongly recommends that the Hanson Aggregates quarry site be considered for either future redevelopment, as an extension of Glen Mills village, or preserved as open space and recreation. The consolidation of protected natural feature areas and other open space areas in corridors is currently a planning goal of the Township's 2007 Open Space and Acquisition Plan. Such systems of open space are not only beneficial for recreational purposes but also for the movement of wildlife within natural habitats. It should also be noted the three major institutions found in the Township, the George W. Hill Correctional Facility, the Glen Mills School, and Cheyney University, are of a significant size with the potential for future change and growth. Any change to these three uses could potentially change the character and "feel" of Thornbury

Township. Considerations should be made for potential need for buffers from residential uses where necessary, if one or more these institutions expanded or changes use. The Township should also explore the feasibility of the County or state enacting deed restrictions on these lands to protect the open space they provide.

Chapter 6: Housing Plan

Thornbury Township offers a unique variety of housing types and living arrangements. This chapter discusses the current housing conditions in the Township, as compared to Delaware County as a whole. 2020 Census data is used to present a snapshot of current conditions, with data from the American Community Survey (ACS) used to supplement the Decennial Census where data was unavailable. The population forecasts from DVRPC data referenced in Chapter 2 are used in this chapter to help predict potential future housing needs of the Township. The chapter concludes with a housing plan to address future needs and ensure Thornbury continues to plan for a variety of housing types.

HOUSING OCCUPANCY AND TENURE

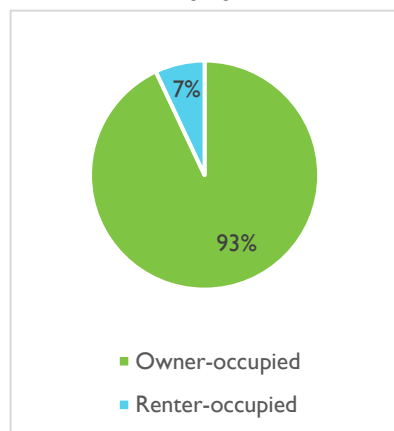
According to the 2020 Census, Thornbury Township currently has a total of 2,255 housing units. **Table 6.1: Housing Units and Housing Occupancy, 2000 to 2020**, shows the change in housing units over the last 20 years, both in the Township and in Delaware County as a whole. Between 2000 and 2010, Thornbury saw a 58.4% increase in housing units, a total of 810 housing units in that decade. Thornbury's growth is notable when compared to the County's overall 2.7% increase over the same time period. As noted in Chapter 2, this was a period of significant population growth in Thornbury and the surrounding area in western Delaware County and Chester County, and the Township's appealing location within the region and bucolic character likely drove demand for new housing. In the decade between 2010 and 2020, however, the market for new housing cooled significantly, and Thornbury Township only saw a 2.6% increase in total housing units, in step with the County's 2.8% increase in housing units over the same time period.

Table 6.1: Housing Units and Housing Occupancy, 2000 to 2020

	Thornbury Township			Delaware County		
	2000	2010	2020	2000	2010	2020
Total Housing Units	1,387	2,197	2,255	216,978	222,902	229,208
Total Occupied Units	1,366	2,114	2,156	206,320	208,700	215,498
Percent Occupied Units	98%	96%	96%	95%	94%	94%

Source: U.S. Census Bureau, Decennial Census, 2000, 2010, and 2020

Between 2000 and 2010, housing units in Thornbury Township went from being about 98% occupied to being about 96% occupied. The housing occupancy rate in 2020 remained the same as in 2010. Although this is still a very high occupancy rate, the slight decline from 2000 to 2010 could be an effect of the large increase in housing stock over that decade. With over 800 houses added to the Township in a decade, according to the Census data, it is conceivable that there would be a lag in filling the new homes, or that older units might not be as competitive in the market. The effects of a recession in the second decade of the 2000s may have also kept home sales down through 2020.

Figure 6.1: Housing Tenure, 2020

Source: U.S. Census Bureau, 2020 ACS 5-Year

According to 2020 ACS 5-Year estimates, housing units in the Township are currently 93% owner occupied and 7% renter occupied. By contrast, housing units in Delaware County as a whole, are about 69% owner occupied and 31% renter occupied. Thornbury Township is among the top communities in Delaware County and the region in its rate of owner-occupied housing units. High ownership rates can indicate stability in neighborhoods as homeowners often take greater care of maintaining and improving their homes; however, renting affords more flexibility and can appeal to those who do not want to be tied to a specific location. Sometimes, the desire to own a home is constrained by personal finances or life situations, and so renting may be the only choice at that time. Indeed, national trends have shown an increase in rental rates as young adults wait longer to purchase their first homes. A desire for increased mobility and flexibility in housing options means that renting appeals to certain populations such as young professionals and empty nesters.

HOUSEHOLD CHARACTERISTICS

Table 6.2: Thornbury Households, 2020, shows that within the occupied housing units in Thornbury, 81% are family households and 19% are non-family households. The U.S. Census Bureau defines Family Households as “a householder and one or more other people living in the same household who are related to the householder by birth, marriage, or adoption.” Non-Family Households, then, are defined as “a householder living alone or with nonrelatives only,” which includes unmarried couples. Married Couple Households, a sub-category of Family Households, make up about 78% of all households within Thornbury Township (this would include households both with and without children), which gives some insight into the family-oriented character of the community. Still, there is a strong presence of non-family households within the Township. It is worth noting that 16% of all households in Thornbury are a householder living alone. The U.S. Census bureau has reported that there is a national trend of increased single people living alone, currently around 28% of all households as compared to closer to 13% of all households in 1960. In 2020, 29% of all households in Delaware County as a whole were a householder living alone. Although Thornbury may not be seeing the effects of this trend at present, household composition and related trends should continually be monitored to address changing housing needs.

Table 6.2: Thornbury Households, 2020

Thornbury Households, 2020	
Family Households	81%
Married Couple Households	78%
Non-Family Households	19%
Householder Living Alone	16%

Source: U.S. Census Bureau, ACS 5-Year, 2020

The 2020 ACS 5-Year estimates show the average household size in Thornbury Township to be 2.89 persons per household. This figure represents a trend of decreasing average household size, as the average household size was 3.03 persons per household in 2000 and 2.98 persons per household in 2010 according to the Decennial Census counts. However, it is important to note that the average household size was not calculated as part of the 2020 Decennial Census, so the available figure is from the 2020 ACS 5-Year estimates, which is calculated with a margin of error. However, Thornbury Township still has a relatively high average household size compared with all of Delaware County, which has an average household size of 2.59 persons per household according to 2020 ACS 5-year estimates. Overall, average household size

has been declining across both the County and the nation over the past several decades. This decline is generally attributed to a greater number of single-member households and fewer children per household.

DWELLING UNIT TYPES AND DENSITIES

Like most municipalities in Delaware County, Thornbury contains single-family detached dwellings and townhouses; however, unlike other municipalities, other housing opportunities are limited. According to the 2020 ACS 5-Year estimates, about 75% of housing units in Thornbury Township are single-family detached, with the remainder being single-family attached homes such as townhouses.

Thornbury Township's Zoning and Planned Residential Development Ordinance provides regulations and districts that allow for an array of housing types. Each district is set with parameters for permitted densities and design standards, with the overall goal of promoting public health, safety, and welfare while preventing overcrowding. **Table 6.3: Residential Zoning District Standards**, highlights Thornbury's existing districts, citing their permitted dwelling unit types and density requirements for each. The different dwelling types permitted within Thornbury include single-family detached (SFD), single-family attached (townhouse) (TH), semi-detached (SD), garden apartments (GRDN APT), condominiums (CNDO) and apartments (APT). This full range of housing types serves to meet the needs of current residents while allowing for flexibility to meet future needs. The distribution of land within residential zoning districts is represented in **Map 5.2: Thornbury Township Zoning Map**.

Table 6.3: Residential Zoning District Standards

Zoning District	Dwelling Unit Types	Density
R-1, Residential-1	SFD	87,000 sq.ft. min.
R-2, Residential-2	SFD	60,000 sq.ft. min.
R-3, Residential-3	SFD, TH, CNDO, APT	Max. 4 units/ acre
PA, Planned Apartment	APT, TH	APT 5-acre min. with max. 7 units/ acre TH 20-acre min. with max. 4 units/ acre
PRD-1, Planned Res. Dev.	SFD	14,000 sq. ft. min.
PRD-2, Planned Res. Dev.	SFD	12,000 sq. ft. min.
PRD-3, Planned Res. Dev.	No data	No data
IR, Institutional Residential	SFD, TH, SD, MLTI, GRDN APT	Max. 2.5 units/ acre
MHP, Mobile Home Park	MH	20-acre min. with Max. 4 units/ acre
J-1, Residential Cluster (Overlay)	SFD	15-acre min. with 11,250 lot min.
J-2, Residential Cluster (Overlay)	SFD	15-acre min. with Max. 1 unit/ 0.75 acre

Source: Thornbury Township Zoning and Planned Residential Development Ordinance, 2019

The Ordinance is comprised of five districts with residential dwellings, R-1, R-2, R-3, I-R, and MHP, four districts with planned development, PA, PRD-1, PRD-2, and PRD-3, and two overlay districts, J-1 and J-2. The four planned development districts and two overlay districts serve to meet the Township's goal of encouraging future housing with compact forms and the provision of significant open space. This goal is a product of the limited land availability suitable for future housing developments, as well as the community's expressed value of preserving open space. While the Township hopes to maintain its character of primarily single-family detached homes, the PRD districts and cluster overlays allow for a higher density while integrating new development into the existing land pattern.

HOUSING OUTLOOK

The DVRPC population forecast presented in **Figure 2.1: Regional Population Forecasts** in Chapter 2 anticipates a 13.8% increase in population in Thornbury Township by the year 2050, an addition of about 950 residents. This forecast was calculated based on past population counts when a significant portion of the Township's population was individuals in group quarters. As discussed previously, the major institutions in Thornbury that house group quarters populations have recently undergone some changes that leave their future impact on Township uncertain. Cheney University has seen declining enrollment over the past decade and its residential (on-campus) population may be affected in the wake of the COVID-19 pandemic. The Glen Mills School closed indefinitely in 2019 and has not re-opened since, although there are ongoing efforts to restore the facilities there.

Table 6.4: Change in Household Population

	2000	2010	2020
Population in Households	4,127	6,308	6,342
Change in Household Population	--	+2,181	+34
Housing Units	1,387	2,197	2,255
Change in Housing Units	--	+810	+58

Source: U.S. Census Bureau, Decennial Census, 2000, 2010, and 2020

Table 6.4: Change in Household Population depicts the changes in population in occupied existing housing in the Township between the years 2000 and 2020. During this two-decade period, the number of people in households increased by 2,215 persons. Of this total increase, 2,181 additional residents occupied units between 2000 and 2010, an increase of 52.8% for the decade, and only 34 additional residents in households occurred between 2010 and 2020, an increase of only 0.5% for the decade. The same chart also shows that the housing stock increased a total of 868 units during the same twenty-year period, of which 810 occurred in the decade 2000 to 2010, while only 58 were added between the years 2010 and 2020. Housing data is directly related to changes in population. To best understand this relationship, Chapter Two of this Plan presents detailed information on past, existing and projected population changes for the Township.

Table 2.1: Regional Population Trends illustrates the population decreases which were seen in the decade 2010 to 2020. This slowdown in growth resulted in a comparable slowdown in people in households during the same period of time. It will be important to monitor the projections as a single large-scale development may alter the projections significantly. The current projection of a future long-range slowing in population growth will affect the demand for future housing in the Township.

HOUSING PLAN

The Pennsylvania Municipalities Planning Code (MPC) Section 301(a)(2.1) requires that a municipal comprehensive plan include a “plan to meet the housing need for present residents and 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.” In evaluating the past, present, and future housing needs of Thornbury, goals for the future have been established to ensure that present and future needs are being met.

From 2000 to 2010, Thornbury Township experienced significant growth. The jump in population led to increased residential development to accommodate growing demand. The development was comprised of largely single-family dwellings, the most prevalent residential development form in the Township. While the Township maintains its large population of homeowners, the past decade did see an increase in renter-occupied properties. Looking toward the future, Thornbury's growth is expected to slow significantly, reducing the need for substantial new housing developments over the next few decades but possibly suggesting the need for new rental housing options.

Housing Considerations

Development Potential

The pattern of existing land use illustrated in the previous chapter, **Map 5.1: Existing Land Use**, indicates that the availability of land suitable for future housing in Thornbury Township is limited. Much of the Township has been developed with single-family detached houses and, to a lesser extent, attached housing. In recent years the Township has approved several Planned Residential Developments (PRD) and cluster developments that contain attached and detached housing and significant amounts of open space, at a density greater than previously found in surrounding areas. As lands available for growth and development become rarer, housing concepts utilizing cluster design and higher densities are an option to provide for those who continue to find Thornbury Township a desirable place to live. Linked to this concept is the notion that future growth opportunities should be integrated into the existing pattern of land use. Specifically, the two villages of the Township, Thornton and Glen Mills, offer the opportunity for expansion in a compatible village style on lands either contiguous or nearby. If development were to occur at these locations, it should be in accordance with village design standards based upon the conditions found in each village.

Housing Variety

Ideally, communities and regions should be able to provide a variety of housing types that offer diversity both geographically and economically. As discussed in the Development Potential section, the geographic distribution of future residential development is limited in Thornbury Township due to the dwindling number undeveloped parcels suitable for new housing. The economic variety in the price of existing and potential new housing stock may also pose challenges for the Township. The economics of land development is based on many variables, including the compatibility of proposed development with its surrounding values. The established pattern of single-family detached homes on large lots has left much of the Township with very high home values; while this can be seen as a positive community trait, it has left limited room for more affordable, alternative housing types that may attract service workers such as teachers, health care workers, and police and fire responders, as well as millennials, empty nesters, and families looking for starter homes. However, the proximity of alternative housing opportunities in communities adjacent to the Township helps to offset some of this need.

To ensure available land and a range of housing opportunities to meet the future needs of residents, lands near Route 202, in the west, and lands near Glen Mills, in the east, are designated as lands allowing for a range of opportunities to meet the needs of future residents. These areas are zoned accordingly as Mobile Home Park and or Planned Apartment, potentially filling a need for those types of housing in the future. The limited availability of public water and sewer facilities in certain areas creates additional constraints in terms of which areas may be considered most suitable for growth.

Housing Goal

Ensure that safe and adequate housing and non-residential buildings are provided for all Township residents.

- | | |
|-------------|---|
| Objective 1 | Evaluate ordinances to ensure opportunities for a variety of housing types to all populations. |
| Objective 2 | Identify, monitor, and maintain an inventory of vacant properties. |
| Objective 3 | Research and examine strategies to encourage the addition of a greater variety of dwelling unit types to the Township's housing inventory. |
| Objective 4 | Continue to encourage future developments to be designed with an emphasis on open space and the existing character of the surrounding area. |

These goals serve to uphold a high-quality housing stock within the Township while sustainably encouraging growth. In meeting these goals, Thornbury will maintain its beautiful homes and open spaces while providing opportunities for a variety of housing needs.

SUMMARY

Thornbury is in a period of transition, moving away from large residential developments and an influx of new residents, into a time of maintenance and slowed growth. The past trend of population growth in Thornbury led to the development of many single-family dwellings. While the municipality does offer other housing types, single-family homes are dominant. Looking toward the future, population projections show there will be some slower growth over the next several decades. To accommodate these changes, the Township has set objectives that will serve to uphold the condition of the existing homes while working to mitigate any surplus. The future of Thornbury's housing stock is truly in the hands of the municipality; however, with established standards, adopted regulations, and deliberate planning, the Township is prepared for this next stage.

Chapter 7: Natural Resources and Open Space Plans

Thornbury Township has been identified as having a strong rural character based upon its agrarian heritage. The presence of abundant natural resources has, in large part, influenced that character. This chapter identifies the significance of the Township's natural resources and addresses the means to preserve them. This chapter will build upon Chapter 4: Community Facilities and Services, by further highlighting the open space and parkland facilities that the Township has to offer. The discussion will focus on the natural resources within those spaces, as well as the possible expansion of the municipality's parks and open spaces. A plan for the future of the Township's natural resources and open spaces will set deliberate goals for the Township moving forward.

NATURAL RESOURCES

Topography

The topography is defined and mapped by contour lines, which are lines that have a constant elevation. Any point along a contour line will be the same elevation as all other points on that line. The degree to which a given area is sloped is measured by relative differences between the contour line will be the same elevation as all other points on that line. The degree to which a given area is sloped is measured by relative differences between contour lines and is expressed as the slope. The slope is a mathematical relationship between the vertical rise compared to the horizontal run. The calculation of the slope is, therefore found by dividing the rise by the run, when both are expressed in the same terms.

Thornbury Township has a variety of topographic conditions, ranging from relatively flat or gently sloping land to isolated areas of very steep terrain. Generally, the steeper slopes are found in the eastern portions of the Township where Chester Creek has cut into the landscape. **Map 2.2: Steep Slopes** found in Chapter 2: Community Profile illustrates the topographic range of the Township. The steepest slopes are as great as 65% and are often associated with the Chester Creek bed.

