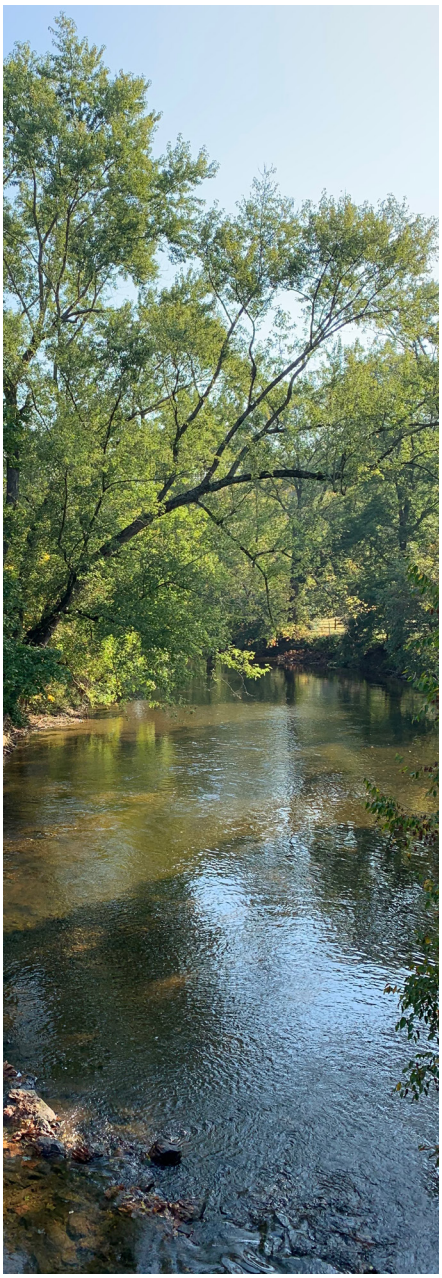
West Bradford Township

Open Space, Recreation, and Environmental Resources Plan Update







West Bradford Township
"Between the Brandywines"

Prepared by

Brandywine Conservancy

Recreation and Parks Solutions
Making communities better places to live, work and play

Open Space, Recreation, and Environmental Resources Plan Update 2022

West Bradford Township
1385 Campus Drive, Downingtown, PA 19335

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This project was financed in part by a Vision Partnership Program Grant from the Chester County Board of Commissioners under the administration of the Chester County Planning Commission. West Bradford Township provided matching funds for this project.

Adopted October 11, 2022
Updated September 10, 2024

WEST BRADFORD TOWNSHIP
"Between the Brandywines"



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TOWNSHIP OF WEST BRADFORD
CHESTER COUNTY, PENNSYLVANIA

RESOLUTION 24-15

A RESOLUTION OF WEST BRADFORD TOWNSHIP INCORPORATING THE EMBREEVILLE MASTER PLAN INTO THE OPEN SPACE RECREATION AND ENVIRONMENTAL RESOURCE PLAN AS AN APPENDIX

WHEREAS, Article Ill of the Pennsylvania Municipalities Planning Code, (the "MPC") requires municipalities to review and update their comprehensive plan every ten years; and

WHEREAS, pursuant to Article Ill of the MPC, on June 1, 2020, the Board of Supervisors of West Bradford Township adopted the West Bradford Township Comprehensive Plan of 2020 (the "2020 Plan"); and

WHEREAS, one component of the 2020 Plan was the Open Space, Recreation and Environmental Resources Plan adopted in 1993 which was attached to the 2020 Plan as Appendix C (the "OSRER Plan"); and

WHEREAS, the 2020 Plan recommended that the OSRER Plan be updated; and

WHEREAS, on October 11, 2022, the Board of Supervisors of West Bradford Township adopted Resolution No. 22-13 to approve and adopt the 2022 OSRER Plan as an amendment to the 2020 Plan; and

WHEREAS, on August 13, 2024, the Board of Supervisors adopted the Final Embreeville Park Master Plan dated August 13, 2024, prepared by Thomas Comitta Associates, Inc.("Master Embreeville Plan"); and

WHEREAS, the Board desires to amend the 2022 OSRER Plan to include the Master Embreeville Plan as Appendix F;

NOW THEREFORE, BE IT RESOLVED AND ADOPTED this 10th day of September 2024 that the Master Embreeville Plan, which is attached hereto, shall be adopted as Appendix F to the 2022 OSRER Plan.

ATTEST:

Justin V. Yaich
Township Secretary

WEST BRADFORD TOWNSHIP
BOARD OF SUPERVISORS

Jack M. Hines, Jr., Chair

Kevin Houghton, Vice Chair

Laurie W. Abele, Member

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RESOLUTION NO. 22-13

WEST BRADFORD TOWNSHIP

CHESTER COUNTY, PENNSYLVANIA

WHEREAS, Article Ill of the Pennsylvania Municipalities Planning Code, (the "MPC") requires municipalities to review and update their comprehensive plan every ten years; and

WHEREAS, pursuant to Article Ill of the MPC, on June 1, 2020 , the Board of Supervisors of West Bradford Township adopted the West Bradford Township Comprehensive Plan of 2020 (the "2020 Plan"); and

WHEREAS, one component of the 2020 Plan was the Open Space, Recreation and Environmental Resources Plan adopted in 1993 which was attached to the 2020 Plan as Appendix C (the "OSRER Plan"); and

WHEREAS, the 2020 Plan recommended that the OSRER Plan be updated; and

WHEREAS, the Township acquired a Vision Partnership Program grant from Chester County to assist with updating the OSRES Plan and the Board appointed a task force to assist in the update of the OSRER Plan; and

WHEREAS, pursuant to Section 301(c)(2) and Section 301.3 of the MPC, on August 11, 2022, the Township delivered a copy of the 2022 OSRER Plan to the Chester County Planning Commission ("CCPC") and the CCPC issued its recommendations to the Board in a review letter dated August 29, 2022; and

WHEREAS, pursuant to Section 301(c)(2) and Section 301.3 of the MPC, on August 11, 2022, the Township sent copies of the 2022 OSRER Plan to the governing bodies of contiguous municipalities and the Downingtown Area School District for review and comment; and

WHEREAS, pursuant to Section 302(a) of the MPC, on June 7, 2022, the West Bradford Township Planning Commission conducted a duly advertised public meeting and considered the 2022 OSRER Plan and voted to recommend that the Board approve the 2022 OSRER Plan; and

WHEREAS, pursuant to Section 302(b) of the MPC, the Board of Supervisors of West Bradford Township conducted a public hearing on the 2022 OSRER Plan on October 11, 2022, pursuant to public notice, at which it considered and voted to approve the 2022 OSRER Plan; and

WHEREAS, the Board of Supervisors of West Bradford Township desires to adopt this Resolution approving and adopting the 2022 OSRER Plan.

NOW THEREFORE, BE IT AND IT IS HEREBY RESOLVED, as follows:

1. The Background to the Resolution is incorporated in and fully made a part hereof.

2. After considering the recommendations and comments from the West Bradford Township Planning Commission, the CCPC and the public, and following notice to the School District, adjacent municipalities and the public, the Board of Supervisors hereby resolves to adopt the 2022 OSRER Plan which is comprised of the maps, charts, textual matter and all other materials constituting a part thereof as more particularly specified in the Table of Contents attached hereto as Exhibit "A", incorporated herein by reference and made a part hereof, and the said 2022 OSRER Plan is hereby adopted as an amendment to the West Bradford Township Comprehensive Plan of 2020.

RESOLVED AND ADOPTED this 11th day of October2022.

ATTEST:

Justin V. Yaich
Township Secretary

WEST BRADFORD TOWNSHIP BOARD OF SUPERVISORS

By: _____
Kevin Houghton, Chairman

By: _____
Laurie W. Abele
Vice Chairwoman

By: _____
Jack M. Hines, Jr., Member

2

Chapter 1 Introduction



Aerial view looking east across the village of Marshallton. Stroud Preserve can be seen in the distance.

Background

West Bradford Township has a long history of open space preservation, a rich agricultural heritage, and a popular system of parks and trails that are cherished by its residents. The residents of West Bradford have also overwhelmingly continued to support these efforts through the 2016 passage of a referendum dedicating one-quarter of one percent of earned income tax toward the purchase of land or easements in support of the preservation of open space and the Township's natural and agricultural resources.

The primary purpose of the Open Space, Recreation, and Environmental Resources Plan Update is to identify opportunities for future open space preservation, identify the current and potential future demands for recreational parks and facilities, and provide a vision for a pedestrian and bicycle transportation network that connects residents to parks, schools, cultural amenities, and local businesses. This Plan is consistent and has been guided by the requirements of Pennsylvania Act 247, the Municipalities Planning Code (MPC), regarding a plan for land use which includes provisions for the amount, intensity, character, and timing of land use proposed for community facilities, public grounds, parks, and recreation (Article III, Section 301 (a) (2)). Applicable sections of the MPC are provided in Appendix A.

West Bradford has a rich agricultural and cultural past, dating back to its formation in 1731 when Bradford Township was divided into East and West Bradford. In addition to agriculture, the community was home to many cottage industries that helped support these agricultural endeavors, as well as a number of mills situated along Broad Run and

the East and West Branches of the Brandywine Creek. Remnants of these cottage industries and mills can be seen throughout the Township to this day. In addition, the open farmland and rolling hills help create the sense of place and rural character that many Township residents cherish and wish to see preserved. The historic and scenic villages of Marshallton, Romansville, Trimblesville, and Northbrook also serve as reminders of West Bradford's rich history. In addition, areas of southeast West Bradford played an important role during the Battle of the Brandywine as tactical battle staging areas during the morning and into the afternoon on the day of the battle, September 11, 1777.

Situated between the Brandywine's East and West Branches, West Bradford is a township of the second class located in southern Chester County with an area of 18.6 square miles. Primarily a residential suburban and rural community, West Bradford is located near the Chester County urban centers of Downingtown, Coatesville, and West Chester, just over 30 miles west of Philadelphia. The western and southern edge of the Township borders areas of the King Ranch, an area known for its expansive areas of protected open space and scenic views, rich historical agricultural legacy associated with cattle ranching, and home to a vibrant equestrian community.

As with many communities in Chester County, West Bradford's landscape has been impacted greatly by population growth and associated residential development over the last 30-40 years. The Township saw a dramatic rise in population between 1970 and 1980 from just under 3,000 residents to over 7,000 residents and continued to climb to an estimated population of just over 14,000 in 2020. The Delaware Valley Regional Planning Commission (DVRPC) predicts that the population of West Bradford will continue to rise at a rate of around 5.5% per year until 2030 and then lower to just under 3% growth in 2045. As such, DVRPC estimates that West Bradford's population will be over 16,500 by 2045, a 30% increase from current levels. West Bradford's rural character and that of its surrounding communities, its proximity to the Boroughs of Downingtown and West Chester, as well as being served by the highly rated Downingtown Area School District, make the Township a desirable place to call home.

West Bradford is fortunate enough to have a number of volunteer-led boards, commissions, and committees, as well as a dedicated staff, to help in the preservation of open space and provision of recreational facilities for its residents. The West Bradford Land Preservation and Sustainability Committee, a seven-member advisory committee to the Board of supervisors, provides guidance and recommendations on open space and agricultural preservation, while also promoting and educating residents on issues of sustainability such as energy conservation, recycling, and the use of renewable energies. To that end, the Board of Supervisors has expressed its support for renewable energy sources and incentives to reduce carbon fuel dependency by signing a resolution (Resolution 21-06) to that effect in early 2021. The Township is also served by a seven-member Recreation Commission that provides recommendations to the Board of supervisors on the maintenance, use and improvement of existing recreational facilities and the acquisition and development of new facilities. In addition to the 3-member Board of Supervisors, other boards and commissions that serve the Township include the Historical Commission, Planning Commission, Zoning Hearing Board, and Emergency Services Board.

The 2022 Open Space, Recreation, and Environmental Resources Plan provides the Township Board of Supervisors and the various commissions and committees with a powerful tool that identifies and prioritizes open space preservation, recreation, and trail needs in the municipality. The Township's boards and commissions will be able to actively utilize this document as a tool to advance open space preservation and recreational opportunities in the Township in a strategic and cost-effective manner. This document is intended to be adopted as an addendum to the West Bradford Comprehensive Plan (2020).