Thornbury Township has been and continues to be committed to the regulation and protection of Steep Slopes as a component of Natural Resources Protection throughout the Township. Section 27-2115 of the Township Zoning Code sets forth the standards which regulate disturbance within steep slopes. In regulating activities such as land disturbance and construction in the steep slopes, the Township is trying to prevent soil erosion and water run-off on to adjacent properties and from intruding into other natural resources within the community. Run-off and soil erosion create siltation which compromises the integrity and degrades the quality of streams, lakes, and wetlands. Collectively all the resources act in tandem with each other in creating the character of the natural features that the Township enjoys and wishes to preserve.

Hydrology and Surface Waters

The primary surface water body in Thornbury Township is Chester Creek, found in the eastern section of the Township. In addition to being in the eastern portion of the Township, the West Branch of Chester Creek serves the western portion of Thornbury. An impoundment of the West Branch makes up Brinton Lake, the namesake for Brinton Lake Road. A second unnamed water impoundment of a similar size is found on an undeveloped tract in the eastern sector of the Township. The two creeks form major drainage basins in the Township, before meeting each other east of Chester Heights Borough and continuing to flow into the Delaware River in Chester City.

The surface watercourses in Thornbury Township are confined by relatively steep slopes, resulting in narrow, well-defined floodplain patterns. **Map 7.1: Wetlands, Floodplains, and Hydrology**, illustrates the locations of floodplains and associated wetlands throughout the Township. The floodplains shown are

primarily adjacent to the two main watercourses and their tributaries. In 1993, the Federal Emergency Management Agency (FEMA) compiled the mapping of floodplains for streams which have a probability of flooding to the extent shown statically once in a one-hundred-year period, due to duration and intensity of a rainstorm and the adjacent topography. The significance of these mapped floodplains is two-fold; areas defined by FEMA require national flood insurance, and floodplains are not stable areas and are generally areas where development should be discouraged. The maintenance of unimpeded floodplains allows for efficient transport of floodwaters. Many municipalities, including Thornbury, have regulations regarding the ability to develop or alter floodplains.

In Thornbury, the Code contains a Floodplain Conservation District overlay zoning district. The overlay district is defined as being the 100-year floodplain as interpreted by the Federal Emergency Management Agency (FEMA) in its Flood Insurance study for Delaware County (1993) and as an area containing mostly alluvial soils, according to the Soil Survey of Chester and Delaware Counties (1964). The floodplain is made up of the floodway, flood fringe and, in some cases, an approximated floodplain. The Thornbury Zoning Code also provides permitted uses within the Floodplain Conservation District as a matter of right, as a special exception, and as a variance. The intent of regulating floodplains is related to public safety, protection of property and the maintenance of high-quality water bodies. Flood prone areas are regulated to minimize loss of life and property from flood damage. The stability and health of the streams; in terms of water temperature, chemistry, silt content, and aquatic habitat; are also areas of concern when regulating water. An advantage of maintaining high-quality surface waters is that those same waters infiltrate the soils and recharge the subsurface aquifers, which are the source of many public and private water domestic water systems.

Often confused with floodplains, freshwater wetlands are areas that can be identified based on unique plant communities and hydric soils. These areas are typically inundated by standing water several weeks during the year. The identification of wetlands has been standardized by the Federal Manual for Identifying and Delineating Jurisdiction Wetlands (1989), which has been adopted by the Pennsylvania Department of Environmental Protection (DEP). Wetlands play a vital role in an area's ecology by filtering and purifying surface water runoff and by providing highly productive zones for fish and wildlife habitat. Periodic storage of stormwater also occurs, thus increasing groundwater recharge into aquifers. Wetlands are frequently associated with floodplains and are often either within or adjacent to them. Wetlands are considered water bodies and are often found near the ponds and streams throughout Thornbury Township. The mapping of wetlands has been done by the U.S. Fish and Wildlife Service. Like floodplains, wetlands are very sensitive environmentally and require protection through development standards.

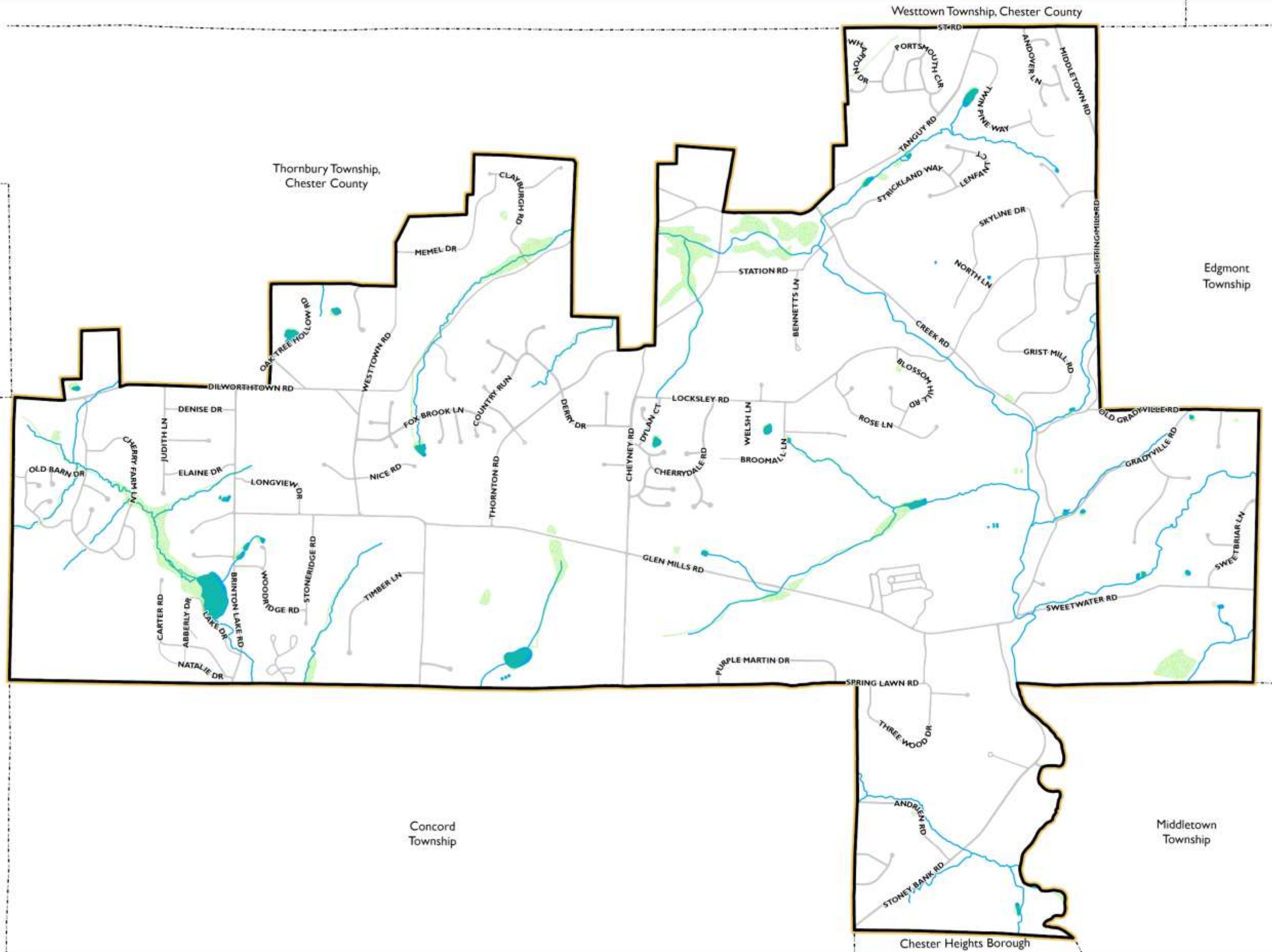
In 2002, a special watershed study of Chester Creek was performed by the Delaware County Planning Department. This plan offered recommendations for watershed protection, as well as a model ordinance for municipalities within the Chester Creek Watershed to adopt. This plan was approved by the County and State as Act 167- Stormwater Management Plan for Chester Creek Watershed. The main points of this ordinance included the requirements for infiltration of the two-year storm difference and lowered release rates for certain portions of the Township, as mechanisms for regulating the stormwater. Since the adoption of this plan, the State has adopted stronger restrictions requiring municipalities to not only monitor the quantity of stormwater within their jurisdiction but also the quality. In 2012, Thornbury Township adopted the model ordinance from 2011, Act 167 – Stormwater Management Plan for Crum Creek, to address these issues, and updated it in 2022. While the Township is not located within the Crum Creek watershed, the plan addresses water quality issues and determines permitted uses for stream buffers such as recreational trails. The Township used Chester Creek metrics, as described in the 2002 plan and applied them to the 2011 Crum Creek model, to ensure that their stormwater management efforts were up to date.

Map 7.1: Wetlands, Floodplains and Hydrology Thornbury Township

0 1/4 1/2 1 Miles



- Municipal Boundary
- Wetlands
- Lakes, Ponds and Streams
- Flood Hazard Zones**
 - 100-Year Floodplain
 - 500-Year Floodplain
 - Regulatory Floodway



Sources:

Wetlands: U.S. Fish and Wildlife Service
National Wetlands Inventory
Floodplains: Federal Emergency
Management Agency (FEMA)
Hydrology: U.S. Geological Survey

This page intentionally left blank for printing purposes.

Soils

In a municipality such as Thornbury Township, which is predominantly composed of single-family housing units, the concern for soils shifts away from the preservation of high-quality agricultural soils to the concern of soil retention. While the state requires municipalities to make efforts to maintain high-quality agricultural soils, numerous developments have shrunk the available land with agricultural potential in Thornbury Township. Some areas of the Township still utilize the existing high-quality agricultural soils; however, the large number of impervious surfaces, such as roof tops, parking lots, and roads, are of much greater concern for soils. Due to a growing number of impervious surfaces within the Township, stormwater runoff has less surface area to infiltrate the ground, leading to runoff into drainage channels. Where runoff is concentrated, soils erosion becomes prevalent. Efforts need to be made to manage stormwater on-site to control and limit erosion. **Map 2.2** and **Map 5.3** displays the Township's steep slopes and prime agricultural soils. These areas are of particular concern for erosion, as they typically border the Township's surface waters, and they often lack vegetation which can help mitigate soil erosion.

Biotic Resources

Thornbury Township contains many parcels which are not developed or in agricultural use due to constraints such as slope or wet soils. Many of these are wooded, providing significant habitat for the local wildlife. Most of these parcels are in private ownership or in public owners, as open space; however, some of the wooded lots are in streams valleys or along rights-of-way. Much of the single-family detached development in the Township has occurred on large lots, which are often partially wooded. While these wooded lots provide significant numbers of trees, the wildlife habitat is of a lesser quality, compared to large, contiguous wooded areas were retained or created. In recent years, clustering has been used to create denser forms of housing development, which have retained wooded areas in the form of open space. **Map 2.3: Wooded Areas**, which can be found in Chapter 2: Community Profile, illustrates the extent and location of major wooded areas in Thornbury. Collectively, these vegetative elements combine to contribute to the Township's natural, scenic quality.

The large amounts of plant life in the Township offer not only aesthetic value, but also critical habitat for wildlife. Many small animals, including birds, inhabit the Township's wooded areas. Connectivity between woodlots allows for the movement of wildlife with protection from larger predators or human interference. Habitat fragmentation caused by development can often be detrimental to some species that rely on interior forest habitats. The Pennsylvania Natural Diversity Inventory (PNDI) serves to recognize these specialized habitats as the first step toward protecting them. As part of the PNDI, Delaware County had a Natural Heritage Inventory completed in 2011, cataloging the sites of significant biodiversity within the County. Out of the 36 identified sites, two are found within Thornbury: The Bonner Park Woods and the Brinton Lake Wetland.

The Bonner Park Woods are located on the south side of Chester Creek, with Glen Mills Schools golf course to the south and Creek Road to the east. This area shown in **Map 7. 2: Natural Heritage Inventory**, Brinton Lake Wetland is described as forested hillside and riparian habitat along Chester Creek. This area is significant for its roughly 30 acres of interior forest, which is forested habitat at least 100 meters away from any fragmenting feature such as roads, powerlines, residences or open fields. This area is considered critical nesting habitat for many of Pennsylvania's songbirds and is home to a sensitive species of concern. This area contributes biodiversity and critical habitat to many creatures in Thornbury Township. Of similar importance, the Brinton Lake Wetland, is located to the east of Route 202 and to the south of Dilworthtown Road. This area is also presented in **Map 7. 2: Natural Heritage Inventory**, Bonner Park Woods is considered the headwater recharge area for the West Branch Chester Creek. While the habitat has been severely fragmented by development, the remaining habitat supports much plant life. Two plant species of concern, the grass-leaved rush and the stiff cowbane, are native to this area. Both Bonner Creek Woods and the Brinton Lake

Watershed provide biotic and scenic value to Thornbury Township. These special habitats contribute to the green aesthetic of Thornbury Township and should be preserved in the future.

NATURAL RESOURCES PLAN

Thornbury Township is one of the few municipalities in Delaware County that is still maintains a largely rural, natural setting. With steep slopes and rolling hills, the Township has a variety of topographic conditions. Often, the steep slopes of the Township are related to the stream banks of the Chester Creek, Thornbury’s main surface water body. Along its banks, the Creek is largely bordered by natural floodplains and wetlands, offering habitat for diverse wildlife. Thornbury Township is at a pivotal point in its history, in that there is still currently a high degree of biodiversity; however, if measures are not taken it, there is greater risk of loss of biodiversity due to increased development.

Natural Resources Goal

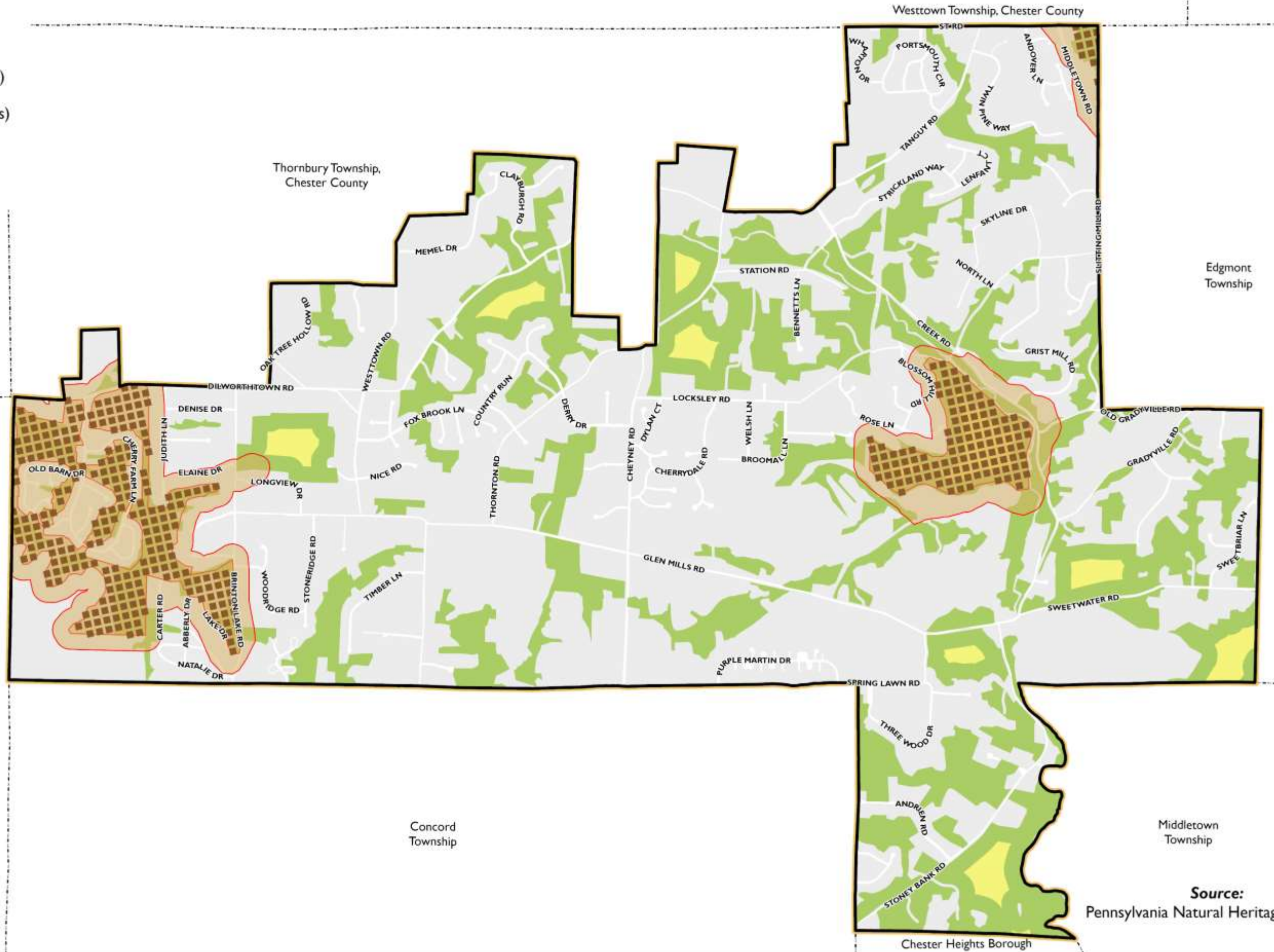
Inventory, protect and enhance environmentally sensitive areas.

- Objective 1 Encourage the accuracy of sources and procedures for monitoring the conditions of natural resources.
- Objective 2 Review and modify development regulations which address the protection and/or enhancement of floodplains, wetlands, hydric soils, steep slopes, watercourses, rock outcroppings, woodlands, and critical wildlife habitat.
- Objective 3 Preserve the sensitive riparian environments and promote the maintenance of high-quality water bodies.
- Objective 4 Limit soil erosion both in the natural environment and on development sites.
- Objective 5 Conserve, promote, and protect the Township’s biotic resources.

The large influx of housing development in Thornbury from 2000 to 2010 put a strain on the Township’s natural features. As development slows, the conservation and protection of the Township’s natural features and resources has emerged as a priority. Both general and natural feature-specific goals serve as guides for the preservation and care of the Township’s natural features. Once these goals are met, the Township will have higher quality natural resources with lasting protection.

Map 7.2: Natural Heritage Inventory Thornbury Township

- Municipal Boundaries
- Core Habitat (Focus NHI Site)
- Core Habitat (other NHI Sites)
- Interior Forest
- Forested Habitat



Source:
Pennsylvania Natural Heritage Program

This page intentionally left blank for printing purposes.

OPEN SPACE RESOURCES

As discussed in Chapter 4: Community Facilities and Services, the Thornbury Township prepared an Open Space and Recreation Study (2007), as part of the Township's commitment to maintain its rural character. This plan recognized the Township as owning and maintaining five municipal parks devoted to open space and recreation. This section serves to evaluate Thornbury's open space facilities in more depth, recognizing their importance as a natural feature, as well as a recreational facility.

Thornbury Township has, in the past, acquired significant property holdings which today function as active and passive parklands for the residents. These public parks are augmented by areas of open space associated with residential developments, owned and maintained by the residents of the development. Other areas of open space are privately owned lands that remain undeveloped. All of these areas contribute to an overall image of open space in the Township. Public open space, private open space, conservation easements and land trusts, and scenic resources will be discussed.

Scenic Resources

Open spaces offer a variety of benefits to a community, most notably recreational opportunities; however, they often provide tremendous visual character to an area. The visual characteristics of an area are often subjective factors in establishing the desirability of that area for residential, employment, or recreational purposes. The subjectivity of scenic resources often leads to their value being taken for granted; however, as an area becomes more developed it becomes increasingly important to retain scenic elements.

Scenic elements of the municipality can serve as visual relief from the concentrated development pattern. In Thornbury Township, Creek Road, through the wooded area along Chester Creek, and Stoney Bank Road, near the waterfalls of Chester Creek, offer scenic drives for residents and those passing through. In addition to scenic roads, there are also several examples of public and private open space in the Township which offer scenic qualities. Other undeveloped and wooded areas of the municipality also add to the scenic resources of the Township. These scenic views help contribute to the natural and historic image of the Township.

Viewsheds, or areas that are viewed from a specific location, are currently not regulated in the Thornbury Township Zoning Code. While not all viewsheds in Thornbury Township are natural, with the views of the historic villages and farmsteads acting as scenic resources, areas of high aesthetic value should be subject to protection. With many scenic resources and viewsheds, such as Brinton Lake and many of the lands around the West Branch of Chester Creek remaining in private ownership, actions should be taken to ensure their protection. The detailed and specific identification of scenic viewsheds should be undertaken by the Township, so that their relationship to a potential development project may be considered.

Public Open Space

Thornbury Township's five parks serve to meet residents' active and passive recreational needs. Thornbury Park, located at the northeast corner of Glen Mills Road and Thornton Road, is the only park that contains extensive facilities for field and court games, as well as other parkland amenities.

Among those recreational amenities in Thornbury Park are:

- Two Tennis Courts
- Basketball Court
- Tot Lot
- Baseball Diamond
- Multi-Use Athletic Fields
- Half Mile Trail

- Pavilion
- Comfort Station

With the park centrally located in the Township the 2007 Open Space Plan, which the Township has the intention of updating in the near future, recommended that a trail network be established that would connect Thornbury Park to the other five parks housed in the Township. A mapped route was proposed that incorporated several existing trails. A large portion of the network would be made up of low traffic streets, utility rights-of-way, stream courses, railroad rights-of-way, and the use of private lands by agreement. This connection to other parks would allow for greater recreational opportunities, as the other five parks are well distributed throughout the Township. These public open spaces serve as a resource to residents, both for recreational purposes, as well as visual purposes. These open spaces offer visual buffers from the developed surrounding lands. These spaces are typically what residents will first think of as open space, and thus act as large contributors to the Township's green image.

Private Open Space

In past years, Thornbury Township witnessed the construction of several large residential developments. These developments contain single family detached, as well as attached residential units. One common approval criteria among the developments, was the requirement to preserve significant amounts of open space. These areas are owned and maintained by the respective homeowner's associations and are provided primarily for the benefit of the residents. The limited accessibility of the general public should not necessarily eliminate efforts to use these private open space areas as components of a connected open space network.

As new developments come to the Township for approval, consideration should be given to allowing for trails which might connect nearby lands. The goal of this effort is to link as many open space areas as possible, allowing for a complete recreational network, as well as a safe alternative transportation route.

Conservation Easements and Land Trusts

Public open space and private open space are often recorded on land use maps and plans with the designated purpose of serving as open space. These lands are often acquired by purchase and owned by an organization such as the municipality or a homeowner's association. There are, however, other ways that land may be acquired for open space; conservation easements are one form of open space acquisition. In a conservation easement, a private landowner elects to grant public use, or enforce restrictions against development other than agriculture, for a given area of their land in exchange for cash value or tax incentives. While these agreements typically require landowner compensation, they have the effect of providing open space, albeit in some limited or prescribed form, to the public at less cost than if the same area were purchased or formally dedicated to open space. This form of open space acquisition is typically used for linear open spaces or trails, which traverse through a given property.

Another form of land acquisition for open space is a land trust. Land trusts are organizations that are formed for the purpose of acquiring and holding lands that are environmentally sensitive and are potentially threatened by development. An example of a land trust, on a national scale, is the Nature Conservancy. There are also land trusts established on a regional and local level, all of which aim to preserve open space; in the Thornbury area, the Brandywine Conservancy serves as a local land trust. These organizations need to be funded in order to have the capital necessary to acquire land; typically, these funds come from public or private sources. Land trusts operate under specific rules and can often become exempt from taxes. Many land trusts hold lands for indefinite periods of time, although they may transfer lands to other organization when appropriate.

Both conservation easements and land trusts serve as cost effective mechanisms for open space acquisition. The Township has previously used conservation easements, however, both should be considered by Thornbury Township in the future.

OPEN SPACE PLAN

Thornbury Township hosts many open spaces in both public and private ownership. These lands serve to provide recreational space and aesthetic relief to residents, providing to the overall beautification and well-being of the Township. As these undeveloped open spaces become scarcer, the Township should continue to consider taking action to protect these resources. While outright purchase can be very expensive, conservation easements and land trusts provide more cost-effective options for open space acquisition and protection within the Township. Specific goals for the future of open space in Thornbury Township are identified below.

Open Space Goal

Preserve existing open space lands and develop procedures to expand, as needed, for recreational, cultural, and scenic qualities.

- | | |
|-------------|--|
| Objective 1 | Continue to develop a new, updated Open Space Plan to help guide the protection and management of open space and natural lands. |
| Objective 2 | Develop methods to protect lands as open space in the future, including the consideration of an overlay zoning district. |
| Objective 3 | Evaluate development regulations for opportunities to further implement cluster development and increase open space |
| Objective 4 | Consider a Safe Routes to Parks Plan to identify comfortable and convenient connections to Township parks and open space for Thornbury residents through the development of a comprehensive open space plan. |
| Objective 5 | Continue to identify and protect scenic corridors and vistas of significant community character within the Township. |
| Objective 6 | Promote the expansion of localized access to parks and open space in the Township. |

Thornbury Township offers many opportunities for open space and recreation to its residents; however, opportunities for expanding the network have been constrained by new large residential developments over the past several years. As development slows, the Township should turn its focus toward expanding and enhancing its open space according to the goals and objectives identified in this chapter for scenic resources, public open space and private open space. Once met, the goals and objectives of this open space plan would allow for a larger open space network that serves to connect the Township's public and private spaces through scenic corridors.

SUMMARY

Thornbury Township exhibits a green and rural image through its vast natural features and significant open space network. The Township's rolling hills, defined stream beds, and expansive wooded areas have provided habitat to many flora and fauna, but also serve to provide residents and visitors with tremendous scenic corridors and view sheds. As development has slowed in Thornbury, the priorities have shifted toward preserving the beautiful natural features and conserving the remaining open space. The Township has set specific and tangible objectives for natural features including topography, water resources, soils, and other biotic resources in a proactive effort to preserve them. Additionally, the Township has created goals for open space, public and private, as a means to protect and enhance their existing network. In outlining and following

Chapter 7: Natural Resources and Open Space Plans

these goals for natural resource preservation, the Township is committing itself to furthering its natural character and enhancing the quality of life of its residents.

Chapter 8: Transportation

Thornbury Township has an extensive road network serving its residences, businesses, and institutions. These roads are categorized from major arterials to local secondary roads. The extent of the road network in Thornbury is generally reflective of the Township's development pattern and its proximity to regional employment and commercial destinations. While Thornbury Township's road network typically serves to connect its residents to external destinations, the Township's institutions serve to generate traffic on local roads. In addition to local roads, there are also opportunities for off-road transportation routes, such as trails and paths available to pedestrians, cyclists, and equestrians. Together, these networks form Thornbury's interconnected transportation network.

EXISTING TRAFFIC PATTERNS

Thornbury Township is situated within a large network of regional roads that are known for carrying significant volumes of traffic daily. While these large regional roads do not cross into the Township, their proximity allows residents to get to regional destinations with ease.

Regional Transportation Pattern

The nearest Interstate highway, for Thornbury residents, is Interstate 476, the Blue Route, located east of the Township. This highway intersects U.S. Route 1 east of Media. Another major transportation route near Thornbury is U.S. Route 1, which is considered a major arterial road, defined in the Delaware County 2035 Transportation Plan as "roadways provid[ing] the highest level of service at the greatest speed for the longest uninterrupted distance, with some degree of access control." Route 1, also known as Baltimore Pike, serves "abutting land uses but does not act as a physical barrier between areas." While not within Thornbury Township, Route 1 is located just to the south running through Concord Township. U.S. Route 202, also known as Wilmington-West Chester Pike, is another major arterial road near Thornbury Township. Route 202 is contiguous to the western edge of the Township and can be directly accessed by residents using Dilworthtown Road. On the opposite side of the Township, State Route 352, also known as Middletown Road, serves as the last major arterial with direct access to Thornbury. Route 352 passes through the northeast corner of the Township, linking State Route 926 and U.S. Route 1. State Route 926, also known as Street Road, is perpendicular to Route 352, and is considered a minor arterial. Route 926 forms part of the northern Township boundary. Route 926 is an east-west oriented roadway that serves to connect areas to the west, in Chester County, to Route 3 immediately north of Edgmont Township. With the exception of Routes 352 and 926, each of these major regional roads lies outside of the Township boundaries; however, these roads provide close access that connects residents to major business and employment opportunities and a variety of uses and activities across the region and beyond.

Local Transportation Pattern

The road network within the boundaries of the Township includes all roads of a lower classification than those noted above. **Map 8.1: Roads and Bridges** illustrates the geographic distribution of the road network. Roads are prescribed classifications by PennDOT, from major, or primary arterials, all the way down to local, secondary roads. While the Township does not have large expanses of major arterials like the regional transportation network, it does include many minor arterials, collector roads, and local roads. Minor arterials are roads that "serve shorter trip lengths and may be part of local bus route networks" and in Thornbury, Cheyney Road is classified as a minor arterial. Collector roads, which provide a lower level of service than arterials assemble traffic from local roads, and connect them with arterials. The majority of traffic in the Township is carried by collector roads including Creek Road, Brinton Lake Road, Thornton Road, and Glen Mills Road to the east of Cheyney Road. Local roads, which are those not defined as arterials or collectors are also very common in Thornbury Township. These roads primarily provide access to land with little or no

through movement. Local roads can be further broken down into primary local roads like Locksley and Springlawn Road, and local secondary roads, like Cherry Farm Lane and Blossom Hill Road, which primarily serve individual developments or limited traffic.

Table 8.1: Thornbury Township Road Segment Traffic Counts, 2020

Road Name	From	To	AADT
Brinton Lake	Mill	Dilworthtown	7,700
Cheyney	Springlawn	Glen Mills	5,200
Cheyney	Glen Mills	Thornton	4,300
Cheyney	Thornton	Creek	3,100
Creek	Thornbury Twp. Boundary	Cheyney	2,600
Creek	Cheyney	Tanguy	2,600
Creek	Tanguy	Old Gradyville	1,200
Creek	Old Gradyville	Sweetwater	1,400
Dilworthtown	U.S. Route 202*	Brinton Lake	7,200
Dilworthtown	Brinton Lake	S. Concord	3,300
Dilworthtown	S. Concord	Westtown	1,500
Dilworthtown	Westtown	Thornbury Twp. Boundary	1,500
Glen Mills	Stoney Bank	Springlawn	3,700
Glen Mills	Springlawn	Cheyney	3,000
Glen Mills	Cheyney	Westtown	3,400
Old Gradyville	Creek	Valley (Edgmont Twp.)	2,700
Mill	Thornton	Brinton Lake	1,100
S. Concord	Westtown	Dilworthtown	2,000
Springlawn	Glen Mills	Cheyney	650
Stoney Bank	Glen Mills	Baltimore Pike (Rt 1)	4,000
Sweetwater	Creek	Stoney Bank	4,200
Sweetwater	Creek	Valley* (Edgmont Twp.)	1,200
Tanguy	Creek	Street (Rt 926) (Chester Co.)	2,000
Thornton	Baltimore Pike (Rt 1)	Glen Mills	2,500
Thornton	Glen Mills	Cheyney	1,100
Westtown	Glen Mills	S. Concord	4,500
Westtown	S. Concord	Dilworthtown	2,500
Westtown	Dilworthtown	Memel Drive	2,400
Middletown Road (Rt 352)	Valley*	Street (Rt 926)* (Chester Co.)	9,500
Street (Rt 926)*	Middletown (Rt 352)	Westtown* (Chester Co.)	5,100
U.S. Route 202*	Baltimore Pike (Rt 1)	Dilworthtown	33,000

Note: Each name is assumed to be "Road" unless noted otherwise

*These are major arterials in the regional transportation network, not within boundaries of Thornbury Twp. Source: PennDOT, 2020

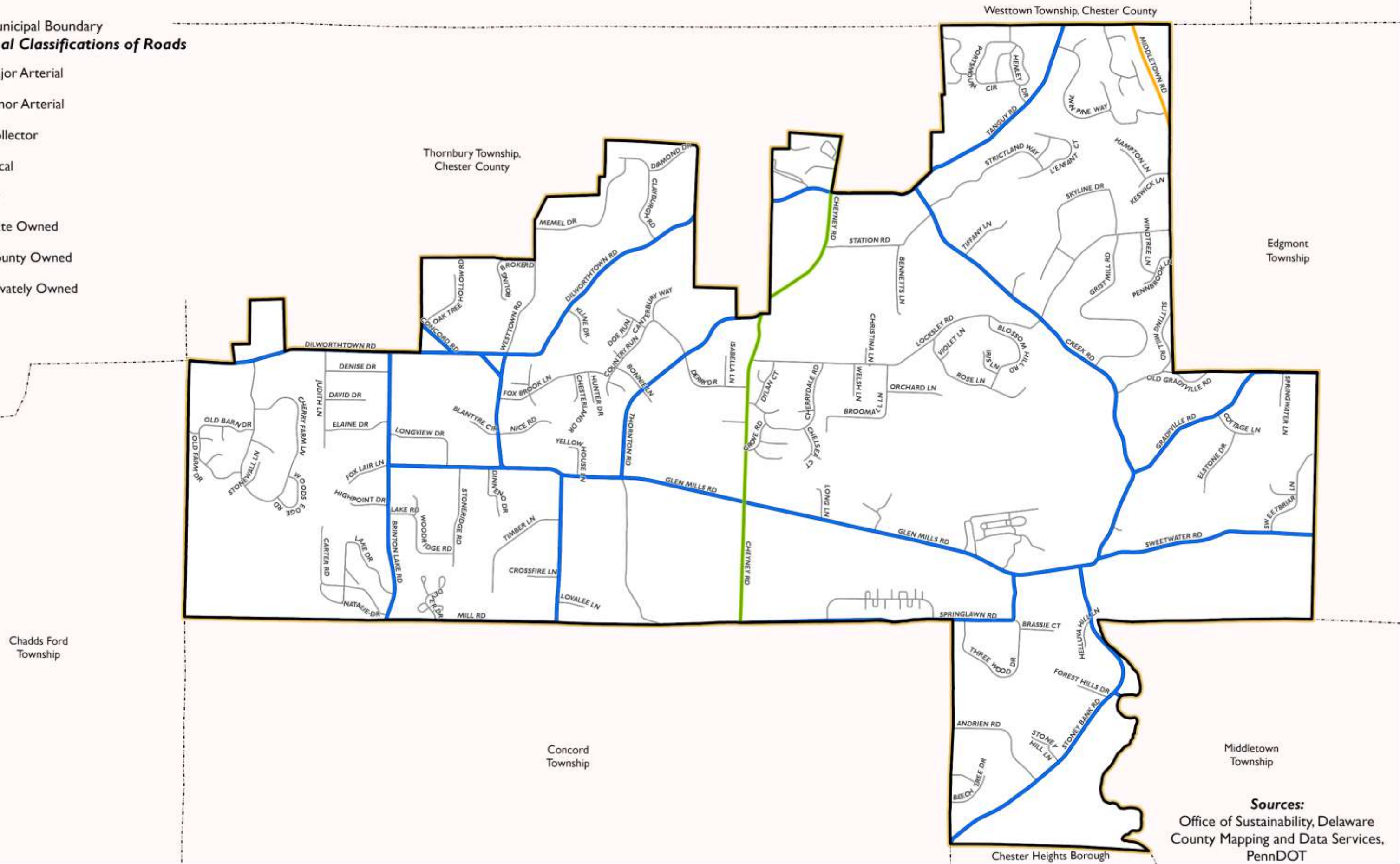
Map 8.1: Roads and Bridges Thornbury Township

Functional Classifications of Roads

- Major Arterial
- Minor Arterial
- Collector
- Local

Bridges

- State Owned
- County Owned
- Privately Owned



This page intentionally left blank for printing purposes.