Vision

West Bradford Township is a vibrant, thriving community that strives for sustainability and seeks to retain its semi-rural character, protect its historical landscapes and resources, preserve remaining prime agricultural lands, protect and restore critical and exceptional natural resources and headwater areas, and promote an integrated system of natural greenway corridors that combine to safeguard water quality for future generations. There will be a well-balanced, meaningful system of parks, preserves, and trails, developed through cooperative efforts, that promote an active, healthy lifestyle and provide a safe, active means for all ages and abilities to connect with parks, schools, neighborhoods, and other key destinations within and outside of the Township.

Goals and Objectives

Township representatives and members of a Steering Committee prepared a series of Goals and Objectives to help frame issues for the Township to address through this Plan.

Goal 1: Sense of Place - Retain the semi-rural character, historical landscapes, and quality of life for West Bradford Township and its residents.

Objective 1-1: Identify priority lands for preservation within the Township.

Objective 1-2: Guide development away from sensitive environmental resources and scenic or historic landscapes or viewsheds.

Objective 1-3: Seek the protection of land adjacent to existing West Bradford Township parks and preserves.

Goal 2: Livelihood – Support and preserve working farms and prime agricultural soils to help sustain the agrarian community and heritage of the area.

Objective 2-1: Identify critical working agricultural lands for preservation which can be preserved in partnership with the Chester County Agricultural Land Preservation Board (ALPB).

Objective 2-2: Promote local agricultural businesses and the products they produce to residents.

Goal 3: Preserve and Steward - Protect, restore and manage critical and sensitive ecosystems, habitats, and natural resources of the Township, including woodlands, areas identified as exceptional natural areas, and wetland and water resources to ensure a resilient environment that can support a healthy community.

Objective 3-1: Continue to identify and pursue the preservation of open space through fee interest purchase, conservation easement, or subdivision plan designation to ensure the conservation of critical natural resources.

Objective 3-2: Continue to focus efforts on preserving and stewarding Broad Run (designated as an Exceptional Value Waterway by PADEP) and its watershed.

Objective 3-3: Continue to guide development away from sensitive environmental resources.

Objective 3-4: Establish best management practices for environmental stewardship on West Bradford Township parks and open spaces and promote these practices to Township residents for implementation on their own properties.

Objective 3-5: Promote the conversion of highly managed manicured landscapes to native, more ecologically diverse landscapes and educate the public on the impacts of invasive species on the local environment.

Objective 3-6: Educate the public on

the economic benefits derived from the preservation of natural resources and the services they provide, including their role in combating and mitigating the impacts of climate change.

Goal 4: Connections – Create a Township-wide network of interconnected open space, natural greenways, historic sites, and trails that protect scenic views, ensure habitat preservation, create wildlife corridors, provide a suite of ecosystem benefits, and create passive recreation opportunities for Township residents.

Objective 4-1: Preserve to the maximum extent possible the connectivity of adjacent natural resources during the land development process.

Objective 4-2: Develop a Township-wide conceptual trail plan for prioritization and implementation.

Objective 4-3: Ensure that new developments include trails, sidewalks, and bikeways that connect residents to destinations in West Bradford and regional trail networks where appropriate.

Objective 4-4: Collaborate with neighboring municipalities to ensure greenways and trail facilities extend beyond municipal boundaries.

Goal 5: Collaboration – Strengthen existing and build new community and municipal partnerships and volunteer opportunities to expand and enhance an excellent public parks, open space, and recreation system.

Objective 5-1: Evaluate the creation of a multi-municipal committee with representatives from adjoining municipalities and local stakeholders to coordinate issues of open space, trails, and recreation.

Objective 5-2: Work with the Downingtown Area School District to determine recreation or trail opportunities on School District property in West Bradford Township.

Objective 5-3: Plan recreational facilities and programs in the context of the regional community.

Objective 5-4: Build volunteer involvement in the park system by considering an adopt-a-park program through partnerships with businesses, churches, civic clubs, friends groups, and neighborhood and community groups located near each park to assist with one-time and recurring park maintenance tasks.

Goal 6: Health and Wellness – Contribute to the health and wellness of residents and support active lifestyles, and mental and emotional wellbeing, by providing and promoting close-to-home recreation opportunities.

Objective 6-1: Provide family-oriented community events at Township parks to bring residents together and build the sense of pride in and identity for the Township.

Objective 6-2: Expand opportunities for self-directed recreation, through the provision of facilities and the promotion of information on where people can enjoy nature, engage in physical activity, and socialize with family and friends.

Objective 6-3: Support community recreation providers including the Downingtown Area Recreation Consortium, West Bradford Youth Athletics, and West Bradford Little League, by allowing use of park facilities and promoting their programs.

Objective 6-4: Provide educational programming and opportunities for residents to participate in community gardening.

Goal 7: Renewal – Keep park areas, trails, and recreation facilities in top shape for safe, clean, and enjoyable use by residents by investing in

Map 1-1

Regional Recreation

West Bradford Township, Chester County



- Streams
- Water Bodies
- Roads
- Existing Regional Trail
- Planned Regional Trail
- Existing Trails
- Sidewalks
- PA Bike Route L
- Public Preserves
- Private Preserves
- Golf Courses
- Municipal Parks and Preserves*
- Other Municipal Land
- Recreational Land
- Private Recreational Facilities

* Municipal Preservers may not have public access or amenities.
** The future community park is not currently open to the public.

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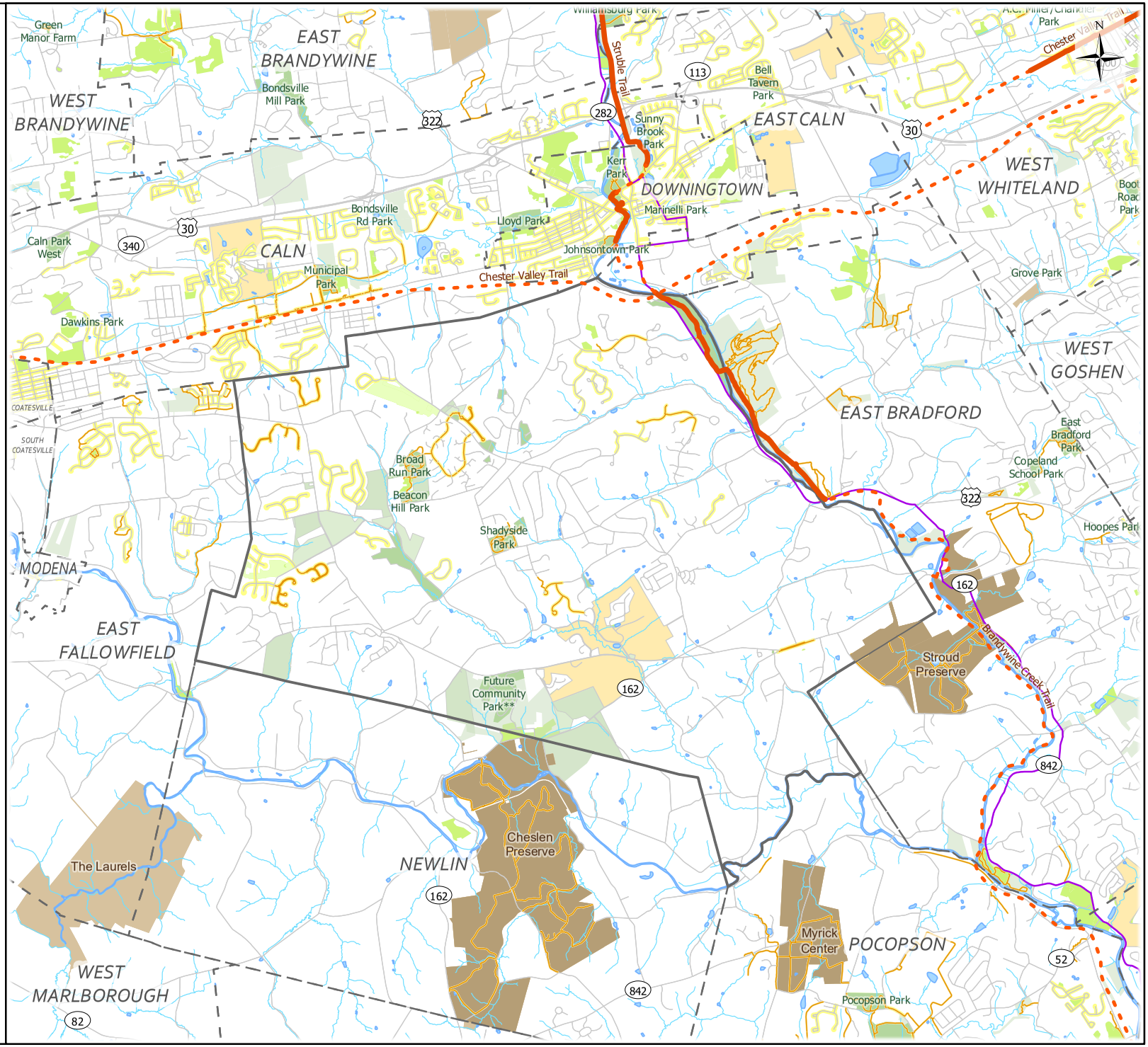
BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2020

Map Created: December 9, 2020

Date Exported: 2/14/2022



maintenance, removing underutilized facilities, and developing new recreation facilities and trail connections.

Objective 7-1: Continue effective maintenance practices that provide quality park experiences by establishing standards of care for each park site and completing regular safety inspections.

Objective 7-2: Evaluate the need to hire additional staff to increase the capacity to maintain existing parks and recreation facilities.

Objective 7-3: Perform a comprehensive analysis of each park by identifying facilities, structures, amenities, and plantings that are in sub-par condition and prioritizing their rehabilitation.

Objective 7-4: Implement the Embreeville Park Master plan (see Appendix F) to expand the recreational opportunities, preserve open space, natural and cultural resources; and enable special events.

Goal 8: Accessibility, Equity, and Inclusion – Remove barriers to participation and serve residents equitably, regardless of location, age, ability, or socioeconomics, with parks, recreation facilities, and programs that are inclusively designed to provide all people the opportunity to play, learn, and explore.

Objective 8-1: Ensure that provisions are made for those in need of financial assistance to participate in community recreation programs offered by West Bradford Township and its partners.

Objective 8-2: Continue to research and assess emerging trends in recreation activities and enhanced technology or infrastructure that may provide additional opportunities for all members of the community to engage in outdoor recreation and exercise.

Objective 8-3: Identify necessary accessibility improvements in each park and develop a plan for addressing deficiencies to include accessible routes to facilities, playgrounds with accessible play events and safety surfacing, and athletic courts and fields with accessible accommodations for players and spectators.

Goal 9: Financing – Secure and maintain financing to support the operation, development, and acquisition of park and open space areas, trail connections, recreation facilities, and recreation programs.

Objective 9-1: Identify Federal, State, County, and private foundation grants to leverage West Bradford Township funds for park planning and improvements, trail planning and development, and the purchase of open space or parkland.

Objective 9-2: Enhance existing and explore new public partnerships to efficiently and effectively advance a robust system of parks, trails, and open space.

Objective 9-3: Consider partnerships with private agricultural or other outdoor based enterprises that could help support the local economy, provide for educational and recreational opportunities, and enhance a sense of community.

Objective 9-4: Periodically evaluate the operating and capital budget for parks, recreation, and open space to ensure compatibility with sustaining and enhancing the quality of life of West Bradford residents.

Regional Context

West Bradford is situated in an area that places great importance on open space and natural resource preservation, access to recreational facilities and trails, and the cultural and historical fabric of our diverse and rich community. Chester County sets

a high standard for protecting these resources and their sense of place and provides programs, funding, and services to facilitate the goals of Chester County municipalities. Below is a brief summary of the many unique regional and local factors that influence parks, recreation, and trails planning in the region and in West Bradford.

Natural Resources – Regional

West Bradford Township lies between the East and West Branches of the Brandywine Creek, with just over half of the municipality draining to the west branch and the remaining areas draining either north or east toward the East Branch. The Brandywine eventually drains into the Christina River in Wilmington, DE, which then drains into the Delaware River and eventually into the Delaware Bay. Both the East and West Branches of the Brandywine are popular destinations for on-water recreation with access possible at the municipalities Brandywine Meadows Preserve and at nearby ChesLen Preserve in Newlin Township, which is owned and managed by Natural Lands.

West Bradford lies in an ecological area known as the piedmont, which is a plateau region located in the eastern United States that lies between the Atlantic coastal plain and the Appalachian Mountains. Along with the climate, geology, soils, and human influences on the land, this helps dictate the flora and fauna you might find in the Township. A far more comprehensive discussion of the local geology, plant communities, and exceptional natural areas in West Bradford Township can be found in Appendix B.

Natural Resources – Local

The Brandywine Conservancy is a private, non-profit land trust (Internal Revenue Code Sec. 501(c)(3)) located in Chadds Ford Township and actively working to help preserve land in West Bradford Township. The Conservancy's mission is to conserve and protect the land, water, and natural and cultural resources of the Brandywine-Christina watershed. Other nearby land trusts that are actively preserving land in and around West Bradford include Natural Lands and The Brandywine Red Clay Alliance.

Recreation – Regional

The Downingtown Area Recreation Consortium (DARC) represents and serves the communities of Downingtown Borough, Caln, East Brandywine, East Caln, Upper Uwchlan, Uwchaln, Wallace, West Bradford, and West Pikeland Townships, and the Downingtown Area School District. DARC provides a variety of adult and youth recreational and educational programming that are available to West Bradford residents at a reduced rate. In addition, other community recreational programming and sports are available through West Bradford Youth Athletics (WBYA), Downingtown West Little League (DWLL), and the Downingtown West Basketball League (DWBL).

Recreation – Local

West Bradford contains a number of popular parks that provide a variety of recreational opportunities such as volleyball courts, tennis courts, basketball courts, and baseball and softball fields. In addition, a number of paved trail systems offer opportunities to walk within these parks. The future development of the Embreeville property provides additional opportunities to expand on both active and passive recreation facilities in West Bradford Township.

Open Space Protection – Regional

Since 1989, the Commissioners of Chester County have created and funded a comprehensive and sustained effort to preserve the most productive non-irrigated agricultural soils in the world, provide park and recreation opportunities, and preserve significant natural areas. The County's Preservation Partnership Grant Program provides funding to municipalities and non-profit land conservation organizations to permanently preserve significant natural, recreational, agricultural, historic, and cultural land resources.

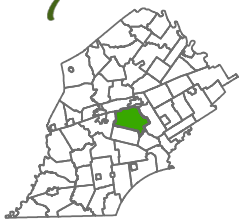
Open Space Protection – Local

To date, within West Bradford Township just under 3,000 acres of open space has been permanently protected. Some of this land is open for public or Homeowner Association use, while other protected

Map 1-2

Regional Protected Lands

West Bradford Township, Chester County



- Roads
- Streams
- Water Bodies
- Agricultural Easements
- Conservation Easements
- Existing Publically Owned Land & Open Space
- Municipal Parks and Preserves
- HOA and Other Protected Lands
- Public Preserves
- Township Boundary
- Adjacent Municipalities

Note: Not all lands shown as protected or as open space are open for public use. Many parcels encumbered by a conservation or agricultural easement are in private ownership, and certain municipally owned lands are not open for public use.

0 2,500 5,000 7,500 Feet

BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2020

Map Created: December 9, 2020

Date Exported: 10/11/2022

WEST BRANDYWINE
EAST BRANDYWINE
CALN
DOWNINGTOWN
EAST CALN
WEST WHITELAND
WEST GOSHEN
COATESVILLE
SOUTH COATESVILLE
MODENA
EAST FALLOWFIELD
NEWLIN
WEST MARLBOROUGH
EAST BRADFORD
POCOPSON
Beaver Creek
Valley Run
Broad Run
Taylor Run
Buck Run
Doe Run
West Branch Brandywine Creek
Municipal Campus
Poorhouse Rd.
Sawmill Rd.
Broad Run Rd.
Romansville Rd.
Shadyside Rd.
Strasburg Rd.
Valley Creek
Sugars Bridge Rd.
Telegraph Rd.
Marshallton Thorndale Rd.
Northbrook Rd.
Broad Run Rd.
322
282
113
30
340
162
842
52
82
100
N

lands are in private ownership, yet they still provide environmental and/or scenic benefits to the residents of West Bradford. These lands have been protected through a variety of partnerships over many years that include the Township, landowners, local land trusts, Chester County, and state agencies. Many private landowners who have permanently protected their properties are also responsible for the preservation efforts to date in West Bradford Township.

Planning Process and Timeline

West Bradford Township received a grant from the Chester County Vision Partnership Program in 2020 to fund the update to this Plan. The Brandywine Conservancy and Recreation and Parks Solutions were hired as the consulting team to complete the Plan. Major milestones in the planning process included completion of the inventory/data collection (February 2021, Steering Committee (SC) Meeting #2), recreational needs analysis and survey data review, open space prioritization mapping (April 2021, SC Meeting #3 and June 2021, SC Meeting #4), draft pedestrian and bicycle trails map and park concept sketch (August 2021, SC Meeting #5), Parks and Recreation Plan (September 2021, SC Meeting #5), draft report with phased recommendations (Date), and final report presentation (Date, public meeting).

Stakeholder and Public Involvement

Steering Committee

The West Bradford Township Board of Supervisors identified ten West Bradford residents and other key stakeholders and invited them to serve on the Plan's Steering Committee (SC). SC members were selected to represent a wide range of neighborhoods, backgrounds, and experiences within the community. Its members are:

Bill Cook, Member, West Bradford Planning Commission

Kevin Houghton, Member, West Bradford Board of Supervisors

Kelly Jurs, Secretary, Marshallton Conservation Trust

Nate Laverty, Board Member, West Bradford Youth Athletics

Edward Mackel, Member, Historical Commission

Heather Martin, Member, Recreation Commission

Richard Phifer, Director of Property and Recreation, East Bradford Township

Bob Portnoy, Chair, West Bradford Land Preservation and Sustainability Committee

Cynthia Prader, Member, West Bradford Historical Commission

Mike Simmons, Buildings and Parks Supervisor, West Bradford Township

The Steering Committee met seven times during the planning process. Agendas from the SC meetings can be found in Appendix C.

SC Meeting #1 – November 17, 2020, 1-3pm

SC Meeting #2 – January 27, 2021, 1-3pm

SC Meeting #3 – April 20, 2021, 7-9pm

SC Meeting #4 – June 17, 2021, 10-12pm

SC Meeting #5 – August 18, 2021, 3-5pm

SC Meeting #6 – September 30, 2021, 3-5pm

SC Meeting #7 – April 25, 2022, 7-9pm

Public Meetings

Three public meetings were scheduled when key phases of the project were presented and discussed in a public forum.

Public Meeting #1 – May 20, 2021, 4-7pm

This meeting was held outside under COVID protocols and did not provide a formal presentation. Material that would have ordinarily been presented in a formal presentation was provided on large-format boards for members of the public to view. Brandywine Conservancy staff were on hand to answer questions and assist the public in completing the activities provided. The same materials were



A frosty morning overlooking preserved land along the West Branch Brandywine in West Bradford Township.

provided for download on the project website for those who were uncomfortable attending in person.

Project overview

- Existing conditions inventory
- Draft vision and goals
- Hands-on public engagement regarding open space, recreation, and trails

Public Meeting #2 – June 7, 2022, 7pm

- Presentation of draft plan including parks and recreational needs analysis, draft recommendations for phased implementation, and draft pedestrian and bicycle facilities plan
- Public review and comment

Public Meeting #3 and Public Hearing – October 11, 2022, 7pm

- Presentation of the final plan
- Public review and comment

Online Survey

All West Bradford Township residents and landowners were invited to participate in a public survey (Appendix D) that was designed to collect the thoughts, preferences, and priorities of the community for open space, parks, recreation, and trails. The survey was available online on the Township's website, and paper copies were also available at the municipal building. A link to the online survey was promoted in a series of emails from West Bradford Township and members of the Steering Committee.

Key Person Interviews

The Steering Committee identified individuals to be interviewed for this Plan update. Nine people were interviewed, and the interviews are documented in Chapter 2.

Website Updates

Throughout the planning process the municipal staff and the Consultant team kept the Township website updated with new documents and maps as they became available. The public was provided access to draft documents and was encouraged to submit comments and questions.

Chapter 2 The Setting



Background Document Review

There are numerous existing plans that provide important background information and context for open space, parks, recreation, environmental resources, trail and bikeway planning in West Bradford Township. Many of the documents have been adopted at the state, county, regional, or municipal levels, while other documents have been published by private non-profit organizations or government agencies as policy/guidance. Below is a summary of the most relevant documents as they relate to the West Bradford Township Open Space, Recreation, and Environemental Resources Plan (OSRER) and information they provide regarding open space, parks and recreation, and trails and bikeways.

West Bradford Township Planning Documents

The following planning documents for West Bradford Township were reviewed for elements that could help shape the future of open space, recreation, and trails: Zoning Ordinance; Subdivision and Land Development Ordinance; Open Space, Recreation, and Environmental Resources Plan (1993); Comprehensive Plan (2020); Land Preservation Plan (2020); and Creating Connections: Country Paths and Village Sidewalks (2004). The Township's Zoning Ordinance also provides extensive provisions for the protection of natural resources, including the setting aside of certain lands for open space within certain development scenarios, the protection of wetlands, the conservation, protection, and restoration of riparian buffers (streamside woodlands), and the prevention of significant loss of woodlands and hedgerows from development.

The recently completed update to West Bradford Comprehensive Plan places significant attention on the protection of natural resources and open space as one of its three guiding principles in fostering a sustainable and resilient future for the Township through 2030 and beyond. A number of natural resource and open space recommendations are identified, including the update and completion of this plan.

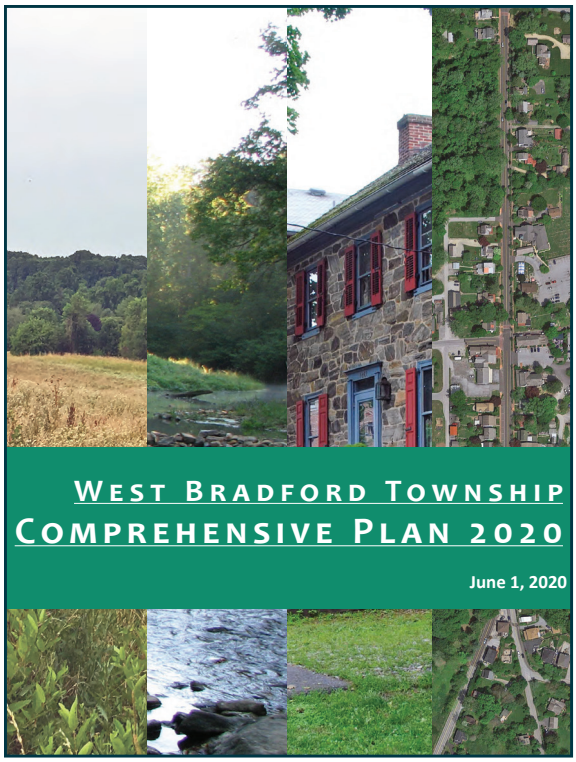


Figure 2.1 - Front cover of West Bradford's Comprehensive Plan

Within the Zoning Ordinance, both the R-1C Residential District and Unified Development Area District set requirements for open space provision to ensure the natural character of the tract be maintained and that sensitive environmental resources are conserved and the opportunity for active and/or passive recreation be provided.

Subsection 385-68 of the Subdivision and Land Development Ordinance provides guidelines for the provision of park, recreation land and open space needs of the additional residents or employees that will result from the land development. In developments that result in ten or more dwelling units, minimum standards are set for the provision of playgrounds or neighborhood park acreage. Sidewalks, with a minimum width of 4.5 feet, are required in all new residential subdivisions and new commercial land development within the Township. Wider sidewalks are required along certain streets and alongside certain development types.

Caln Township Comprehensive Plan (2017)

Located to the north of West Bradford Township, Caln Township provides a number of commercial areas and other community services for the area, including a Southeast Pennsylvania Transportation Authority (SEPTA) train stop. Elements in their Comprehensive Plan that are relevant for the West Bradford OSRER Plan include a focus on natural resource conservation, expanded bicycle and pedestrian opportunities, and environmental sustainability. The plan also includes a mobility and connectivity study action plan that highlights several potential trail connections between the two municipalities, which may promote and provide for non-motorized connections to the commercial services and other facilities Caln has to offer.