While geographic distribution helps classify roadways, the volume of traffic that individual roads carry is also an important indicator of use. Traffic volume is measured in a variety of ways, including periodic counting by regional transportation agencies and specific traffic impact studies for proposed land development. The Delaware Valley Regional Planning Commission (DVRPC) is the local Metropolitan Planning Organization (MPO) serving the southeastern counties of Pennsylvania and adjacent New Jersey. DVRPC assembles and distributes traffic data for all of its member counties, including Delaware County. The accepted unit of year, detours, and other specific factors that might affect any given count. **Table 8.1: Thornbury Township** measurement for traffic counts, used by DVRPC and other organizations in the traffic industry, is referred to as AADT, or average annual daily traffic. This unit reflects actual counts of traffic at an intersection or a road segment. The number collected is then adjusted to account for variables such as day of the week, time of the

Road Segment Traffic Counts is the most up-to-date list of traffic counts for roads in Thornbury Township, measured in 2020 by the Pennsylvania Department of Transportation (PennDOT). Traffic counts are performed periodically to ensure accurate information that is reflective of the ever-changing existing conditions.

Among the road segments described in **Table 8.1: Thornbury Township Road Segment Traffic Counts**, the traffic volume of U.S. Route 202, between Baltimore Pike and Dilworthtown Road is the highest at 33,000 AADT. This is not surprising, given the regional context and orientation of the road. In the 2004 Thornbury Township Comprehensive Plan, Street Road (Route 926) was identified as the most traveled road within the Township; however, when evaluating the 2020 PennDOT map of roads for Delaware County, Street Road (Route 926) was not included. PennDOT had Street Road (Route 926) listed exclusively in Chester County. Despite this distinction, the AADT for Street Road (926) and Baltimore Pike (Route 202) were provided due to their significance within the regional transportation network, specifically to Thornbury residents. It can also be noted that the road segments of Thornbury Township are significantly lower in volume and are primarily used by residents rather than serving a regional context. The highest volume roads in Thornbury Township are displayed in **Table 8.2: Thornbury Township Highest Traffic Volumes**.

Table 8.2: Thornbury Township Highest Traffic Volumes, 2020

Road Name	From	To	AADT	Classification
U.S. Route 202*	Baltimore Pike (Rt 1)	Dilworthtown	33,000	Major Arterial
Middletown (Rt 352)	Valley (Edgmont Twp.)	Street (Rt 926)*	9,500	Major Arterial
Brinton Lake	Mill	Dilworthtown	7,700	Collector
Dilworthtown	U.S. Route 202*	Brinton Lake	7,200	Collector
Cheyney	Springlawn	Glen Mills	5,200	Minor Arterial

Note: Each name is assumed to be "Road" unless noted otherwise

*These are major arterials in the regional transportation network, not within the boundaries of Thornbury Township

Source: PennDOT, 2020

When comparing Thornbury's five (5) most heavily traveled roads to their road classifications, as determined by PennDOT, there are apparent corresponding relationships. Middletown Road, also known as Route 352, has the highest traffic volume in the Township at 9,500 AADT and is classified as a major arterial. This road acts as a major thoroughfare for commuters, travelers, and residents of the area. Middletown Road is the only major arterial within Thornbury Township, so it is not surprising that it has the highest traffic volume within the Township. Next, Brinton Lake and Dilworthtown Roads are classified as collectors. These roads are typically known to have less traffic and are largely used for connecting local roads to arterials. While both Brinton Lake and Dilworthtown Roads do serve to connect local roads to arterials, their high traffic volume may provide justification for their reclassification by PennDOT. Lastly, Cheyney is classified as a minor arterial that typically has greater trip lengths and traffic densities than collector roads but fewer than major arterials.

While the volume of traffic is critical for evaluating roads, the classification may be important in the assignment of improvement funds and prioritization.

ROADWAY PROBLEMS AND CONDITIONS

Vehicular Crashes in Thornbury

The construction of the Township's roads is generally indicative of a rural community. Most of the arterials, collectors, and local primary roads have a narrow single lane in each direction and have no paved shoulders or curbing. Many of Thornbury Township's roads were in existence long before car traffic, therefore, they are not designed for the volumes and speeds of today's cars. The result of increased usage of the Township roads has increased safety problems and crashes. **Tables 8.3 and 8.4** summarize the traffic crash data collected by PennDOT between January 2012 and December 2017. **Table 8.3: Intersection Crashes, 2012 – 2017** focuses on the intersections with the highest number of crashes in the Township.

Intersection Crashes

When evaluating the intersection crash data between 2012 and 2017 there are some startling trends. First, of the 93 total crashes that occurred at intersections in the Township, 53 of them, approximately 57%, occurred at the five intersections listed in **Table 8.3**. To be more specific, of the 53 crashes that occurred at these five intersections 39 of them, approximately 74%, were at junctions with Dilworthtown Road.

Table 8.3: Intersection Crashes, 2012 – 2017

Intersection	Number of Crashes	Percentage of Crashes Resulting in Injury
Dilworthtown and Westtown	22	36.4%
Dilworthtown and Brinton Lake	10	40%
Dilworthtown and S. Concord	7	85.7%
Creek and Cheyney	7	14.3%
Sweetwater and Creek	7	14.3%
Total Intersection Crashes	93	38.7%

Source: PennDOT, 2019

When evaluating the orientation of the problem intersections, there are two distinct patterns: three of the intersections meet as four-way stops with the roads forming nearly right angles and the other two intersections form "Y" patterns at irregular geometries. Before 2014, the intersection of Dilworthtown and Westtown Roads only had stop signs on Dilworthtown, allowing Westtown traffic to have an unobstructed right of way. The 45 miles per hour (MPH) speed limit and lack of stop signs in all directions may confuse drivers and ultimately lead to an increase in the number of crashes. Since then, stop signs have been installed on both sides of the street in all four directions; the speed limit has been posted at 35 MPH approaching the intersection in all directions; and lights have been added to the tops of stop signs allowing for better visibility. With these improvements, the number of crashes has declined.

Despite the improvements at Dilworthtown and Westtown, four-way stops remain an issue for the Township. A large number of crashes at these intersections may be attributed to the high-speed limits posted for approaching vehicles. For example, when driving east on Dilworthtown Road the speed limit is 45 MPH for the one-mile stretch between Route 202 and the intersection with Brinton Lake Road. This segment of road is relatively straight and has a very gradual ascending slope, making it easy for drivers to speed. Just before drivers arrive at the intersection of Dilworthtown and Brinton Lake Roads, they reach the crest of the slope and begin a slight descent; this arrangement places the intersection at a lower elevation than the crest, which disallows approaching vehicles from seeing the intersection until they are actively on top of the hill. When

traffic backs up at the intersection of Brinton Lake and Dilworthtown, drivers going 45 MPH or more, are left with little time to react, due to the high approach speed and poor visibility of the intersection, leading to a higher likelihood of crashing. The same can be said about the four-way stop at Creek Road and Cheyney Road. When driving north on Cheyney Road, the approach speed for the intersection is 45 MPH. This high-speed approach, in addition to poor sight distances due to trees lining the road, leads to hazardous conditions.

The intersections that meet in “Y” orientations have different challenges. South Concord (S. Concord) is an off-set road, meaning the segments on either side of Dilworthtown Road do not perfectly line up. While both segments of S. Concord have had crashes, the segment to the south of Dilworthtown, located near Westtown Road, experience more crashes. When approaching this intersection from the west, on Dilworthtown Road, traffic is met with a stop sign. Drivers coming from the east on Dilworthtown are only required to stop if they are continuing straight. Traffic traveling to and from S. Concord has the right-of-way, so vehicles turning right from Dilworthtown, are not required to stop and vehicles traveling northwest on S. Concord are also not required to stop. Heavy foliage fills the space in between the two branches of the “Y” formed between Dilworthtown and S. Concord Roads. These trees lead to diminished visibility of the intersection for cars traveling in both directions, which causes this intersection to be particularly hazardous.

While visibility is a large issue at Dilworthtown and S. Concord, the intersection of Sweetwater and Creek Roads is very open with view visual obstructions. The cause for the heightened rate of accidents at this intersection is not as apparent as it was for the others; however, a logical guess would be that the intersection conflicts are caused by the narrow bridge on Sweetwater Road which forms the bottom of the “Y”. While the high number of crashes associated with all five of the intersections referenced in **Table 8.3** are caused by an assortment of complex conditions, simple safety recommendations will be made in Chapter 11: Plan Implementation, as an attempt to take the first step toward improving road conditions for drivers throughout the Township.

Table 8.4: Crashes by Road Segment, 2012 – 2017

Segment Number	Road Name	From	To	Length of Segment (Miles)	Crashes per 1 Mile	Number of Crashes	Percentage of Crashes Resulting in Injury
One	Dilworthtown	Westtown	Kline	0.37	38	14	42.9%
Two	Cheyney	Locksley	Station	0.62	31	19	50%
Three	Middletown (Route 352)	Slitting Mill	Street (Route 926)	0.49	16	8	50%
Four	Brinton Lake	Glen Mills	Mill	0.68	16	11	36.4%
Five	Dilworthtown	Kline	Chester County Boundary	0.77	13	10	50%

Source: PennDOT, 2019

Road Crashes

In addition to evaluating Thornbury Township’s five worst intersections for crashes, the top five road segments for crashes were also evaluated; **Table 8.4: Crashes by Road Segment** was evaluated for roads with high concentrations of crashes. Roads with apparent clusters of crashes were then classified as segments, with nearby roads acting as the start and endpoints for each. With the length of each segment varying in mileage, the ratio of crashes to segment mileage was applied over one mile, to allow for meaningful comparison across all segments.

When looking at the raw crash data, Cheyney Road, from Locksley to Station, also known as segment two, had the highest number of crashes at 19; however, Dilworthtown Road, from Westtown to Kline, had the highest ratio of crashes per mile at 38. Both of these segments have one lane in each direction, no shoulder or curbing, and large curves in the road. Out of the 14 crashes that occurred in segment one, all 14 were single-vehicle crashes that hit a fixed object, such as a guardrail, tree, pole, etc. Nine of the 14 crashes were at night where no streetlights were present. Similar to segment one, segment two had 11 crashes that resulted in a single driver hitting a fixed object, with nine crashes occurring when the ground was wet from either snow, slush, or rain. Segments four and five show similar trends to one and two: most crashes include a single-vehicle hitting a fixed object during dark or wet conditions. The high amount of single-vehicle crashes in the Township is concerning. While road conditions appear to be a large factor in the single-vehicle crashes along segments one and two, speed has also established itself as a common factor in the Township. Of the 246 crashes that occurred between January 2012 and December 2017, 100 of them were related to speeding. With 41% of crashes relating to speed, measures should be taken to encourage safer driving speeds throughout the Township.

Segment three was the anomaly of the five road segments with the most crashes. While segments one, two, four, and five were primarily made up of single-vehicle crashes, segment three primarily had crashes involving two or more cars; four of the crashes involved one car rear-ending another and three were angle crashes, occurring when one vehicle was turning. Segment three is also dissimilar from the other segments in that seven of the eight crashes occurred on the dry ground during the day. One determining factor for these accidents may be due to speed; all eight crashes in segment three were speeding-related. While it is understood that this road would have higher speeds, given its status as a major arterial, conditions should be improved upon to minimize crashes.

Other Roadway Concerns

Bridges

Bridges are a vital component of any transportation network, often requiring a higher degree of maintenance than most roads. Bridges are generally inspected every two years unless they have been identified as having structural deficiencies. Once deficiencies have been identified, the inspection schedule for the bridge is accelerated, requiring more frequent inspections. Structurally deficient bridges are commonly referred to as “posted bridges” because they are posted with weight limits and certain types of vehicle access may be restricted due to the posting. Out of the 12 bridges in the Township, Thornbury has three bridges that are considered to be in poor condition. First, the county-owned bridge on Station Road is in the worst condition. This bridge was built in 1914 and has restricted access with a posted weight limit of three tons. The state-owned bridge on Cheyney Road, located in-between Station and Thornton Roads, is also in disrepair. Despite having poor ratings in the deck, superstructure, and substructure conditions, the bridge remains unrestricted. Lastly, the narrow bridge over the Chester Creek on Sweetwater Road, near the intersection with Creek Road, is also in poor condition. The state-owned bridge was built in 1933 and remains unrestricted today.

Incompatible Road Uses

A specific local traffic problem in the Township is the presence of large dump trucks carrying stone material from the quarry in the southeast portion of the Township. These trucks are typically traveling to and from the quarry to Route 1, using Sweetwater Drive, Glen Mills Road, and Cheyney Road. The trucks’ large sizes and slower speeds make them incompatible with other road users. As noted earlier, Thornbury is characterized by narrow roads with no curbing or shoulders in most places. The oversized vehicles associated with the quarry often take up the entirety of their lane, sometimes partially crossing over the yellow line. Additionally, with most roads in the Township having speed limits of 40 or 45 miles per hour, the trucks will typically either go significantly slower than the posted speed limit or pose the risk of losing control by traveling at the high posted speeds. The issue of road incompatibility has existed for some time and will continue to

persist as long as the quarry remains operational. While large trucks cannot be removed altogether, mitigation strategies could be implemented to minimize problems. Having a posted truck route through the Township with lower speeds is one option for mitigating the incompatible uses. Additionally, installing signs that have flashing lights during the quarry's hours of operation may serve to warn residential commuters that they may be sharing the road with the commercial trucks during those hours.

Speeding on Local Roads

Speeding traffic is a concern in the Township along arterial and collector roads such as Cheyney Road, which is used by "cut through" traffic to avoid other more congested nearby roadways in the County. As noted previously, the widths of Township roads were designed to accommodate rural traffic and often have limited or no shoulders or sidewalks. A significant number of the traffic complaints the Township receives are related to speeding and cut through, non-local traffic.

Given this situation the Township should consider the implementation to traffic calming measures along roads with the most problematic speeding issues.

NON-VEHICULAR TRAFFIC

Thornbury Township has a diverse system of open space areas, well distributed throughout the municipality. These serve the population well, although they are generally accessed by car. The Township's 1996 Open Space and Recreation Plan proposed a system of off-road trails and paths that would connect these major open spaces and parks. In some cases, the proposed trails utilized existing utility rights-of-way and portions of open space. In many cases, however, the links were proposed on existing roadways. Taken as a whole, this was an ambitious proposal and one that has the potential to make most areas of the Township accessible by means other than motorized vehicles. **Map 8.2: Sidewalk Inventory** and **Map 8.3: Trails** show the existing paths already in place for pedestrian use.

As the Township moves forward to implement the trail network, which this Comprehensive Plan encourages, it should be cautious in how it integrates pedestrian mobility into the motor vehicle right-of-way. Paved trails and sidewalks that parallel existing roadways need to be carefully constructed to avoid safety-related problems. Thornbury Park at the intersection of Glen Mills Road and Thornton Road, with its highly developed recreational facilities, would make a good demonstration project for a limited trail system designed to connect the park with the surrounding communities. There are several nearby Planned Residential Developments (PRD) with their own internal open space systems that could be integrated into a localized system of both on-road and off-road trails in the central sector of the Township. Later extensions of this central system could link the eastern and western areas of the Township.