Downingtown Borough Comprehensive Plan (2015)

Along with Caln, Downingtown is the closest commercial center for many neighborhoods within West Bradford Township, providing a variety of retail establishments, as well as local dining and entertainment options. Downingtown also serves as a hub for a variety of existing and planned regional trail connections that will ultimately provide trail connections to the cities of Philadelphia and Lancaster, as well as northward toward Marsh Creek State Park and the Borough of Honey Brook. Downingtown is also home to the closest Amtrak station that provides connections to Harrisburg, Philadelphia, and beyond.

Relevant to this plan, Downingtown's 2015 Comprehensive Plan identifies creating trail connections between local parks, schools, and privately owned areas for recreation, and specifically calls out the need to create opportunities to connect the existing East Branch Brandywine Trail with the Borough's trail system in Johnsontown Park and the areas in the vicinity of Borough Hall.

Map 2-1

Zoning

West Bradford Township, Chester County



- Roads
- Water Bodies
- Streams
- Estimated Tax Parcels
- Township Boundary
- C-1 - Commercial
- C-2 - Commercial
- C-2A - Commercial
- I - Industrial
- IM - Institutional/Mixed
- R-1 - Residential
- R-1C - Residential
- R-2 - Residential
- R-2A - Residential
- R-2B - Residential
- R-3 - Residential
- R-4 - Residential
- R-5 - Residential
- TND-2 - Traditional Neighborhood Development-2
- U.D.A. - Unified Development Area
- T.N.D. - Tradtional Neighborhood Design Overlay (Romansville Village)

0 2,000 4,000 6,000 Feet

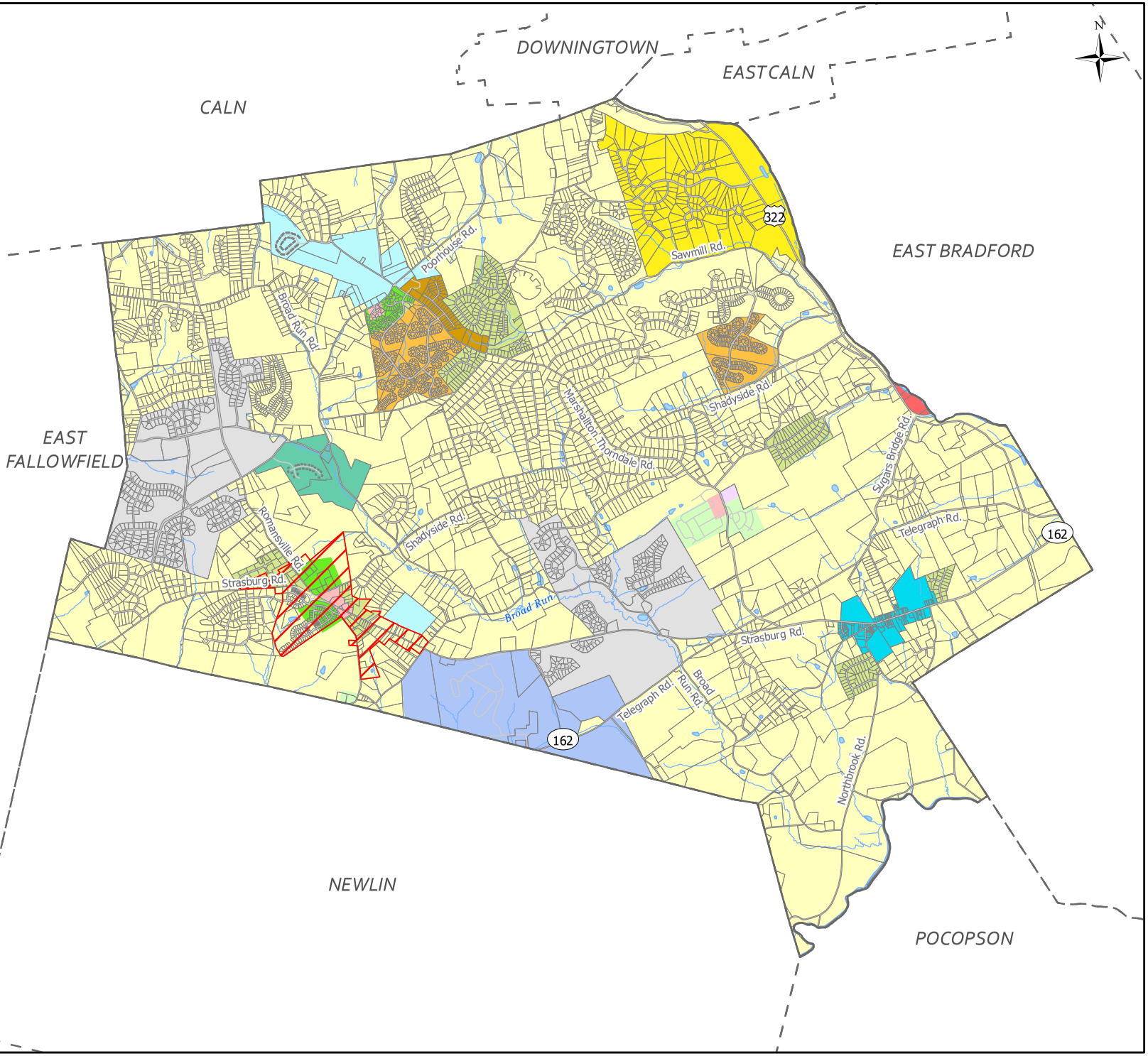
BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2020; Land Use data from DVRPC, 2015.

Map Created: December 9, 2020

Date Exported: 1/21/2022



East Caln Comprehensive Plan (2011)

Despite having a very short shared boundary with West Bradford Township, East Caln also provides important commercial and other community services to residents of West Bradford and is also a critical partner municipality in making future connections northward from the current terminus of the East Branch Brandywine Trail. Within the Plan, the Township recognizes the need to work cooperatively with neighboring communities to expand recreational facilities, provide trail linkages, and protect critical open spaces and natural resources important to the area.

East Bradford Township Comprehensive Plan (2016) and Open Space, Recreation, and Environmental Resources Plan (2009)

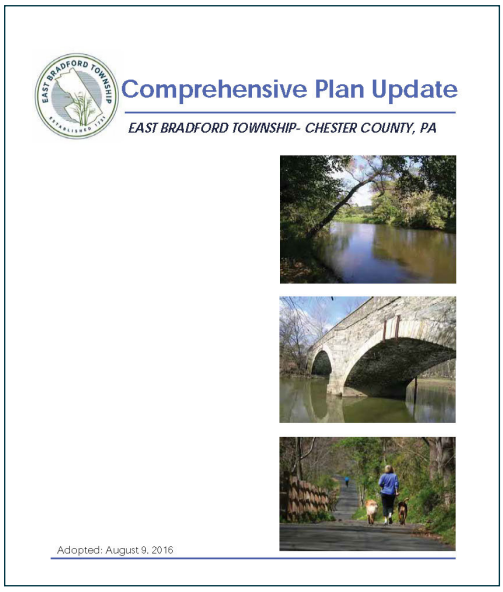


Figure 2.2 - Front cover of East Bradford's Comprehensive Plan

Sharing a significant portion of their eastern boundary, East Bradford is an important partner for West Bradford with respect to open space, existing and future trail connections, the preservation of important greenways, and the provision of recreational facilities for the residents of both municipalities. East Bradford is highly active in planning for these services for its residents and has developed two plans to help guide them in this pursuit.

Completed in 2016, the East Bradford Comprehensive Plan identifies four key priority focus areas within the Township, one of which, Bicycle and Pedestrian Circulation and Connectivity, is important for this Plan. Specifically, the plan recommends supporting regional connections, including the extension of the existing East Branch Brandywine Trail both north and south to Downingtown and Stroud Preserve respectively. Despite being an older Plan, the 2009 Open Space, Recreation, and Environmental Resource Plan has many goals and aspirations that are relevant to West Bradford and this planning effort. The Plan strongly promotes interconnected areas of open space, including those at a regional scale, encourages the fostering of partnerships for resource and greenway protection, and emphasizes participating in regional planning efforts regarding land use and resource protection, especially with respect to watershed areas and significant natural habitat areas that extend across municipal boundaries.

Pocopson Township Comprehensive Plan (2014) and Community Trails Feasibility Study (2010)

Pocopson Township shares its boundary with West Bradford Township along a short section of the West Branch Brandywine Creek in the vicinity of the village of Northbrook. Pocopson Township is a local leader in open space preservation and a strong advocate for and developer of trails within its community, although it lacks links to many of its surrounding municipalities, including West Bradford where only two crossings of the West Branch Brandywine, one at Northbrook Road. and the other along PA Route 842 in Pocopson Township, make connection more problematic.

Pocopson's Comprehensive Plan's overarching goal is to preserve and enhance the character of the Township – rural and suburban development with a focus on natural, historic, and scenic resources – while allowing for appropriate development to meet anticipated needs. Its goals for natural resources are to protect, restore, and maintain natural resource features, landscapes, and functions to sustain ecosystems, public health, and quality of life. Their goal

for parks, recreation, trails, and open space is to promote the establishment and maintenance of, and programming for, a network of park and recreation facilities, and permanently protect open space, to provide public health, ecological, economic, and quality of life benefits in a manner that is both cost effective and environmentally appropriate.

Pocopson's 2010 Community Trails Feasibility Study provides an extensive vision for off-road and share the road trail facilities across the Township, and includes two conceptual trail connections into West Bradford, one across the Northbrook Bridge, and the other a conceptual signed bikeway along North Wawaset Road.

Unionville Area Regional Comprehensive Plan (2011)

Newlin Township, West Bradford's neighbor to its southwest, is part of the Unionville Area Regional Comprehensive Plan that is a multi-municipal plan between Newlin, East Marlborough, and West Marlborough Townships. The purpose of the plan was to establish community goals and objectives through a joint planning effort. The plan indicates that parks and recreation are an essential part of a healthy community, with positive impacts on public health, the environment, the economy, and the quality of life. Community facilities, including parks and open spaces, are a source of community pride and help to create community identity. At the time the Regional plan was written, the Unionville Area had one public park, and one public park in the planning stages. None of the partner municipalities operate municipal recreation programs. Private organizations and school district facilities support the recreation needs of the population. The region has an abundance of protected open space and many outdoor amenities available to its residents.

Newlin's extensive agricultural land use is core to its community character and impacts many facets of life within the municipality. Newlin contains

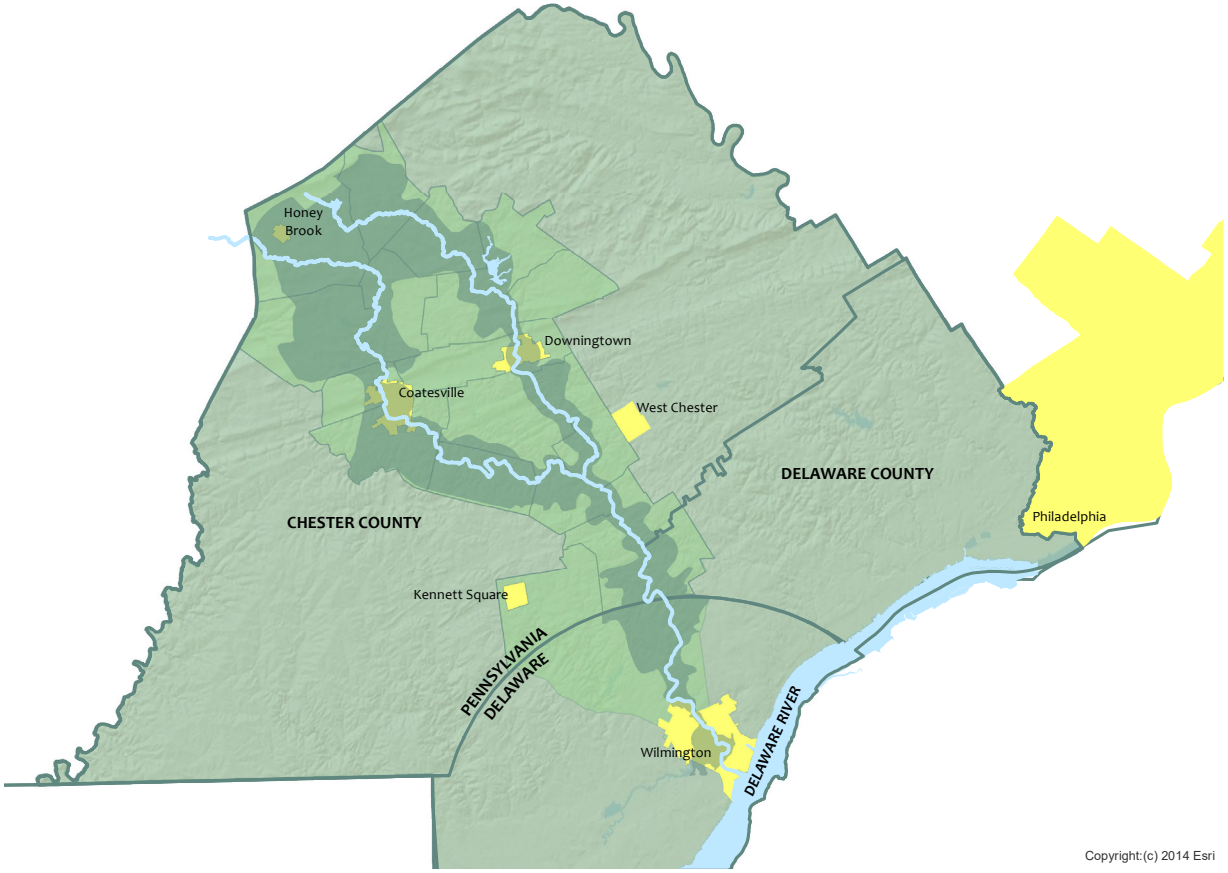


Figure 2.3 - Brandywine Creek Greenway Regional Map

extensive open space, both private and public, with ChesLen Preserve, owned and managed by Natural Lands, in close proximity to West Bradford Township which offers a variety of passive recreational opportunities to its residents, including access to the West Branch Brandywine for canoeing and kayaking. Beyond a wide network of equestrian trails that are utilized by that community through individual agreements between landowners, and those trails within ChesLen Preserve, Newlin contains very few additional trails.