The use of utility and natural corridors for the development of trail systems offers great potential. Two natural gas pipeline corridors traverse the Township in a north-south direction, which provide the potential to connect to adjacent municipalities. Coordination with the utility authorities would need to occur to secure permission to use these lands. Chester Creek, which flows through the eastern portion of the Township, offers additional potential for off-road trails. Just to the south of Thornbury in Middletown and Aston Townships there is a County Chester Creek Trail Rail Trail. This is a rail-trail project with additional planned phases that could potentially extend to Thornbury Township.

On a smaller scale within Thornbury Township, Chester Creek's corridor is the site of a project to develop a stream-side trail. This project has been undertaken by the Township's Environmental Advisory Council and work is being done by community volunteers. The area being developed extends from the foot of Old Gradyville Road upstream to the Township property at Cheyney Road. The trail passes through Bonner Park, an easement through private property and SEPTA property. Part of the trail project includes planting trees and shrubs along the waterway, which is being jointly funded by the Township and a mini-grant from Delaware

County. Although the use of the trail in the short term is to be local, there may be opportunities in the future for linkage to other projects in the region.

Public Transit

Historically, Thornbury Township has been served by train on a line between Philadelphia and West Chester. Station stops included Glen Mills, Locksley, and Cheyney. Stations continue to exist at these locations, although the service has long been discontinued. Portions of the line are used by the West Chester Railroad tourist train for recreational purposes. There may be opportunities for reinitiating commuter train service on the line through coordination between SEPTA (Southeast Pennsylvania Transportation Authority) and Delaware County and some municipalities along the line, including West Chester Borough have initiated efforts to restore service along the line. On a regional level, many issues and concerns would have to be addressed before such service could be returned. Locally, the stations in Thornbury Township have limited parking capacity. Options for expansion of lots or relocation of stops would have to be investigated. The feasibility of restoration of service in the near to mid-term may be limited, however the concept as a whole has merit and appeal to some local and regional stakeholders. The Township should continue to monitor the efforts of other regional municipalities to restore service and the potential impacts of restoration on Thornbury residents should be carefully considered.

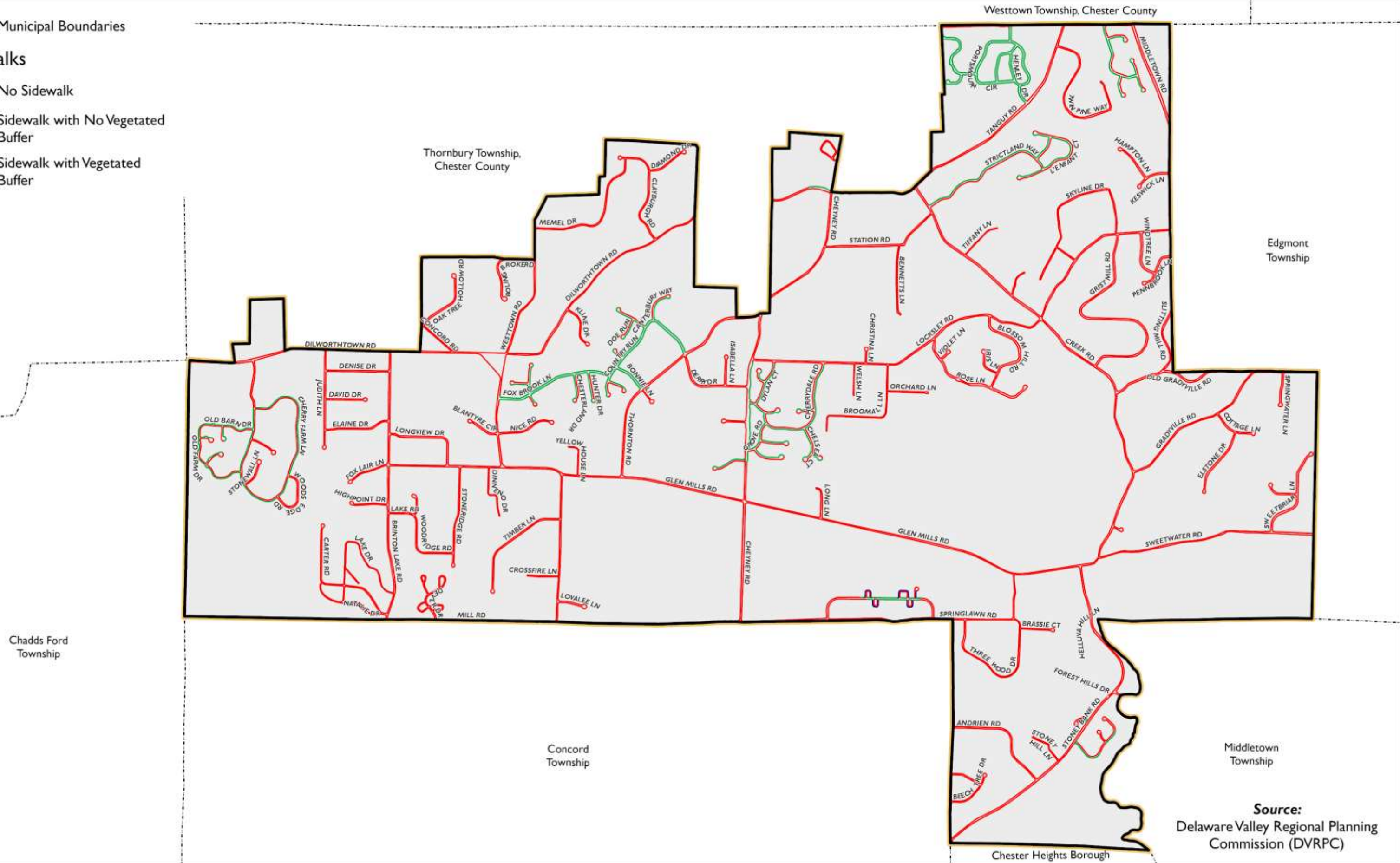
Currently, SEPTA operates several local bus lines that either traverse the Township or operate nearby. Bus Route 119 provides service from Cheyney University through the Township along Cheyney Road. It then connects to Baltimore Pike and the Concordville Town Centre before taking Route 322 and ending in Chester City. Bus Route 120 connects Cheyney University to Newtown Square via Creek, Tanguy and Street Roads in the Township and then along West Chester Pike, ultimately ending at the 69th Street Transportation Center in Upper Darby. These two routes allow a rider several options, including commuting into Philadelphia. There are also park and ride lots within the Township which might assist in the regular use of bus service, in addition to several small lots that are adjacent to the closed railroad stations noted above.

Although not technically public transit, the use of carpools by Township residents offers an opportunity to reduce the number of single-occupant vehicles on the roads. A variation on this option is the park and pool system, requiring centralized parking lots where motorists could leave cars during the day and consolidate into one vehicle for the commuting trip. In either case, programs would need to be prepared by transportation authorities and the Township to encourage their use. The primary element of such a program is the identification of potential participants and matching them together by origin and destination. This is a large task, often undertaken by large employers to reduce parking demands. At the local level, the Township could provide a mechanism for residents to register an interest in participating and communicate potential interest. Other options would be for Delaware County or DVRPC to initiate the effort through a Transportation Management Agency.

Municipal Boundaries

Sidewalks

- No Sidewalk
- Sidewalk with No Vegetated Buffer
- Sidewalk with Vegetated Buffer

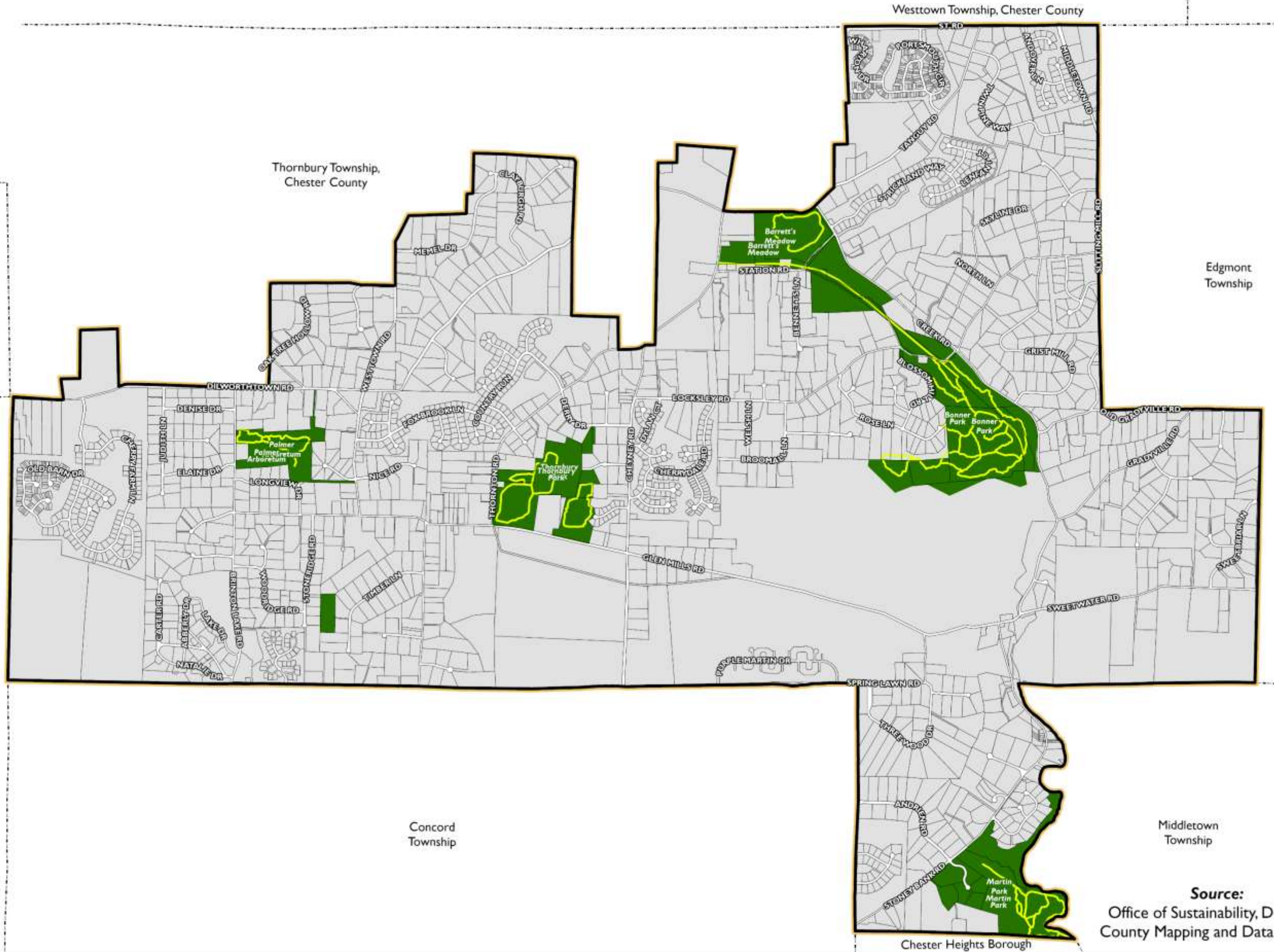


Source:
Delaware Valley Regional Planning
Commission (DVRPC)

This page intentionally left blank for printing purposes.

Map 8.3: Trails Thornbury Township

- Municipal Boundaries
- Existing Trails
- Township Parks & Open Space



Source:
Office of Sustainability, Delaware
County Mapping and Data Services

This page intentionally left blank for printing purposes.

TRANSPORTATION IMPROVEMENT PROGRAM

DVRPC and its member counties, including Delaware County, maintain a Transportation Improvement Program (TIP) on an annual basis. Proposed projects within Thornbury Township and nearby areas currently included in the TIP program are as follows:

- The Station Road Bridge over Chester Creek project involves rehabilitating or replacing Station Road over Chester Creek in Thornbury Township, a single span bridge.
- US 202 and US 1 Loop Road. This project is in Concord and Chadds Ford Townships and involves intersection improvements to ease congestion including pavement widening, pavement reconstruction, signal upgrades, landscaped medians, and pedestrian crossings.
- US 1 and PA 352 Interchange, Intersection, and Roadway Improvements. This project will entail the reconstruction and reconfiguration of this cloverleaf interchange, originally built in 1939.
- Old Forge Road Over Rocky Run. The existing County-owned one-lane bridge will be replaced with a two-lane bridge with the sidewalk on one side. There will also be a minor realignment of the bridge's horizontal curve.

Other than the Station Road bridge over Chester Creek, the projects listed as being in the DVRPC Transportation Improvement Program are on the edges or beyond Thornbury Township. However, each will have an impact on the Township, primarily in the way traffic generated by the Township accesses nearby regional roads. In particular, the proposed improvements to Routes 202 and Route 1 should have a major positive impact on the local traffic pattern. Thornbury Township (Delaware County) consistently supported this planned improvement due to its proximity and potential for decreasing cut-through traffic from regional roads.

Transportation Goal

Provide an efficient and well-maintained network of transportation routes for the needs of residents and businesses.

- | | |
|-------------|--|
| Objective 1 | Inventory roadways, public transit routes, trails and other transportation corridors with the pertinent right-of-way, speed limit, use, material, and location information. |
| Objective 2 | Develop a maintenance schedule for Township-owned roads to be included in a Capital Improvement Program. |
| Objective 3 | Evaluate the compatibility of Township roads with those of adjacent municipalities. |
| Objective 4 | Identify corridors suitable for non-vehicular transportation and establish a network of trails for pedestrian, bicycle and equestrian use. Evaluate handicapped accessibility design issues. |
| Objective 5 | Evaluate traffic calming measures and other transportation related planning that could be employed in conjunction with PennDOT and other transportation agencies. |
| Objective 6 | Manage future growth that is compatible with and/or would improve existing road design capacities while avoiding cut-through traffic on local roads. |
| Objective 7 | Evaluate the availability of parking facilities at Township locations such as Thornbury Park. |

Summary

The transportation network in Thornbury Township is a diverse pattern of primarily rural roads that have evolved out of need over several centuries of growth. The character of the road network is in keeping with the low-density residential pattern of development. As such, the design capacity of some roads may be exceeded by current levels of usage caused by recent growth and continued future growth will lead to further reduction in levels of service. Opportunities for major road improvements within the Township boundaries will be limited by existing development patterns and geography. The future development of the lands at the western end of the Township will have close access to regional roads such as Routes 202 and 1. Other parts of the Township are far more reliant on local roads. Any potential redevelopment of the quarry properties in the eastern sector will have to carefully consider the local roads not only in Thornbury Township but also the surrounding municipalities which have a similar rural road pattern.

The establishment of an off-road network of trails for all users could be of great benefit to Township residents. Such a network could be a major enhancement to the existing areas of open space which are located in all parts of the Township. Although this network would probably have to use road rights-of-way in some cases, the ability to walk or ride a bicycle safely throughout the Township, to and from residences, parkland, and nearby communities, should be made possible. Because of Thornbury Township's connection to the surrounding transportation network, residents, businesses and institutions are affected by road construction, bridge closures and general traffic beyond the Township borders. While having limited influence over these conditions, the Township should continue to participate in regional transportation forums, to have the necessary input. Both at the County level and the regional level, Thornbury Township can play a role in shaping the future transportation pattern of the area.

Chapter 9: Municipal Finances

In Thornbury Township, financial management is one of the most important functions performed by municipal officials on behalf of the residents. In its most simple form, this management includes the collection of revenues, the expenditure of those moneys for services to the Township, and the retention of funds for unforeseen needs; however, the process of balancing available funds with needed expenses is far more complicated. The Board of Supervisors, with assistance of the Township staff, works to reach the ultimate goal of enhancing the health, safety, and general welfare of the Township's residents. The sources of funds for meeting that goal can be varied, ranging from Earned Income Taxes, paid annually by residents, to the use of State and Federal grants.

The inclusion of a chapter on municipal finances in this Comprehensive Plan is essential, based on the relationship between financial matters and the accomplishment of goals set by the Township, whether they would be the provision of additional parks and open space for the replacement of gutters along Township roads. The timing of expenditures to coincide with both the availability of funds and the expressed need is critical. This chapter will assess the revenues and expenditures of the Township for the past six (6) years, in order to identify income and spending patterns. The primary source of information for this chapter has been the annual audits prepared by the Township, as required by the State. This analysis will provide the percentage of moneys dedicated to specific line items in order to identify areas of emphasis over time, as well as note changing levels of funding and expenses.

REVENUES

The General Fund

To maintain compliance with state finance laws, municipalities will often create specific funds to fulfill grant requirements, or to meet very specific program goals. All other financial activity that has not been assigned a specific individual funds is accounted for within the General Fund. Thornbury Township's General Fund budget is made up of numerous funding sources, most of which are taxes and fees legislated by the Board of Supervisors. **Table 9.1: Thornbury Township's Revenue Breakdown** provides an itemization of the revenues received from each of funding source for the General Fund.

Table 9.1: Thornbury Township's Revenue Breakdown, 2016-2020

YEAR	TOTAL	TAXES		FINES & RESTITUTION	
		Amount	% of Total	Amount	% of Total
2016	\$2,563,498	\$1,928,649	75.24%	\$4,132	0.16%
2017	\$2,499,008	\$1,880,060	75.23%	\$5,830	0.23%
2018	\$2,684,082	\$1,946,128	72.51%	\$3,771	0.14%
2019	\$2,855,760	\$2,058,485	72.08%	\$2,559	0.09%
2020	\$3,191,432	\$2,046,024	64.11%	\$3,850	0.12%
YEAR		INTEREST, RENTS & ROYALTIES		GRANTS	
		Amount	% of Total	Amount	% of Total
2016		\$303,163	11.83%	\$112,301	4.38%
2017		\$316,538	12.67%	\$87,862	3.52%
2018		\$304,537	11.35%	\$92,765	3.46%
2019		\$329,727	11.55%	\$109,828	3.85%
2020		\$334,069	10.47%	\$95,346	2.99%
YEAR		FEES		LICENSES & PERMITS	
		Amount	% of Total	Amount	% of Total
2016		\$65,643	2.56%	\$76,249	2.97%
2017		\$71,319	2.85%	\$60,634	2.43%
2018		\$117,753	4.39%	\$142,996	5.33%
2019		\$97,535	3.42%	\$188,687	6.61%
2020		\$100,248	3.14%	\$136,229	4.27%

YEAR	CHARGES FOR SERVICES		INTERFUND TRANSFERS	
	Amount	% of Total	Amount	% of Total
2016	\$30,863	1.20%	\$42,499	1.66%
2017	\$33,133	1.33%	\$43,632	1.75%
2018	\$31,238	1.16%	\$44,894	1.67%
2019	\$33,850	1.19%	\$35,088	1.23%
2020	\$53,825	1.69%	\$421,842	13.22%

Source: Township Records, 2020

Liquid Fuels Fund

The State Liquid Fuels Fund is a governmental fund that provides significant revenues to municipalities in Pennsylvania. The Fund was authorized in 1956 by the Liquid Fuels Tax Municipal Allocation Law, otherwise known as Act 655 (P.L. 1944). Under Act 655 a portion of all State fuel taxes paid on gasoline is returned to the municipalities in an annual allocation determined by 50% of the population and 50% of the miles of Township-owned roads on their approved Liquid Fuels Inventory. To be placed on the inventory, a road must also meet standard size and maintenance requirements. The funds received from the State are required to be kept separate from other municipal funds for accounting purposes. These funds are designated to be used for highway- and transportation-related projects within the municipality's annual budget.

The funds are not required to be spent immediately and can be accumulated to allow for large public works projects. Examples of eligible projects within the Liquid Fuels Fund include street cleaning, snow removal, the installation of traffic signals and street lighting, highway construction and repair, among others. The annual allocations received by Thornbury Township for the Liquid Fuels Fund are presented in **Table 9.2: State Liquid Fuels Fund Allocation 2016-2020**. In 2014, Thornbury, along with other Liquid Fuels Fund recipients, saw the amount of money they receive increase, due to Act 89 (2013), which provided a gradual increase in funds over the next five years. This increase in funding was in reaction to the large number of Pennsylvania roads and bridges which were found structurally deficient or in disrepair during a State-wide infrastructure study. With 2019 marking the end of the 5-year funding increase period, it is expected that Thornbury's numbers stabilize over the next few years, once again, mirroring the population and road mileage.

Table 9.2: State Liquid Fuels Fund Allocations, 2016 - 2020

Year	Amount
2016	\$225,567.46
2017	\$236,038.48
2018	\$251,214.49
2019	\$257,162.07
2020	\$252,520.54

Source: Township Records, 2020

Grants

Historically, Thornbury Township has used grants as an additional funding source for special projects and initiatives; for example, the Township was awarded a grant from the Pennsylvania Department of Environmental Protection (DEP), in 2018, to retrofit a storm water basin into a rain garden to help reduce storm water runoff pollution. Grants can be extremely beneficial for maintaining and repairing the Township's existing infrastructure and services, as well as building anew; however, grants are not a guaranteed funding source. To obtain grants, municipalities, such as Thornbury Township, must spend time completing research in preparation for their application. Normally, grant programs are extremely competitive due to the limited availability of funds, so applications are typically very complex and time consuming to ensure that only serious applicants will apply. Larger organizations may have full-time staff dedicated to the grant writing procedure; however, with the limited resources, Thornbury must rely on its staff to complete applications, while balancing their other duties. If a grant is awarded, there is frequently a monitoring and reporting procedure that must be followed throughout the process, which also requires a great deal of focus and staff time.

Despite the limited resources, Thornbury Township is encouraged to pursue grant opportunities, where applicable. While grants should not be relied upon for routine needs, the Township should utilize grants to assist in funding special projects and initiatives or for purchasing and repairing existing facilities and equipment. The pursuit of grants should continue to be considered as a part of the municipality's financial planning and work program.

EXPENDITURES

As previously stated, Thornbury Township has an obligation to provide services to its residents and businesses; like all municipalities, this is often done with funds generated through taxes, fees and other resources. Services to maintain the functionality of the Township, such as public safety and highway maintenance are among those expenditures of the Township, in addition to services residents find desirable, like cultural and recreational programs and facilities. **Table 9.3: Thornbury Township's Expenditure Breakdown** illustrates the variety of expenditures and their relative magnitude over the past four years. Much like the revenue totals, the expenditures of the Township have shown a general increase over the past five years, with a significant increase in 2020. The year 2020 expenditures are 38% higher than the 5-year average of \$2,772,440, with the previous years following just under the 5-year average of 2.7 Million. The year 2020 marks the highest expenditures totaling \$3.8 million. Several factors explain the general upward trend, including increased costs due to inflation, increasing population figures and greater demands for services from residents. Increased costs expenditures in 2020 may be accounted for due to needs engendered by the COVID-19 pandemic.

Table 9.3 not only provides the breakdown of each year's expenditures by fund, but also indicates the percentage of each fund to the annual total expenditures. Historically, the three highest areas of expense, in order of magnitude, include: Salaries, Public Safety, and Services/Taxes. Between 2016 and 2020, salaries averaged about 20% of the annual budget, public safety averaged 10%, and services and taxes averaged approximately 9%. These figures are similar to those of the 2004 plan, where General Government was the highest expense with public safety and highways closely behind. Since then, General Government, which includes salaries, operational costs of the Township management and building costs, has been modified to exclude salaries. Additionally, highways have combined with public works.

When evaluating the year-to-year expenditure totals, 2020 had the highest spending. The most noticeable increases in 2020 were in Interfund Transfers which increased by more than five times the amount from 2019, to \$750,000 and in Building and Land Purchases of \$873,821, compared to no expenditures in this category in the previous four years. These two funds account for the two largest shares of Township expenses. The remaining funds contained relatively minor expense increases, designated for purposes and special projects deemed necessary by the Township. The distribution of expenses is a reasonable balance of the primary needs of the Township and demands made by residents and businesses.

A comparison of the total expenditures with total revenues reveals a close alignment of the two figures for each year reported. Although it is not expected that the expenses and revenues be the same each year, there is a general similarity, meaning that as revenues increase, so do expenditures. The costs to maintain a township have risen with inflation, as have the needs to generate increased revenues. Reliance on taxes is common among residential municipalities in Pennsylvania, since tax revenues rise proportionally with the population and inflation. While the population rates begin to slow in the Township, financial planning should begin to develop strategies to overcome continued inflation with a tax-base which is leveling off.

Financial Planning

One financial tool that a municipality can employ in the budgeting process is the use of a Capital Improvement Program (CIP). A CIP is a short-range plan, usually spanning from six to ten years, which identifies capital projects and equipment purchases and provides strategies and a schedule for financing the projects. The more

distant years will typically have less specificity in the plan than the near-term years; however, they serve to allow for planning and the distribution of expenses across multiple years.

Thornbury Township currently uses a CIP, which has helped to better plan for the future financial needs of the Township. While Thornbury is encouraged to maximize the benefits of using the CIP, it is understood that there are always refinements that can be made. Routine adjustments to the program should be made to reflect the changing conditions of the Township. This process ensures the most accurate estimate of future needs and costs, as possible. Routine expenditures, such as road maintenance, can be projected forward while taking into account growth factors and inflation.

Table 9.3: Thornbury Township's Expenditure Breakdown, 2016-2020

YEAR	TOTAL	GENERAL GOVT		SERVICE / TAXES / CONTR	
		Amount	% of Total	Amount	% of Total
2016	\$2,111,828.49	\$116,049	5.50%	\$229,612	10.87%
2017	\$2,730,371.03	\$108,092	3.96%	\$266,848	9.77%
2018	\$2,615,125.45	\$114,819	4.39%	\$259,688	9.93%
2019	\$2,576,900.58	\$112,900	4.38%	\$300,988	11.68%
2020	\$3,827,977.31	\$104,409	2.73%	\$260,727	6.81%
YEAR		MAINTENANCE / REPAIR		CODE	
		Amount	% of Total	Amount	% of Total
2016		\$44,089	2.09%	\$33,407	1.58%
2017		\$79,082	2.90%	\$31,121	1.14%
2018		\$72,899	2.79%	\$26,720	1.02%
2019		\$154,483	5.99%	\$41,385	1.61%
2020		\$105,009	2.74%	\$44,835	1.17%
YEAR		PUBLIC SAFETY		PLANNING	
		Amount	% of Total	Amount	% of Total
2016		\$244,261	11.57%	\$23,677	1.12%
2017		\$258,220	9.46%	\$21,497	0.79%
2018		\$249,597	9.54%	\$3,582	0.14%
2019		\$262,726	10.20%	\$25,760	1.00%
2020		\$260,697	6.81%	\$11,150	0.29%
YEAR		ZONING BOARD		HEALTH & WELFARE	
		Amount	% of Total	Amount	% of Total
2016		\$1,723	0.08%	\$2,998	0.14%
2017		\$17,382	0.64%	\$4,602	0.17%
2018		\$8,747	0.33%	\$2,560	0.10%
2019		\$12,589	0.49%	\$3,320	0.13%
2020		\$6,482	0.17%	\$2,840	0.07%
YEAR		SANITATION		SEWER	
		Amount	% of Total	Amount	% of Total
2016		\$85,790	4.06%	\$4,675	0.22%
2017		\$95,190	3.49%	\$3,039	0.11%
2018		\$137,294	5.25%	\$4,883	0.19%
2019		\$180,646	7.01%	\$16,024	0.62%
2020		\$209,432	5.47%	\$6,202	0.16%
YEAR		PUBLIC WORKS		PARK / RECREATION	
		Amount	% of Total	Amount	% of Total
2016		\$163,166	7.73%	\$176,394	8.35%
2017		\$214,026	7.84%	\$180,057	6.59%
2018		\$215,820	8.25%	\$198,668	7.60%
2019		\$176,883	6.86%	\$194,196	7.54%
2020		\$136,339	3.56%	\$197,344	5.16%

YEAR	HISTORICAL COMM		ENVIRONMENTAL	
	Amount	% of Total	Amount	% of Total
2016	\$12,229	0.58%	\$1,214	0.06%
2017	\$11,615	0.43%	\$2,882	0.11%
2018	\$11,265	0.43%	\$860	0.03%
2019	\$13,371	0.52%	\$396	0.02%
2020	\$20,145	0.53%	\$950	0.02%
YEAR	SALARY		BENEFITS / WHHLDING	
	Amount	% of Total	Amount	% of Total
2016	\$487,396	23.08%	\$128,605	6.09%
2017	\$509,745	18.67%	\$126,249	4.62%
2018	\$530,011	20.27%	\$124,361	4.76%
2019	\$490,709	19.04%	\$145,688	5.65%
2020	\$485,628	12.69%	\$123,379	3.22%
YEAR	INSURANCE		INTERFUND XFERS	
	Amount	% of Total	Amount	% of Total
2016	\$241,545	11.44%	\$115,000	5.45%
2017	\$243,225	8.91%	\$557,500	20.42%
2018	\$253,351	9.69%	\$400,000	15.30%
2019	\$309,206	12.00%	\$135,631	5.26%
2020	\$228,590	5.97%	\$750,000	19.59%
YEAR	BLDG/LAND PRCHSE			
	Amount	% of Total		
2020	\$873,821	22.83%		

Source: Township Records, 2020

New and unique needs, however, such as a future community center or other service facilities, require a consensus of community involvement in the planning process. For effective use, the CIP should closely align with the goals and future outlook of the Township's Comprehensive Plan to ensure that the priority projects of the Township are being saved for. Other examples of CIP projects include land acquisition, equipment purchases or rentals, and other contractual services. Projecting costs for the replacement of equipment can entail monitoring current expenses relative to the value of the equipment to best determine when it is financially advantageous to replace it.

A Capital Improvement Program can be an effective tool for managing future expenses. It allows for some control over the timing of expenditures and minimizes the irregularities of budget cycles. While there will always be unforeseen expenses, the use of a CIP can help the Township recover from such expenses and creatively accommodate its future needs.

Finance Goal

Maintain a financial program to balance the needs of the community with the ability to generate municipal revenues.

- Objective 1 Prepare an annual Budget and a Capital Improvement Plan and Program to fund facilities, maintenance, and programs.
- Objective 2 Encourage fiscally responsible land development through diversity to strengthen the tax base and provide varied employment opportunities.
- Objective 3 Maintain reserve funds for maintenance and expansion of community facilities and public works projects. Evaluate future taxes based on expected development and zoning.

- Objective 4 Investigate when necessary the imposition of fees for community facilities and infrastructure.

SUMMARY

Thornbury Township has provided for the needs of its residents through a variety of services and facilities. The costs associated with these needs have escalated over the past several years; however, the rising costs have been met with elevated revenues due to a growing tax-base. The use of grants has assisted the Township in funding several special projects in recent years, but the unpredictability of grants and their labor-intensive processes make them an unreliable when budgeting for future Township needs. One strategy that Thornbury has employed is the use of a Capital Improvement Program (CIP) in the budgeting process. Thornbury's CIP should continually be updated to ensure that it is reflecting the changing needs and wants for the community. As the Township's tax-base begins to level off due to slowed growth in the Township, Thornbury should continue to maintain its CIP and employ strategies to overcome future inflation and other unexpected expenses.

Chapter 10: Plan Implementation

This chapter establishes the means by which the goals and objectives outlined in Chapters 2, 3, 4, 5, 6, 7, 8 and 9 are proposed to be implemented. The structure of this process is the linkage of each objective with a statement of the recommended implementation strategy. Along with each implementation measure is a designated individual, group or agency responsible for enacting the recommendation. Priorities have also been recommended which span the time period from immediately to long-range. The intent of these five priority periods is not to form rigid constraints on implementation, but to offer timing guidelines for accomplishment. There are also instances where the recommended implementation measure are to be on-going. Those priorities are listed as follows:

Immediate	Adopted during this Plan or occurring within one year of adoption.
Short Term	1 to 3 years
Mid Term	3 to 5 years
Long Term	5 + years
On-going	A recurring activity or undetermined

CHAPTER 2: COMMUNITY CHARACTER

Preserve and enhance beneficial aspects of the Township community.

- Objective 1 Evaluate beneficial or positive community characteristics and seek means to perpetuate them.
- RECOMMENDATION: Consider a full or partial update of the Open Space Plans developed in 1996 and 2007.
- PRIORITY: On-going
- RESPONSIBILITY: Environmental Advisory Council, Planning Commission and Township staff
- Objective 2 Identify negative characteristics of the Township and seek remedies to correct and improve them.
- RECOMMENDATION: Similar to Objective 1 above, the negative characteristics need to be identified and made the subject of high priority actions to eliminate them. An example would be enforcing the existing sign ordinance.
- PRIORITY: Immediate / On-going
- RESPONSIBILITY: Environmental Advisory Council, Planning Commission and Township staff
- Objective 3 Encourage growth management that sustains and expands positive community characteristics.
- RECOMMENDATION: Develop future plans that reinforce existing positive characteristics of the Township, including coordination of future land use planning with open space and recreation planning, for the Township that reinforce the existing positive character. For instance, if the sense of open space is thought to be a positive characteristic, encourage new development plans to set aside significant open space areas that might be integrated into the Township's system of parks, passive open space, and trails.
- PRIORITY: On-going

RESPONSIBILITY: Planning Commission and Township staff

- Objective 4 Strengthen the sense of community by promoting citizen engagement on a local and Township level.

RECOMMENDATION: Continue to develop means for individuals and groups within the Township to participate in community activities, both through membership on boards and committees and other volunteer activities.

PRIORITY: On-going

RESPONSIBILITY: All boards and commissions

- Objective 5 Encourage the protection of scenic vistas identified in 2007 Open Space Plan.