East Fallowfield Comprehensive Plan (2015)

Connecting with West Bradford along its most western border, East Fallowfield Township's Comprehensive Plan seeks to promote environmental stewardship and responsible use of the land. Land uses along the shared border are primarily residential in nature, but the plan does identify some opportunities for "intermediate recreation" bike routes along West Chester Road and Oaklyn Road that connect these two communities. These routes were first identified in the Chester County Planning Commission's bikeway system plan that was developed in 2011.

Brandywine Creek Greenway, Concept Plan (2014, updated 2019)

The Brandywine Creek Greenway Concept Plan is a vision for a conservation corridor, centered on Brandywine Creek and the lands around it. The Brandywine Creek Greenway is a regional planning initiative of the Brandywine Conservancy. It involves 27 municipal partners in Chester and Delaware counties in Pennsylvania, and recently expanded to include New Castle County and the City of Wilmington in Delaware. The vision is to create a 40-mile long conservation and recreation corridor along both branches of the Brandywine that stretches from the Christina River in the City of Wilmington to the Pennsylvania Highlands in Honey Brook Township. The three core themes of the Greenway focus on natural resource conservation, historic resource preservation, and recreation and trails.

Brandywine Creek Water Trail Feasibility Study

A feasibility study for a proposed water trail from the Downingtown and Coatesville areas to Brandywine Creek State Park in Delaware was completed in 2020. A range of recommendations for trail implementation centered on additional potential access sites and amenities, recreational safety, trail management and operations, public information, volunteerism, education, and partnerships, conservation and stewardship.

Access to the East Branch Brandywine is identified at West Bradford Township's Brandywine Meadows Preserve with goals to improve trail access to the put-in location, as well as providing wayfinding and informational signage to water trail users. Additional trail access locations identified near West Bradford are at the Northbrook Road Bridge and Ingram's Mill in East Bradford. The site of the old Route 322 bridge in East Bradford is also identified as a potential future water access site.

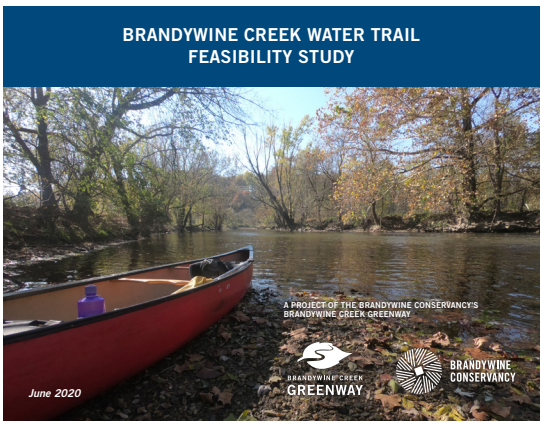


Figure 2.4 - Front cover of Brandywine Creek Water Trail Feasibility Study

Chester County Regional Comprehensive Plan – *Landscapes3* (2018)

Landscapes3 is the comprehensive plan for Chester County. The plan has four major purposes, including establishing a vision for preservation and growth across the county and in its municipalities; guiding county government decision-making; guiding municipal planning and implementation; and providing a framework for intermunicipal collaboration.

Landscapes Map

The Landscapes Map is Chester County's guide for growth and rural resource protection to help achieve our vision. The map's six categories—four in the Growth Areas and two in the Rural Resource Areas—guide future growth while protecting the special characteristics of the county. Each landscape may be appropriate for multiple land uses, with the mix and intensity varying to reflect the character of the specific landscape. The Landscapes Map also recognizes significant historic and natural resources through map "overlays."

Prepared by the Chester County Planning Commission. Adopted 2018.

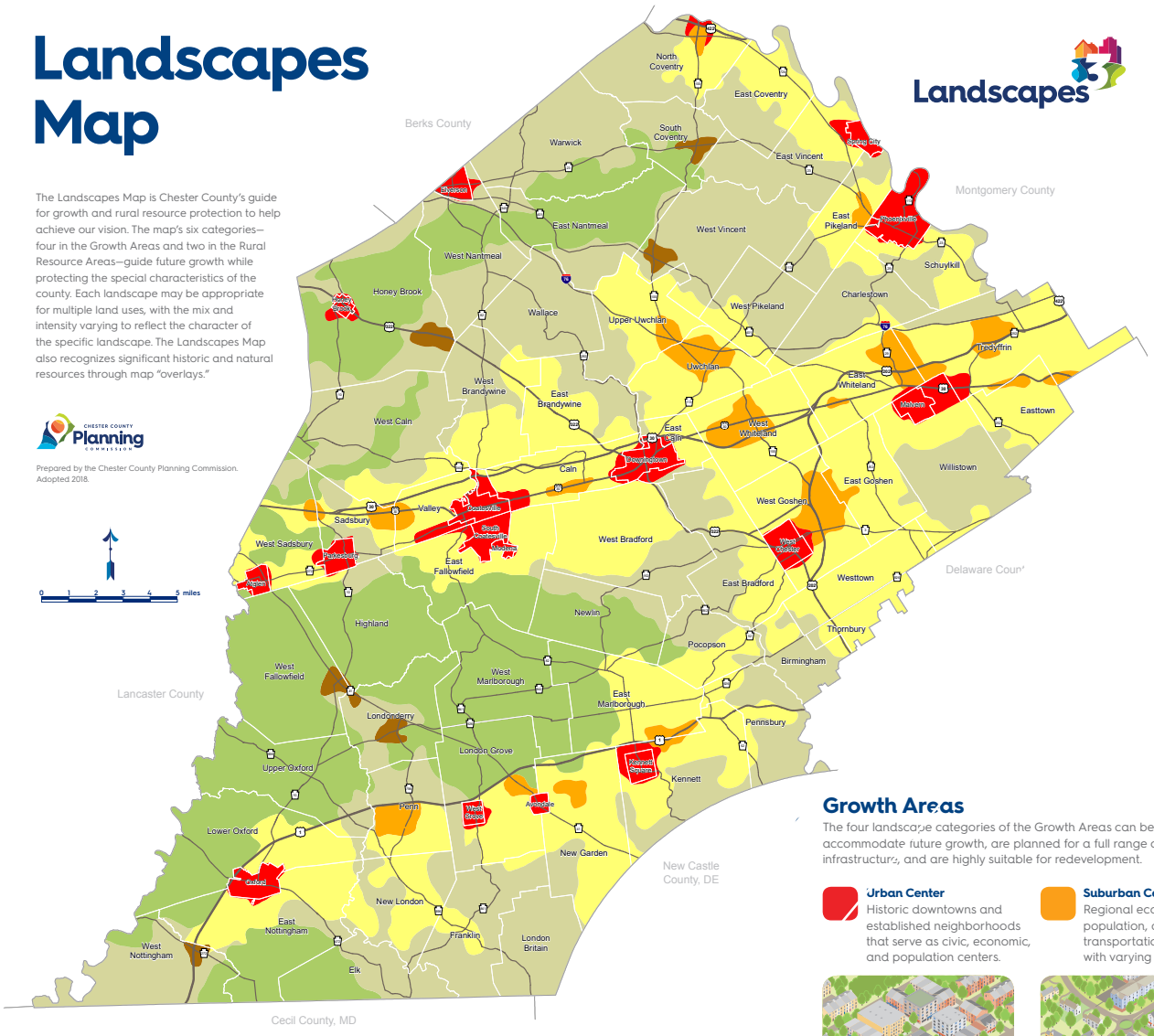


Figure 2.5 - Landscapes Map

Growth Areas

The four landscape categories of the Growth Areas can best accommodate future growth, are planned for a full range of infrastructure, and are highly suitable for redevelopment.

Urban Center
Historic downtowns and established neighborhoods that serve as civic, economic, and population centers.

Suburban Center
Regional economic, population, and transportation centers with varying land uses.



Suburban
Predominantly residential communities with locally-oriented commercial uses and community facilities.



Rural Center
Often an extension of a village at a historic crossroads.



Rural Resource Areas

The two landscape categories of the Rural Resource Areas are not appropriate for significant growth, strongly reflect the agricultural and rural character of the county, and serve as a focus for preservation efforts.

Rural
Open and wooded lands, with scattered villages, farms, and residential uses.



Agricultural
Large concentrations of active and diverse farm operations, along with related support services.



Landscapes3 articulates several key considerations for open space, parks and recreation, and trails and bikeways that are either in or within proximity to West Bradford Township. The plan also designates two landscape areas for West Bradford, one a growth area and the other a rural resource area (see Figure 2.5). The northern half of the municipality is classified as Suburban, while the southern half is designated as Rural. The classifications and categories serve as a guide for growth and rural resource protection across the county, while protecting unique characteristics in the community and Chester County at large.

Farmland under agricultural easement and unprotected priority farms are mapped within *Landscapes3* and are shown in Figure 2.6. West Bradford contains four unprotected priority farms of 10-25 acres identified in *Landscapes3*, which offer future potential opportunities for continued farmland preservation.

Potential conservation corridors are identified conceptually with the intention of guiding further land conservation efforts and aiding in the linkage of protected open space clusters. The eastern edge of West Bradford Township is identified as a protected open space cluster (see Figure 2.7), and one conceptual conservation corridor is shown in this area along the East Branch Brandywine linking East and West Bradford with the Borough of Downingtown.

Environmentally sensitive areas are identified to highlight important natural resources and guide land preservation to protect these areas. West Bradford contains one exceptional value drainage area in Broad Run that occupies a good portion of the western side of the Township (see Figure 2.8). In addition, it contains several streams identified as natural trout fisheries. Both the East and West Branch Brandywine and Broad Run are sources of water supplies for municipalities downstream. Additionally, West Bradford has several small core habitat areas, identified through the natural heritage inventory.

Growth areas surrounded by ½ mile service areas are mapped (see Figure 2.9) to illustrate the existing provision of recreational facilities in the region and to help identify potential areas for new recreational facilities, amenities, and improved access via sidewalks or trails. Within the Suburban growth area of West Bradford, Landscapes3 identifies much of that area as being beyond a ½ mile of a public recreational opportunity.

The Circuit Trail network is a planned, multi-use trail network in Philadelphia and Southeastern Pennsylvania. Landscapes3 recommends that municipalities and partners collaborate to advance local trails that tie into this broader network (see Figure 2.10). One existing Circuit trail connection along the East Branch Brandywine Creek is shown in and near West Bradford Township, while another proposed trail connection is shown just to the north in Caln Township.

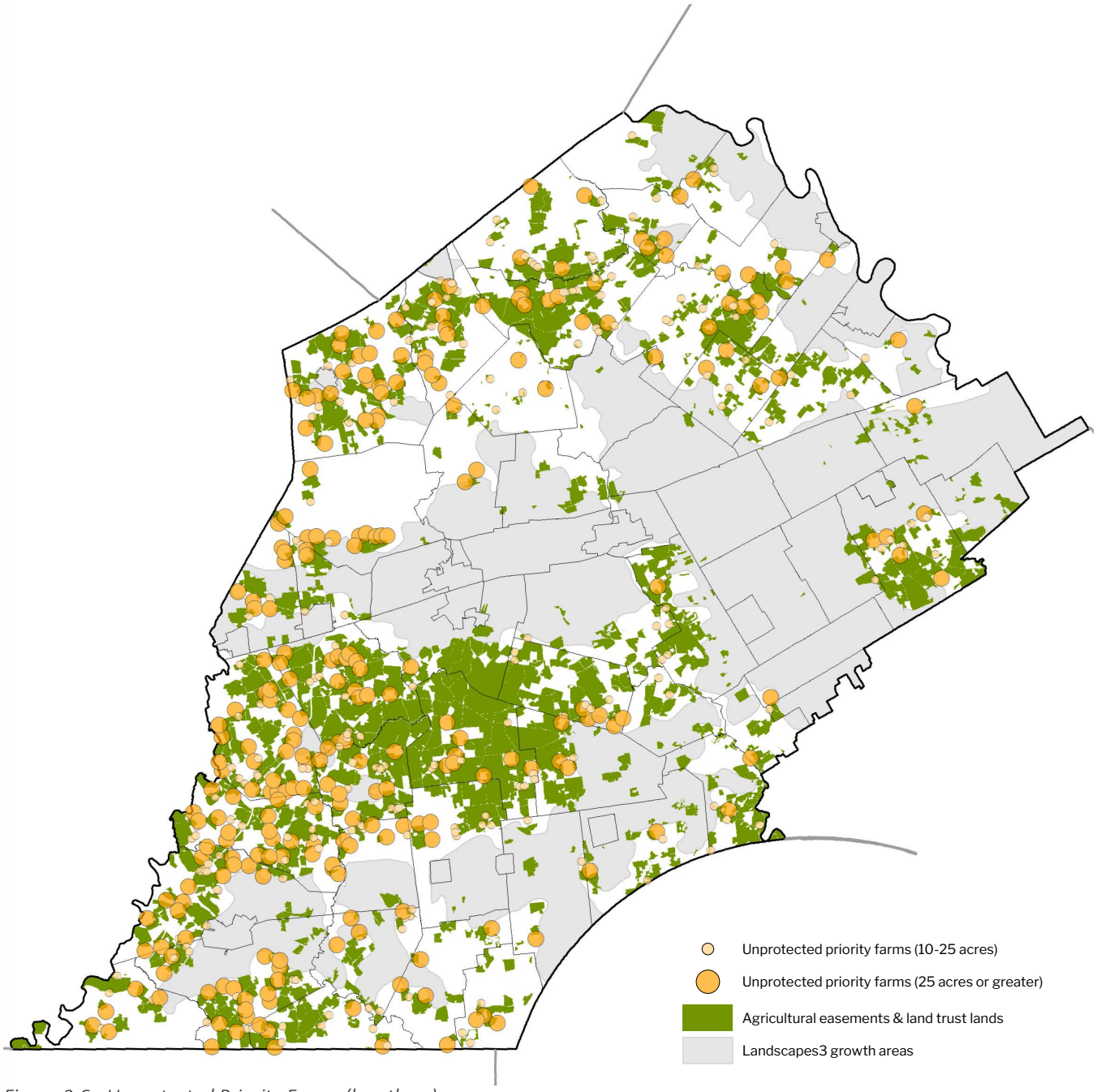


Figure 2.6 - Unprotected Priority Farms (by others)

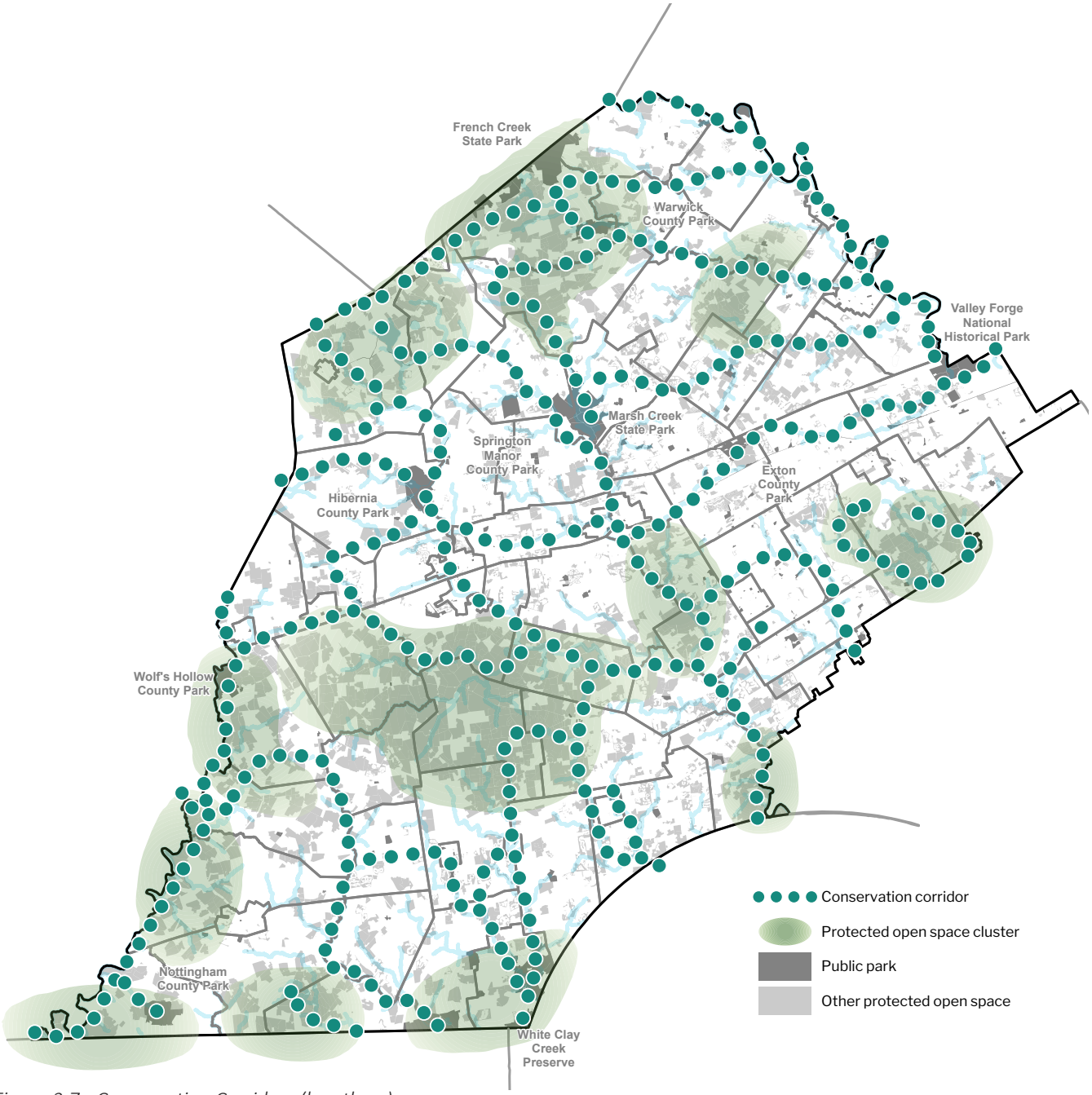


Figure 2.7 - Conservation Corridors (by others)

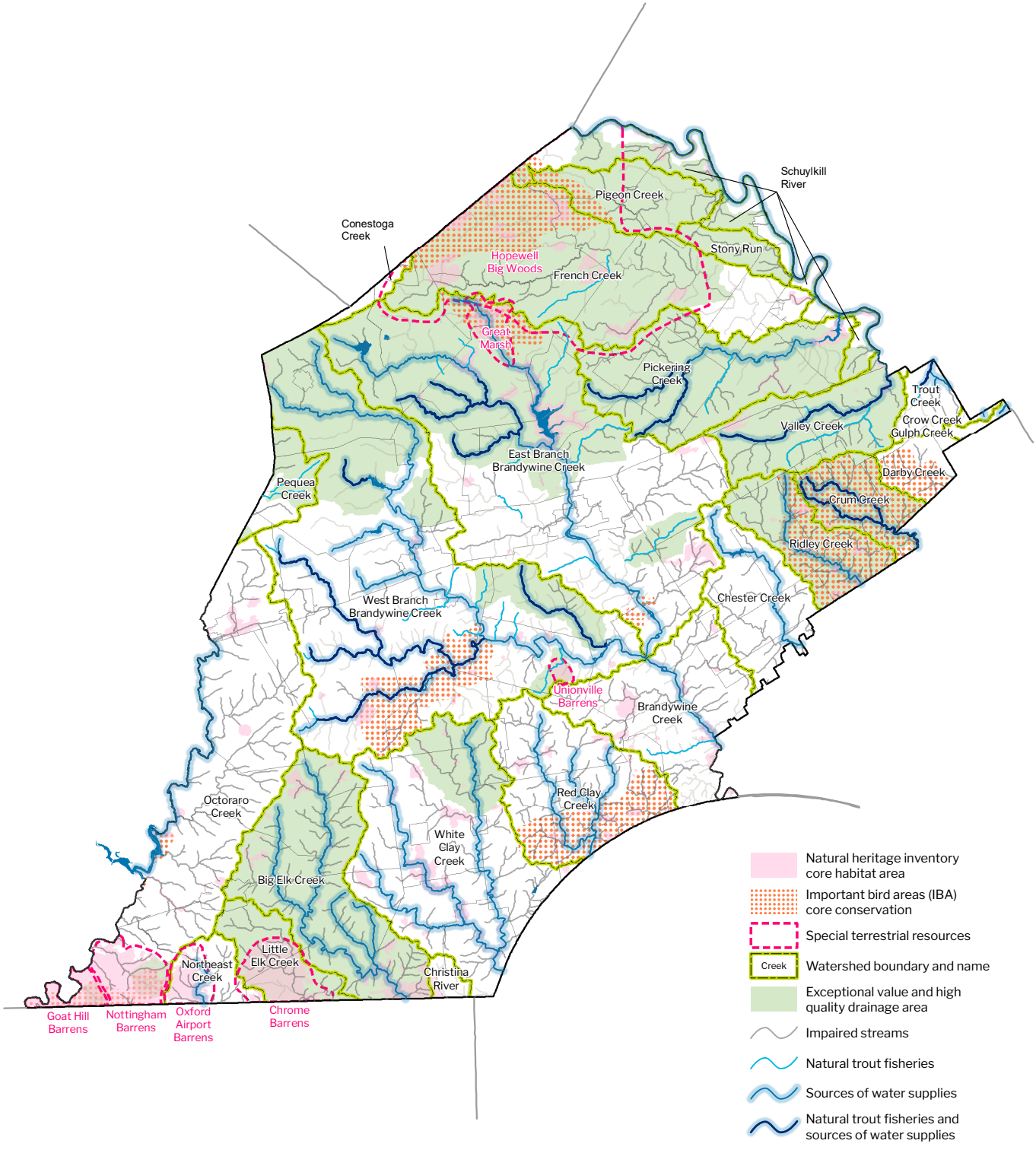


Figure 2.8 - Natural Resource Protection Areas (by others)