RECOMMENDATION: Identify views and vistas within the Township as they relate to vantage points, scenic roads, historic events, or roadside features. Encourage new development plans to include means to identify and preserve scenic qualities, through creative site design and buffering.

PRIORITY: Mid Term

RESPONSIBILITY: Environmental Advisory Council, Historical Commission, Park and Recreation Board

CHAPTER 3: HISTORIC PRESERVATION

Recognize the value of the historic heritage to the community and its role in establishing the Township's image.

- Objective 1 Educate Thornbury residents on existing regulations which facilitate preservation and/or adaptive reuse and encourage compliance with the Township Historic Resource Protection Ordinance.

RECOMMENDATION: Encourage the continued adaptive reuse of historic buildings and sites through the ongoing review and amendment of the Zoning Ordinance and Subdivision and Land Development Ordinance to create opportunities for uses to occur in historic structures that would otherwise not be permitted, assuming community compatibility and historic appropriateness. Consider developing material to be distributed to the entire township community that addresses programs to assist in locating owners and funding modifications.

PRIORITY: Mid Term

RESPONSIBILITY: Historical Commission

- Objective 2 Consider an update and further study of the historic resource inventory in conjunction with property owners.

RECOMMENDATION: Coordinate between local and regional historic preservation organizations and landowners to research properties' historic value and history of their historic designation. The value of such a detailed registry is not only the prestige of the designation but required compliance with standards for renovation.

PRIORITY: Short Term

RESPONSIBILITY: Historical Commission

- Objective 3 Continue with communication strategies and educational initiatives, highlighting the importance and impact of historic resources to residents and other local stakeholders.
- RECOMMENDATION: Continue to maintain a thorough inventory of all historic structures in the Township, to include houses, outbuildings, commercial structures, agricultural buildings, bridges and landscape elements. Stress documentation through drawings, photographs, and interviews.
- PRIORITY: Immediate
- RESPONSIBILITY: Historical Commission
- Objective 4 Cooperate with neighboring municipalities in Delaware and Chester Counties to address the preservation of the Brandywine Battlefield and associated troop movements.
- RECOMMENDATION: Continue to maintain a Township-wide historic resource protection ordinance, surveying the Township and documenting historic resources, and considering historic resources throughout future land development reviews.
- PRIORITY: On-going
- RESPONSIBILITY: Historical Commission, Planning Commission, Board of Supervisors

CHAPTER 4: COMMUNITY FACILITIES AND SERVICES

Provide public facilities and services for current and future Thornbury Township residents, businesses, and institutions consistent with the changing needs and demographics of the municipality.

- Objective 1 Inventory and assess current community facilities and services for effectiveness, location, and cost.
- RECOMMENDATION: Maintain a current and complete inventory of Township owned public facilities and services provided to residents and businesses. Periodically assess the effectiveness of the expenditure relative to expanding development and alternative means to improve the facility or service.
- PRIORITY: Immediate / On-going
- RESPONSIBILITY: Board of Supervisors
- Objective 2 Develop an integrated community facilities and services operations and maintenance plan providing for the changing demographics of the Township and the related facility needs, including utilities, human services, health, safety, recycling, educational development, and economic development.
- RECOMMENDATION: Initiate and maintain a Community Facilities Plan that inventories facilities and services and projects their growth into the future with respect to population and development. This Plan should be reviewed annually during the preparation of the annual budget and Capital Improvement Program.
- PRIORITY: On-going
- RESPONSIBILITY: Township Staff

- Objective 3** Evaluate the adequacy of Township meeting facilities in order to encourage public participation.
- RECOMMENDATION: Assess the size, location, accessibility and parking availability for Township meeting facilities, as well as the scheduling of meetings, to encourage the broadest possible public participation. Adjust scheduling and improve facilities as necessary.
- PRIORITY: On-going
- RESPONSIBILITY: Township Staff, Board of Supervisors
- Objective 4** Identify areas suitable for facilities expansion, including acquisition methods and scheduling.
- RECOMMENDATION: As part of maintaining the Community Facilities and Services Plan, assess needs for expanded facilities, replacements, and new locations. The assessment should include evaluation of potential sites, available future facilities or parkland, scheduling and cost estimates.
- PRIORITY: On-going
- RESPONSIBILITY: Board of Supervisors
- Objective 5** Ensure recreation and community facilities are adequate to meet the needs of a growing and diversifying Thornbury Township.
- RECOMMENDATION: Develop means for individuals and groups within the township to participate in community activities, both through membership on boards and committees and other volunteer activities. Use existing neighborhood and civic associations within the Township as the basis for engaging residents in recreational programs.
- PRIORITY: On-going
- RESPONSIBILITY: Board of Supervisors
- Objective 6** Coordinate with utility companies to develop programs for Township residents to encourage their participation in recycling and conserving energy, water, and other resources.
- RECOMMENDATION: Survey community interest in recycling and conservation programs, relative to services the Township could provide. Coordinate and develop Township programs accordingly. Establish a liaison with appropriate utility companies to coordinate conservation programs for water, sewer, electric and gas utilities.
- PRIORITY: Long Term
- RESPONSIBILITY: Township Staff, Board of Supervisors
- Objective 7** Monitor and evaluate the accessibility and utility of regional services for residents and businesses.
- RECOMMENDATION: Recognizing that many of the services provided to residents are beyond Township boundaries, coordinate with organizations and agencies that provide services such as recreational programming, educational classes, and cultural activities. Assemble this information and make it available to residents through newsletters and on the Township web site.

PRIORITY: On-going

RESPONSIBILITY: Township Staff, Park and Recreation Board

Objective 8 Continue to coordinate with state and regional emergency services providers, including police, fire, emergency health, and disaster relief.

RECOMMENDATION: Maintain on-going contact and coordination with local and regional public safety organizations. Provide residents and businesses with current and accurate contact information to ensure general public health and safety.

PRIORITY: On-going

RESPONSIBILITY: Emergency Management Coordinator

CHAPTER 5: LAND USE PLAN

Establish and maintain land use planning regulations and policies which preserve the beneficial aspects of the Township character and provide for management of future growth.

Objective 1 Maintain a system of land use mapping to have available an inventory of Township land uses, infrastructure, open space, and transportation corridors.

RECOMMENDATION: Adopt long-range plans for future development in the Township that are consistent with the ability of the existing road network to accommodate projected traffic volumes. Road upgrades needed for individual developments should be the responsibility of the developer.

PRIORITY: Short Term / On-going

RESPONSIBILITY: Planning Commission

Objective 2 Evaluate Township ordinances and modify as necessary to encourage the location of future development in areas where adequate infrastructure exists.

RECOMMENDATION: Review the Zoning Ordinance and the Subdivision and Land Development Ordinance for opportunities to encourage future development in locations that have sufficient capacity and maximize the current system's investment.

PRIORITY: Short Term

RESPONSIBILITY: Planning Commission

Objective 3 Encourage development that concentrates future growth near compatible land uses.

RECOMMENDATION: Review Township ordinances and the Zoning Map to ensure that there is compatibility between zoning districts and requirements for buffering of dissimilar uses.

PRIORITY: Mid Term / On-going

RESPONSIBILITY: Planning Commission

Objective 4 Continue to develop programs and provide education to encourage conformity and compliance with Township Codes.

RECOMMENDATION: Assist landowners that have non-conforming uses and structures through education and guidance, so that changes can occur to make them less non-conforming and potentially bring them into full conformity.

PRIORITY: Immediate / On-going

RESPONSIBILITY: Township Staff

- Objective 5 Reinforce existing villages and create performance standards that encourage village development at new community locations.

RECOMMENDATION: Review all development standards for applicability to village situations, with the intent of providing flexibility to encourage the perpetuation of villages. Encourage adaptive reuse of existing historic buildings to ensure continued use. Apply village standards to new development through ordinance amendments, to expand village attributes to new Township areas. Consider pedestrian scale and connectivity of development elements.

PRIORITY: Mid Term

RESPONSIBILITY: Historical Commission, Planning Commission and Township staff

- Objective 6 Encourage the development of commercial, industrial and institutional uses which service needs of Township residents, while enforcing applicable regulations, such as buffering of dissimilar uses.

RECOMMENDATION: Coordinate with business and realty associations to facilitate the development or expansion of businesses that provide services or employment to Township residents, while regulating that development with standards that support the community character.

PRIORITY: Short Term / On-going

RESPONSIBILITY: Planning Commission and Township Staff

- Objective 7 Monitor existing and future pipeline activity that may occur in the Township to mitigate its impact on its community.

RECOMMENDATION: Enact, where feasible, regulations complementary to Pennsylvania Oil and Gas Act, as amended, Pennsylvania case law, and the Federal Energy Regulatory Commission designed to protect public health, safety and welfare, and land uses in conformance with the Pennsylvania' Municipalities Planning Code, Act 247.

PRIORITY: On-going

RESPONSIBILITY: Township Staff

- Objective 8 Coordinate with adjacent municipalities for compatibility of land uses and infrastructure.

RECOMMENDATION: Take all opportunities to meet with and coordinate with officials of nearby municipalities and regional agencies to remain informed about and contribute to discussions pertaining to issues significant to land use planning in Thornbury Township.

PRIORITY: Mid Term / On-going

RESPONSIBILITY: Planning Commission, Board of Supervisors

- Objective 9 Ensure that future growth patterns are compatible with both the Chester and Delaware Counties Comprehensive Plans and other planning programs.
- RECOMMENDATION: Through this Comprehensive Plan and the Zoning Map, regulate growth patterns such that there is consistency with County and regional land use plans. Areas of concern include land use, open space, housing, and transportation planning.
- PRIORITY: Long Term / On-going
- RESPONSIBILITY: Planning Commission and Township Staff
- Objective 10 Develop a Comprehensive Recreation and Open Space Plan to identify open space areas and tracts that are of high value to the Township and consider long-term approaches to the preservation and expansion of the open space network.
- RECOMMENDATION: Form a committee to oversee the development and production of the Recreation and Open Space Plan.
- PRIORITY: Mid Term
- RESPONSIBILITY: Planning Commission, Township Staff, and professional consultants

CHAPTER 6: HOUSING

Ensure that safe and adequate housing and non-residential buildings are provided for all Township residents.

- Objective 1 Evaluate ordinances to ensure opportunities for a variety of housing types to all populations.
- RECOMMENDATION: Review the Zoning Ordinance to ensure balanced housing opportunities within the various zoning districts. Encourage a combination of housing types in communities and, to the extent possible, a variety of housing types in various economic ranges.
- PRIORITY: Long Term
- RESPONSIBILITY: Planning Commission and Township Staff
- Objective 2 Identify, monitor, and maintain an inventory of vacant properties.
- RECOMMENDATION: Address the status and condition of vacant properties in a coordinated matter and encourage the rehabilitation of dilapidated structures.
- PRIORITY: On-going
- RESPONSIBILITY: Township Staff
- Objective 3 Research and examine strategies to encourage the addition of a greater variety of dwelling unit types to the Township's housing inventory.
- RECOMMENDATION: Educate residents on the opportunities for the adaptive reuse of historic structures by permitting mixed-uses or accessory dwelling units.
- PRIORITY: Long-term
- RESPONSIBILITY: Township Staff
- Objective 4 Continue to encourage future developments to be designed with an emphasis on open space and the existing character of the surrounding area.

RECOMMENDATION: Review provisions related to cluster development and planned residential development to ensure continued preservation of open space.

PRIORITY: Mid Term

RESPONSIBILITY: Township Staff

CHAPTER 7: NATURAL RESOURCES AND OPEN SPACE

NATURAL RESOURCES

Inventory, protect and enhance environmentally sensitive areas.

Objective 1 Encourage the accuracy of sources and procedures for monitoring the conditions of natural resources.

RECOMMENDATION: Establish a program to assess the quality and quantity of natural resources in the Township. The assessment should include the ability of the resource to provide wildlife habitat, the stability of the resource and any threats to its conditions. Using the Natural Resources Inventory mapping and other sources available to the Township, prepare and maintain maps of features such as floodplains, wetlands, topography, steep slopes, wooded lands, watercourses, soils and riparian areas.

PRIORITY: On-going

RESPONSIBILITY: Environmental Advisory Council

Objective 2 Review and modify development regulations which address the protection and/or enhancement of floodplains, wetlands, hydric soils, steep slopes, watercourses, rock outcroppings, woodlands, and critical wildlife habitat.

RECOMMENDATION: Institute a procedure whereby Township land development ordinances, codes and regulations are reviewed periodically to ensure that they are allowing for the protection and enhancement of significant natural resources. The process should include applicability of the regulation to current scientific standards and to those of other governmental jurisdictions.

PRIORITY: On-going

RESPONSIBILITY: Environmental Advisory Council, Board of Supervisors, Planning Commission and Township Staff

Objective 3 Preserve the sensitive riparian environments and promote the maintenance of high-quality water bodies.

RECOMMENDATION: Review and maintain the Township's Floodplain Conservation District as a zoning overlay district and consider combining it with wetlands and riparian buffer areas, comprising comprehensive Natural Features overlay zoning district. Review Township's Floodplain Conservation District uses by right, conditional use, special exception, and variance, with the intent to permit only minimal disturbance.

PRIORITY: On-going

RESPONSIBILITY: Environmental Advisory Council, Board of Supervisors, Planning Commission and Township Staff

- Objective 4 Limit soil erosion both in the natural environment and on development sites.
- RECOMMENDATION: Assess development regulations for their ability to limit and minimize disturbance within a construction area. Monitor stormwater management regulations in the Zoning Code and Subdivision and Land Development Ordinance for their effectiveness in controlling runoff both on-site and regionally.
- PRIORITY: Short Term
- RESPONSIBILITY: Environmental Advisory Council, Board of Supervisors, Planning Commission
- Objective 5 Conserve, promote, and protect the Township's biotic resources.
- RECOMMENDATION: Utilize educational means to inform Township residents of the value of biotic resources and the need to preserve them, even on an individual lot by lot basis.
- PRIORITY: Short Term
- RESPONSIBILITY: Environmental Advisory Council and Township Staff

OPEN SPACE

Preserve existing open space lands and develop procedures to expand, as needed, for recreational, cultural, and scenic qualities.

- Objective 1 Continue to develop a new, updated Open Space Plan to help guide the protection and management of open space and natural lands.
- RECOMMENDATION: When private open space is proposed to satisfy requirements for residential development plans, where possible enact agreements that allow for public use of trail systems connecting to other open space systems.
- PRIORITY: Long Term
- RESPONSIBILITY: All Boards
- Objective 2 Develop methods to protect lands as open space in the future, including the consideration of an overlay zoning district.
- RECOMMENDATION: Continue to use open space dedication as part of the conservation subdivision process and budget funds in the CIP to be used to acquire available lands to meet future open space needs. Develop an Open Space Overlay zoning district to protect such lands.
- PRIORITY: Mid Term
- RESPONSIBILITY: Planning Commission
- Objective 3 Evaluate development regulations for opportunities to further implement cluster development and increase open space
- RECOMMENDATION: Review the Zoning Ordinance and Subdivision and Land Development Ordinance to create conditions and standards that encourage the use of cluster developments and prevent fragmentation of open space as alternative to traditional subdivision patterns.
- PRIORITY: Long / On-going

RESPONSIBILITY: Planning Commission and Township Staff

- Objective 4 Consider a Safe Routes to Parks Plan to identify comfortable and convenient connections to Township parks and open space for Thornbury residents through the development of a comprehensive open space plan.

RECOMMENDATION: Investigate the availability of land parcels throughout the Township that may serve as links between other public open spaces and parks, with the objective of creating a network of open space connections and destinations for pedestrians, cyclists and/or equestrians. Prioritize potential acquisitions and consider a variety of acquisition means, including fee simple purchase.

PRIORITY: On-going

RESPONSIBILITY: All Boards

- Objective 5 Continue to identify and protect scenic corridors and vistas of significant community character within the Township.

RECOMMENDATION: Map land areas of the Township that have scenic qualities and contribute to the Township's green image and develop regulations within the Zoning Code and the Subdivision and land Development Ordinance (SALDO) that address the responsibilities for preserving view sheds and other scenic areas.

PRIORITY: On-going

RESPONSIBILITY: All Boards

- Objective 6 Promote the expansion of localized access to parks and open space in the Township.

RECOMMENDATION: Explore unique opportunities for recreational facilities and/or programming throughout the park system without duplicating Thornbury Park facilities. Periodically survey community interests for parks and recreation.

PRIORITY: Long Term

RESPONSIBILITY: All Boards and Commissions

CHAPTER 8: TRANSPORTATION

Provide an efficient and well-maintained network of transportation routes for the needs of residents and businesses.

- Objective 1 Inventory roadways, public transit routes, trails and other transportation corridors with the pertinent right-of-way, speed limit, use, material, and location information.

RECOMMENDATION: Establish and maintain an informational inventory of all aspects of the transportation network, including facilities for motorized vehicles, pedestrians, cyclists, and equestrians. The inventory should include descriptions, lengths, repair history and current condition.