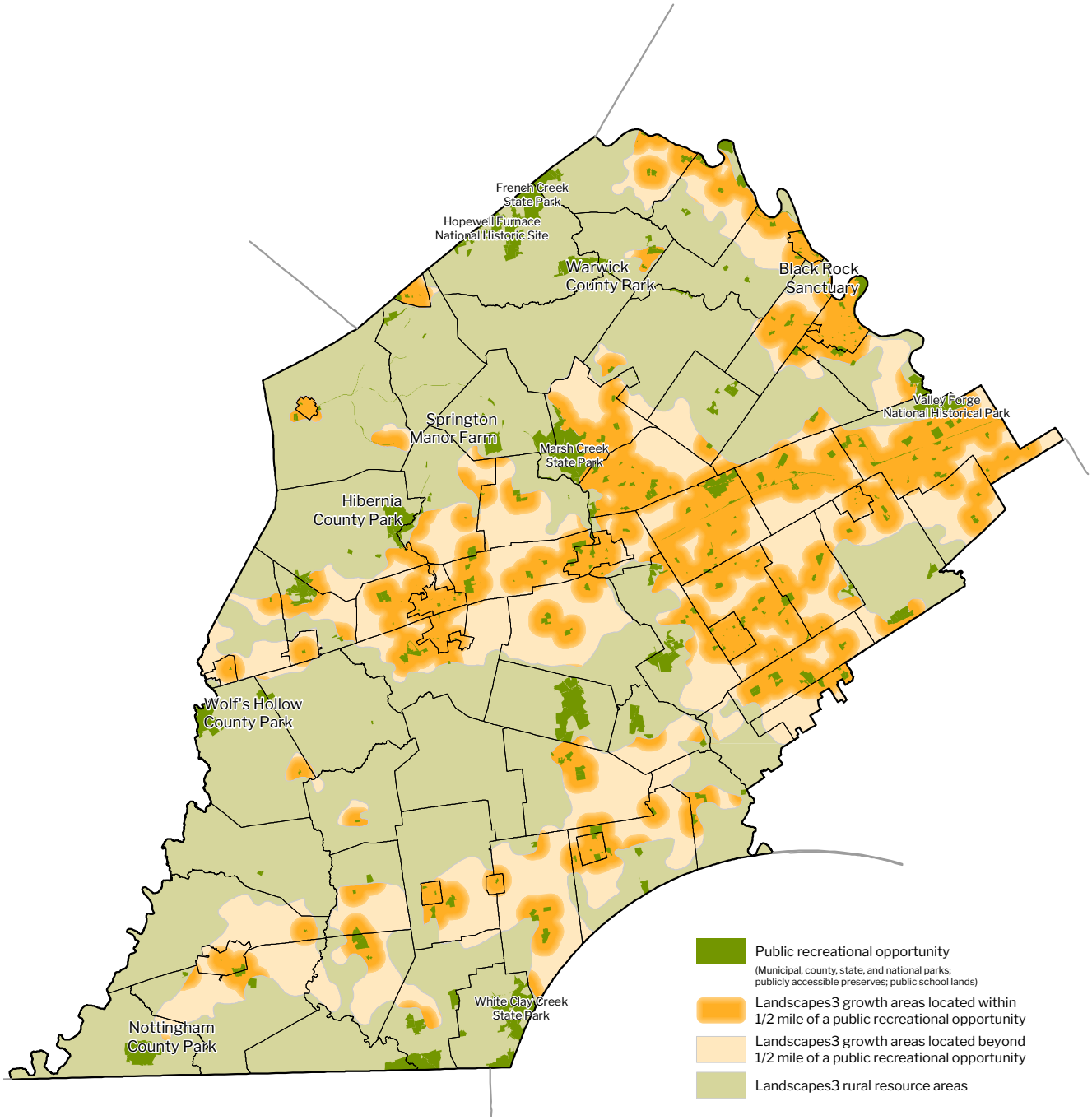


Figure 2.9 - Half Mile Recreation Service Areas (by others)

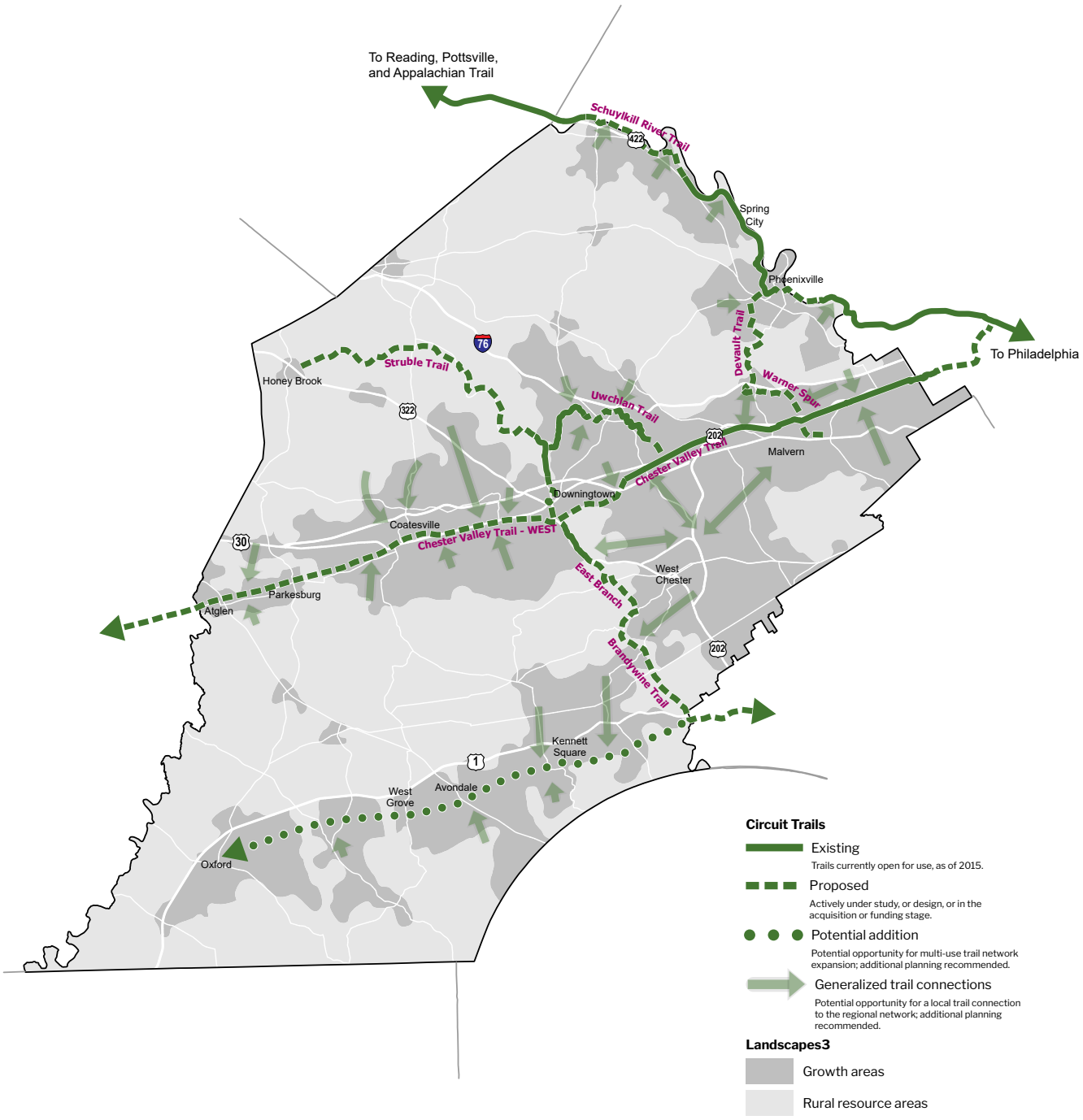


Figure 2.10 - Regional Trails (by others)

Chester Valley Trail - Extension and West (2017 & 2018)

The Chester Valley Trail Extension Study (2017) proposes a recommended alignment for the extension of the Chester Valley Trail from its current terminus in West Whiteland to the Borough of Downingtown and will provide connections to the existing Struble Trail and East Branch Brandywine Trails in the area. The Chester Valley Trail West Study (2018) identifies and evaluates potential routes for extending the trail westward from Dowingtown with the future 29-mile multi-use Enola Low Grade Trail located just outside Atglen Borough in western Chester County.

Both plans provide for potential trail connections from Brandywine Meadows Preserve to a wider regional network of trails that will connect users to commercial, recreational and cultural facilities throughout the center of Chester County and northward toward Honey Brook along the Struble Trail. They will also provide the potential for trail access all the way to both the cities of Philadelphia and Lancaster.

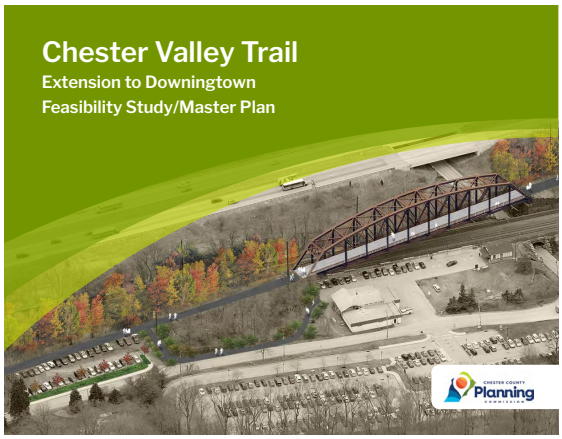


Figure 2.11 - Front Cover of Chester Valley Trail Study

Connections 2045 Long-Range Plan for Greater Philadelphia (2017)

DVRPC's Connections 2045 is a long-range plan for the nine-county, two-state, Greater Philadelphia region, with the goal of establishing a vision for development and growth in the region, while prioritizing transportation funding over a 28-year time horizon. The plan is structured around five core principles: sustain the environment; develop livable communities; expand the economy; advance equity and foster diversity; and create an integrated, multimodal transportation network.

West Bradford Township is classified as a Growing Suburb. Key planning policies in these communities often focus on growth management, open space preservation, congestion management, and community design. Projections indicate the 2045 municipal population forecast for West Bradford Township will be between 12,001 and 24,000 people. The percentage population change anticipated between 2015-2045 is classified by DVRPC as "Significant Growth," between +26% and +50%.

The western half of the Township is identified in the Land Use Vision map (see Figure 2.12) for infill/redevelopment opportunities and emerging growth, while the northern border of West Bradford is included in the Great Valley Ridgelines and Brandywine Creek Greenspace networks. The very southern portion of the Township is included in the King Ranch Region Conservation Focus area and the eastern portion of the Township is included in the Brandywine Valley Conservation Focus Area (see Figure 2.13).

Existing Conditions

In order to plan appropriately for the open space, recreational and environmental needs of the Township, it is important to consider existing natural, cultural, agricultural, and recreational features in and around West Bradford Township. This inventory of existing features reveals opportunities and constraints which are used to inform recommendations.

Regional Recreational Facilities

The regional recreation facilities map (Map 1-1) identifies existing and planned recreational facilities in West Bradford and the adjacent communities of East Bradford, Pocopson, Newlin, East Fallowfield, Caln, Downingtown, and East Caln Townships. The recreational facilities represented on this map include public parkland, public and