PRIORITY: On-going

RESPONSIBILITY: Township Staff

- Objective 2** Develop a maintenance schedule for Township-owned roads to be included in a Capital Improvement Program.
- RECOMMENDATION: Use the inventory of transportation facilities to formulate a maintenance forecast and schedule, to be used as part of the preparation of the annual budget and CIP.
- PRIORITY: On-going
- RESPONSIBILITY: Public Works Department
- Objective 3** Evaluate the compatibility of Township roads with those of adjacent municipalities.
- RECOMMENDATION: Coordinate with adjacent municipalities regarding development proposals or road conditions that may affect Thornbury Township roads. Consider maintaining uniform transitions as roads cross municipal boundaries.
- PRIORITY: On-going
- RESPONSIBILITY: Public Works Department
- Objective 4** Identify corridors suitable for non-vehicular transportation and establish a network of trails for pedestrian, bicycle and equestrian use. Evaluate handicapped accessibility design issues.
- RECOMMENDATION: Institute a Township-wide trail and path system that primarily utilizes off-road rights-of-way, corridors, and easements for the use of pedestrians, cyclists, and equestrians. Where possible provide full accessibility to the system.
- PRIORITY: On-going
- RESPONSIBILITY: Environmental Advisory Council, Planning Commission and Township Staff
- Objective 5** Evaluate traffic calming measures and other transportation related planning that could be employed in conjunction with PennDOT and other transportation agencies.
- RECOMMENDATION: Maintain contact with PennDOT, DVRPC, and Chester County transportation planning agencies to coordinate with project schedules and public transportation programs that will have an impact on the Township.
- PRIORITY: On-going
- RESPONSIBILITY: Township Staff
- Objective 6** Manage future growth that is compatible with and/or would improve existing road design capacities while avoiding cut-through traffic on local roads.
- RECOMMENDATION: Develop regulations for new development that ensure that road capacity is available on nearby roads and intersections. Require road improvements to meet the acceptable level of service standards. Discourage situations that will lead to through traffic on local roads.
- PRIORITY: Immediate / On-going
- RESPONSIBILITY: Planning Commission and Township Staff
- Objective 7** Evaluate the availability of parking facilities at Township locations such as Thornbury Park.

RECOMMENDATION: Evaluate the recommendations in the Open Space and Recreation Plan, through vehicle counts at specific events and meetings, to determine if there is sufficient parking to serve public facilities such as Township parks and the Township Building.

PRIORITY: Short Term

RESPONSIBILITY: Park and Recreation Board

CHAPTER 9: FINANCES

Maintain a financial program to balance the needs of the community with the ability to generate municipal revenues.

Objective 1 Prepare an annual Budget and a Capital Improvement Plan and Program to fund facilities, maintenance, and programs.

RECOMMENDATION: Continue to use the Capital Improvement Program to project the future needs of the Township and estimate associated costs. Consider the extension of the CIP to further years than currently used, recognizing that distant years and costs will be more conceptual than near-term years.

PRIORITY: On-going

RESPONSIBILITY: Township Staff

Objective 2 Encourage fiscally responsible land development through diversity to strengthen the tax base and provide varied employment opportunities.

RECOMMENDATION: Promote a variety of future land uses to create a broad economic tax base, including limited non-residential uses that support local needs and services.

PRIORITY: On-going

RESPONSIBILITY: Township Staff and Professional Consultants

Objective 3 Maintain reserve funds for maintenance and expansion of community facilities and public works projects. Evaluate future taxes based on expected development and zoning.

RECOMMENDATION: Continue the practice of retaining funds for unexpected expenses, such as equipment repair and emergency service contracts. Forecast future tax revenues based on the anticipated and planned development.

PRIORITY: On-going

RESPONSIBILITY: Township Staff

Objective 4 Investigate when necessary the imposition of fees for community facilities and infrastructure.

RECOMMENDATION: Research and propose amendments to the Zoning Ordinance and Subdivision and Land Development Ordinance that would permit a developer to offer a fee in lieu to the Township for community facilities and infrastructure.

PRIORITY: Immediate

RESPONSIBILITY: Planning Commission and Township Staff

PLANNING AND COORDINATION

Coordinate with local, county and state planning agencies on all issues that affect Township services, infrastructure, and land use planning.

Objective 1 Monitor development trends regionally for compatibility and impact on the Township.

RECOMMENDATION: Maintain regular contact with nearby municipalities and regional agencies to be informed of land development activity that would affect the Township land use planning initiatives. This should include not only specific site development plans, but also regional transportation, sewage, water or other systems.

PRIORITY: On-going

RESPONSIBILITY: Planning Commission and Township Staff

Objective 2 Maintain a consistent liaison with adjacent townships to remain aware of activities affecting Thornbury Township.

RECOMMENDATION: Assign board or commission members to monitor specific nearby townships and boroughs in order to coordinate with Thornbury Township activities.

PRIORITY: On-going

RESPONSIBILITY: Planning Commission, Township Staff, Board of Supervisors, Historical Commission

Objective 3 Continue and expand participation with local and regional organizations that address planning issues or provide services to the Township.

RECOMMENDATION: Assign Township Staff to monitor regional agency activities of local significance, such as a regional planning organization within Delaware County, the Delaware County Planning Department, and the Delaware Valley Regional Planning Commission.

PRIORITY: On-going

RESPONSIBILITY: Township Staff and professional consultants

Objective 4 Implement plans that provide adequate and appropriate locations for future growth using sound land use planning principles.

RECOMMENDATION: Coordinate the Township's Zoning Map and future land use map of this Comprehensive Plan by making any necessary Zoning Map amendments to effectuate the Plan's land use goals.

PRIORITY: On-going

RESPONSIBILITY: Planning Commission, Board of Supervisors

Objective 5 Monitor legal decisions and new regulatory controls which may impact growth management of the Township and provision of services.

RECOMMENDATION: Research and discuss how current and recent legal decisions and other regulatory controls may affect the Township's planning initiatives. Provide portions of public meetings for such discussions and opportunities for participation by residents.

PRIORITY: On-going

RESPONSIBILITY: Township Staff and professional consultants

Objective 6 Encourage all boards and commissions to interact with one another.

RECOMMENDATION: Township Liaisons have been established for these now and should be maintained. Lack of intercommunication leads to lost time and effort and makes the Boards and Commissions jobs harder.

PRIORITY: On-going

RESPONSIBILITY: Planning Commission, Board of Supervisors, Township Staff

SUMMARY

The purpose of the Plan Implementation chapter has been to develop a linkage between the goals and objectives of all chapters of this Comprehensive Plan and the means to accomplish them through the recommendations, timing, and responsibility. Those goals and objectives have been restated in this Chapter for completeness. The beneficiaries of this process should be not only the elected decision-makers of the Township but also residents who wish to be involved in the governing of their community. The goals and objectives are the product of the community's expressions of interest in various areas. The implementation measures are reasonable and accomplishable approaches to each issue identified. The priorities that have been assigned are suggested completion dates and should be adjusted during the planning period. Although the more distant priorities may seem to be less significant than current and on-going activities, they will need to be brought into focus in the coming years, much like the out years in the Capital Improvement Program.

Chapter 11: Plan Interrelationships

One of the requirements for comprehensive plans, as determined by the Pennsylvania Municipalities Code (MPC), is that each plan offers a statement of the interrelationships among the various plan components and an estimate of their consequences on the municipality. At a minimum, the MPC requires environmental, energy conservation, fiscal management, economic development, and social factors to be estimated as to their effect on the Township.

ENVIRONMENTAL

This Comprehensive Plan includes an analysis of the existing natural features of the Township briefly in Chapter 2, Community Profile, and more extensively in Chapter 7, Natural Resources and Open Space. Features such as topography, steep slopes, floodplains, wetlands, woodlands, and riparian corridors are described and mapped. Additionally, the plan proposes strategies and establishes goals for preserving existing natural features and open spaces, while enhancing their utility for residents to enjoy. In order to accomplish the preservation of the Township's environmentally sensitive areas and remaining open spaces, the following goals have been established in Chapters 5 and 7 of this Comprehensive Plan:

1. Inventory, protect, and enhance environmentally sensitive areas.
2. Regulate steep slopes within the township to address safety and erosion concerns.
3. Preserve the sensitive riparian environments and promote the maintenance of high-quality water bodies.
4. Limit soil erosion both in the natural environment and in dry areas.
5. Conserve, promote, and protect the Township's biotic resources.
6. Preserve existing open space land and develop procedures to expand as needed for recreational, cultural, and scenic qualities.
7. Identify and protect scenic corridors and vistas of significant community character within the Township.
8. Expand and enhance open space and recreational opportunities for residents. Preserve and link private open space within the Township.
9. Promote soil conservation practices to reduce erosion and sedimentation in the region.
10. Promote the preservation of prime agricultural soils.

Environmental factors such as floodplains, steep slopes, wetlands, and riparian buffers are regulated by the Township code. Additional requirements for such natural features are also considered in the Township's Subdivision and Land Development Ordinance. Lands available for future development are required to make special arrangements to preserve environmentally sensitive areas to minimize the negative impact on them.

ENERGY CONSERVATION

Energy conservation efforts within the Township are undertaken at varying levels by residents, businesses, and by the municipal government. The sector that affects energy conservation, arguably the most, is transportation. The high level of dependence on cars within Thornbury Township requires heavy usage of fossil fuels. From a planning perspective, alternative transportation methods, such as walking, biking, mass public transit, or even riding horses, should be encouraged. To encourage non-vehicular transportation Thornbury Township has implemented many trail components that allow for safe walking and biking to and from various areas of the

Township. The encouragement of developers to include sidewalks in their designs has also served to improve the alternative transportation network. The inclusion of mass transit and sidewalk transportation is found in detail within Chapter 8: Transportation of this Comprehensive Plan.

Other forms of energy conservation are usually controlled by individuals and relate to the way a building, such as a house or commercial structure, uses energy. Heating and lighting are two major factors of energy consumption, with outdoor lighting being a major electric power expenditure. Through the use of innovative building systems and technologic advancements, it is possible to significantly reduce the need for energy to operate a building or process. The Township should evaluate its housing and building codes, in reference to Act 222, the Building Energy Conservation Act of 1980, to assure that appropriate building and energy conservation standards are being utilized. This may entail allowing for non-standard building orientation on lots and the encouragement of tree buffer planting for wind protection. In addition to wind protection, conservation of trees can result in energy savings. The right tree in the right place provides shade and cool air by absorbing the light energy and using it to evaporate water. The Township's subdivision and land development ordinance currently has a section on tree preservation, which contributes to energy conservation efforts.

Adoption of the following goals and objectives, as expanded upon in Chapters 5, 7, and 8, allow the Township to encourage the reduction of energy costs:

1. Continue to implement a Township-wide pedestrian and bicycle trail system connecting significant points.
2. Require new development to contribute to the trail system through the contribution of lands and funds.
3. Encourage growth in areas near roads that offer opportunities for adequate service, carpooling or mass transit.
4. Review and revise Township codes to ensure maximum efficiency of energy consumption in buildings.

FISCAL MANAGEMENT

Thornbury Township relies primarily on the Earned Income Tax to operate the services needed by residents and businesses. Services provided by the Township to its residents are the result of fiscal management, including the preparation of budgets based on available revenues from taxes, fees, and grants. The continued and expanded use of a Capital Improvement Plan (CIP) to forecast expenditures, as recommended in Chapter 9, Municipal Finances, is a valuable tool in the planning process. Projected growth should be channeled in both quantity and location to result in the efficient use of existing facilities and infrastructure. The cost to provide services to scattered or low-density development is usually more expensive than to clustered development. This Comprehensive Plan encourages the use of infill development and cluster housing where appropriate to take full and efficient advantage of such facilities as road capacity, public sewer, water systems, and other community-based services. The following goals and objectives have been adopted by the Township and are expressed in Chapter 5, Land Use Plan, and Chapter 9, Municipal Finances:

1. Promote the development of small tracts that may remain between larger development as infill.
2. Encourage future growth to occur in designated growth areas.
3. Continue to budget funds for future needs through the use of a Capital Improvement Program.

ECONOMIC DEVELOPMENT

The term “economic development” is often associated with communities with a diverse structure of commercial, office, manufacturing and residential uses. Thornbury Township is largely a residential community, where residents commute outside the municipal boundaries for employment and shopping. Besides its many residential communities, the Township is the home to the institutions of Cheyney University, Glen Mills Schools and part of the George W. Hill Correctional Facility. These three facilities occupy a significant land area of the Township, provide employment to some residents and are generally vary visual elements of the community. The consequences of economic development on the Township are minimal. This Comprehensive Plan proposes no radical change from the current pattern of land uses but would reinforce that pattern with infrastructure and facilities that allow it to function more effectively. The following goals and objectives, detailed in Chapter 5, Land Use Plan, will enable that to occur:

1. Coordinate with surrounding municipalities and regional agencies on matters affecting the economic status of Township residents.
2. Encourage the development of employment centers, commercial, industrial and institutional uses which service needs of Township communities, while enforcing applicable regulations, such as buffering of dissimilar uses along major transportation corridors.
3. Promote small scale local commercial centers within the Township, consistent with the historical village pattern.

SOCIAL

Thornbury Township recognizes that growth will occur in the future, although at a likely slower pace than previous decades. As mentioned, the Township is largely residential in character and it is anticipated that the same pattern will continue. Housing needs will be met by providing areas suitable for both infill development and new projects. The new development will continue to satisfy the needs for a variety of housing types and values. As growth occurs, additional demands will be made on community services and infrastructure which will have to be accommodated. Services, such as road maintenance and public parks are a major responsibility of the Township to its residents. In order to accomplish the needs of social issues, the Township has adopted the following policies, which are elaborated upon in Chapter 5, Land Use Plan, and Chapter 6, Housing Plan:

1. Designate adequate amounts of area to provide for housing units in number and location consistent with the Future Land Use Plan.
2. Concentrate new housing within identified growth areas.
3. Channel housing proposals in rural areas to infill existing development.
4. Promote adaptive reuse in villages and older development to conserve those concentrations.
5. Investigate opportunities to accommodate the social and recreational needs of Township residents.
6. Promote efficiency in the development process to avoid unnecessary costs to housing.
7. Encourage variety in type and cost of housing.
8. Require new development plans to provide open space for residents that are consistent with Township’s network of parkland and trails.

SUMMARY

This chapter has discussed the ways various components of the Comprehensive Plan interrelate and how they will impact the Township. The environmental effects of the development process have already impacted the way in which the Township has evolved and will continue to do so. Development regulations in the Zoning Code and Subdivision and Land Development Code require the preservation of sensitive environmental features. Energy conservation is an aspect of land development that is not usually given enough consideration. There are development policies that foster the conservation of fossil fuels used in vehicles. The most significant is the encouragement of land development plans that allow for other forms of transportation to nearby destinations. A Township-wide trail system is a major component of such a goal.

Fiscal management within the Township is affected by the tax base, which is established by new development, primarily housing. New services, infrastructure, and facilities to those projects need to be budgeted through the use of a Capital Improvement Program to ensure continuous delivery of services. The social consequences and aspects of this Comprehensive Plan relate to the general welfare and well-being of the Township residents. The reinforcement of a quality environment and community character, as well as the provision of services and community facilities, including parks and recreation, are the largest elements of impact attributable to the Township.

Appendix A: Statement of Compatibility

STATEMENT OF COMPATIBILITY OF SURROUNDING LAND USES

Regional Setting

Thornbury Township is surrounded by eight neighboring municipalities and the land use compatibility between Thornbury and these other eight is generally compatible. Within Delaware County, the Township is bordered by Edgmont Township, to the northeast; Middletown Township, to the east; Chester Heights Borough, to the southeast; Concord Township, to the south; and Chadds Ford Township, to the southwest.

Compatibility

Thornbury and Edgmont Township contain compatible uses adjacent to each other comprised mostly of low density single-family detached housing. Thornbury and Middletown each have a portion of the Hansen Aggregates quarry on either side of their shared boundary. Thornbury and Chester Heights have differing uses adjacent to each other with the former comprised of undeveloped, forested land with a few single-family residential uses and the latter comprised of a townhouse community. There is adequate buffering between the different uses. Thornbury and Concord also share compatible uses at their boundaries with predominantly single-family detached residences. The two Townships also share a portion of the Delaware County prison at their boundary line. To the southwest Concord contains office and commercial development while Thornbury Township contains a working farm. However, the office and commercial uses are somewhat buffered by a golf course and given its proximity to Route 202, the farm is zoned for mixed use development. Chadds Ford Township to the southwest contains Route 202 with a mix of retail, service and heavier commercial uses. These abut a townhouse community in Thornbury however the buffering between the two uses is substantial.

To the west and north in Chester County the Township is adjacent to Thornbury and Westtown Townships. The two Thornbury Townships have primarily compatible single-family housing along their shared boundary. Other uses along either side of the Thornbury Townships' boundary are small scale commercial uses and portions of Cheyney University. Along the shared boundary with Westtown Township the Township and Westtown have similar and compatible low-density single-family detached uses. Thornbury is contiguous to Birmingham Township at a single point so there are no uses that are actually adjacent to each other.