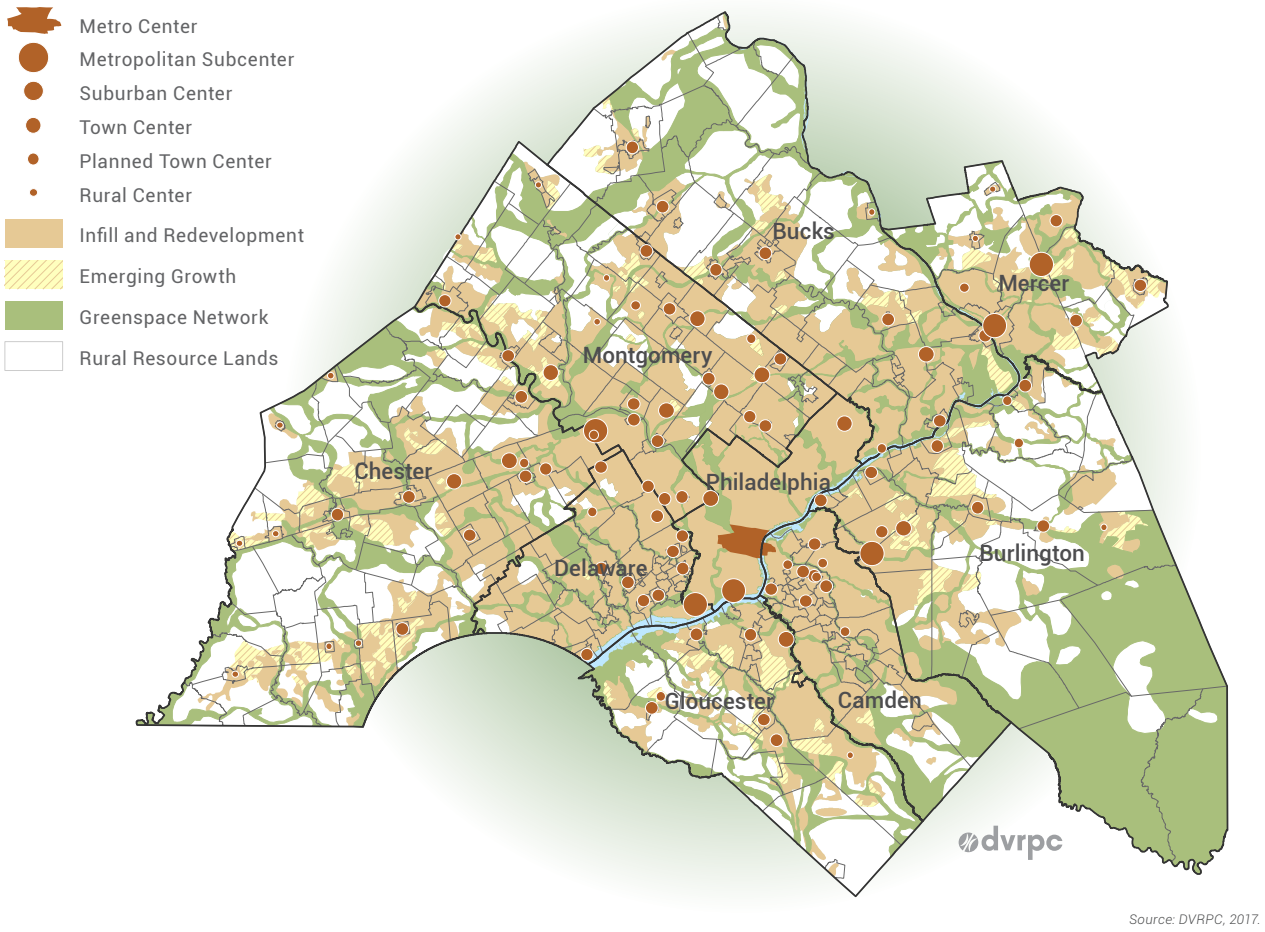


Figure 2.12 - DVRPC Land Use Vision Map (by others)

private preserves owned by land trusts, community and private recreational facilities, existing trails and bike routes, sidewalk connections, and golf courses. This map provides insight into the existing recreational opportunities in and around West Bradford and helps identify key recreational destinations as well as important trail links both locally and in the greater regional context.

When focusing on West Bradford, Map 2-2 shows a variety of both public and private recreational facilities, many of which are discussed in more detail in Chapter 5, Parks and Recreation Plan. While access to public natural lands is somewhat limited in West Bradford itself, a number of large public and private preserves with several miles of trails are located in close proximity to the Township. ChesLen and Stroud Preserves, both owned by Natural Lands (a small portion of Stroud is located in West Bradford, but no public access to the property is possible from within the Township), the Myrick Center, owned by Brandywine Red Clay Alliance, and The Laurels, a property owned by the Brandywine Conservancy and only open to its members, are all within a short drive of West Bradford and provide opportunities for passive recreation. In addition, and near West Bradford's Brandywine Meadows Preserve, is East Bradford's Harmony Hill Nature Area that contains a varied trail network for both hikers and mountain bikers. Other regional recreational assets include the existing East Branch Brandywine Trail, the Struble Trail, and the planned extensions of the Chester Valley Trail.

Protected Lands

Map 2-3 illustrates the protected lands in West

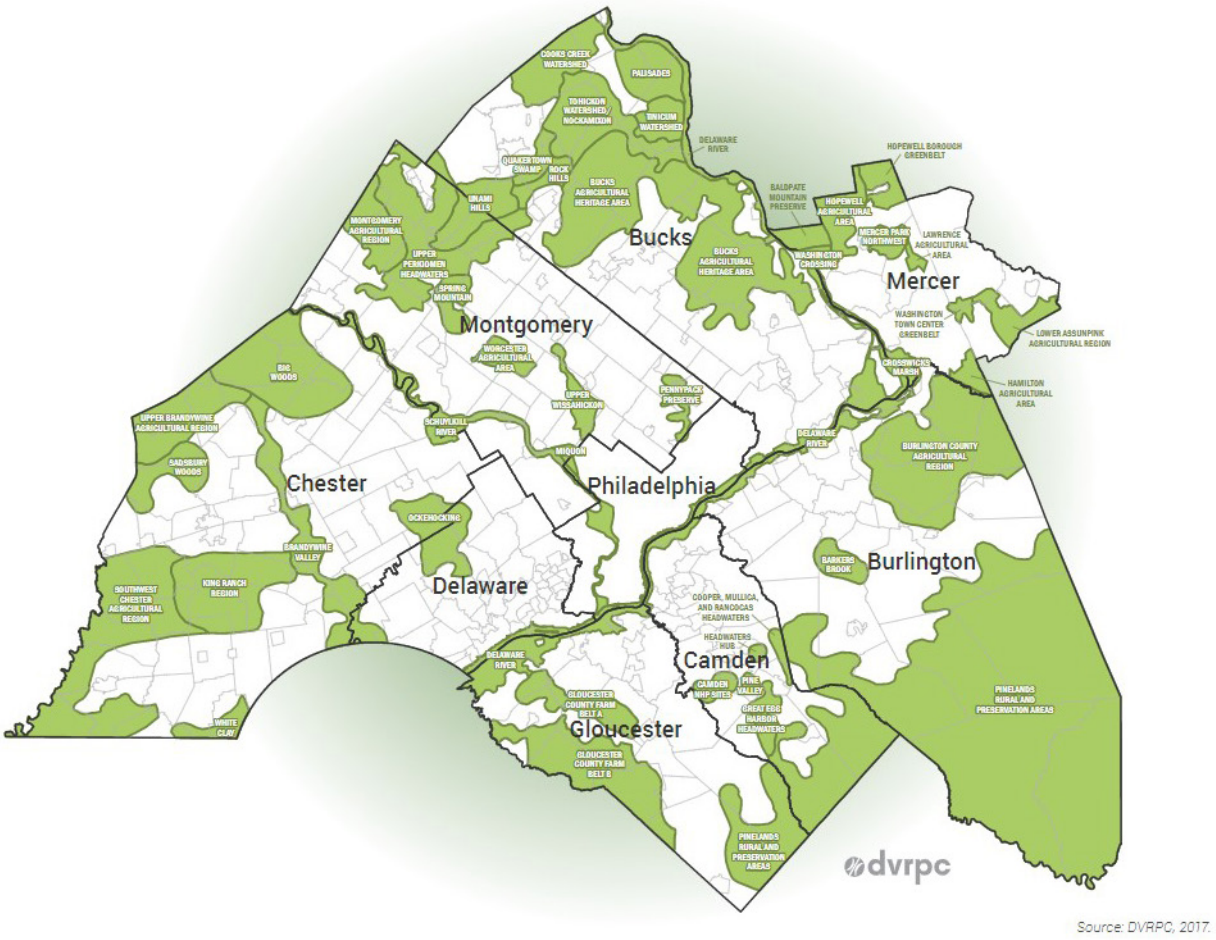


Figure 2.13 - DVRPC Conservation Focus Areas (by others)

Bradford Township. The protected lands are characterized into several different categories including lands conserved through either a conservation or agricultural easement, lands owned in fee by either the municipality or a land trust, and those lands protected through the development process and held within Homeowner Associations.

Currently, just under 25% (about 2,900 acres) of West Bradford Township is protected. Of that protected land, approximately 174 acres is publicly accessible (the Embreeville property increases this acreage by approximately 200 acres). The remaining protected land, including agricultural and conservation easements, HOA land, and some parcels owned by the municipality, are not publicly accessible. However, these areas still provide a variety of important community benefits to residents of West Bradford, such as protecting scenic views, reducing stormwater impacts, and protecting surface waters. The type of protected land found in West Bradford is divided centrally through the Township in the vicinity of Shadyside Road, with the northern half being dominated by lands held by Homeowner Associations, while the southern half is dominated by lands held in public ownership or privately preserved with agricultural or conservation easements. A few of these conservation easements provide an additional level of protection on publicly accessible lands such as the Stroud Preserve and ChesLen Preserve, but lands protected with conservation and agricultural easements are generally not open to the public. The existing protected lands map is important to consider when identifying opportunities and constraints for trail easements and additional recreational opportunities. For instance,

agricultural easements do not allow for trails.

Existing Land Use

Map 2-4 shows the existing land uses in West Bradford Township. These land use categories, defined by the Delaware Valley Regional Planning Commission, include agriculture, commercial, industrial, institutional, recreational, residential, transportation, undeveloped, utility, water, and woodland.

Based upon this map, the predominant land uses are residential, woodland, and agriculture, which together account for 87% of land uses in West Bradford Township (see Chart 1). While a little more of the agricultural land is concentrated in the southern half of the Township, and the reverse is true of residential land uses, generally these three primary land uses are evenly spread across the geography of West Bradford. Other land uses in West Bradford that are discernable are areas for recreation, small pockets of commercial activity that are spread throughout the Township, and several utility corridors that crisscross the landscape.

Water Resources

Map 2-5 represents the water resources of West Bradford Township and their associated watersheds.

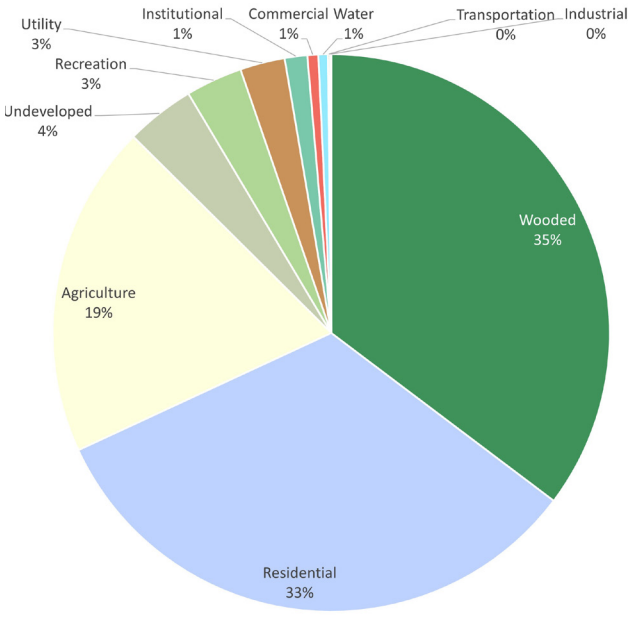


Chart 1 – Land Uses in West Bradford, 2015

West Bradford is almost equally split by watersheds that drain to either the West Branch Brandywine or East Branch Brandywine Creek. Broad Run watershed, which drains to the West Branch Brandywine Creek along the border with Pocopson Township, is almost exclusively contained within West Bradford Township. As such, it is an important waterway for the Township as it acts as the primary steward of almost all the land draining to and influencing the water quality of Broad Run. Broad Run is also recognized as an Exceptional Value (EV) waterway by the Pennsylvania Department of Environmental Protection (PA DEP), meaning it contains excellent water quality that must be protected and maintained.

Almost all the drainages in West Bradford are streams that meet the water quality requirements for their designated uses, known as attaining streams. However, one tributary of Broad Run is characterized as an impaired stream by PA DEP. A body of water is considered impaired if it fails to meet one or more water quality standards due to several potential causes. In the case of the tributary to Broad Run, its cause of impairment is due to urban runoff.

Natural Resources

Map 2-6 identifies important natural resources in West Bradford Township, including woodlands, interior woodlands, riparian corridors, and core habitat areas. These natural resources can inform the placement of trails and recreation areas and help identify priority lands for open space protection.

Despite the residential development in West Bradford, woodlands remain a significant feature of the landscape. In addition, several tracts of woodland are large enough to support interior woodlands, those areas of woodland that are afforded an additional 300' of woodland buffer around them. Interior woodlands tend to support a wider range of plant and animal species that do not thrive in forest edge or smaller patches of woodland that are impacted by human activities. While a number of

Map 2-2

Recreational Facilities

West Bradford Township, Chester County



- Streams
- Water Bodies
- Roads
- Estimated Tax Parcels
- Sidewalks
- Existing Regional Trails
- Planned Regional Trails
- Existing Trails
- PA Bike Route L
- Public Preserves
- Municipal Parks and Preserves*
- Municipal Property (not open to the public)
- Recreational Facilities
- Private Recreational Facilities
- Golf Courses

* Municipal Preservers may not have public access or amenities.
** The future community park is not currently open to the public.

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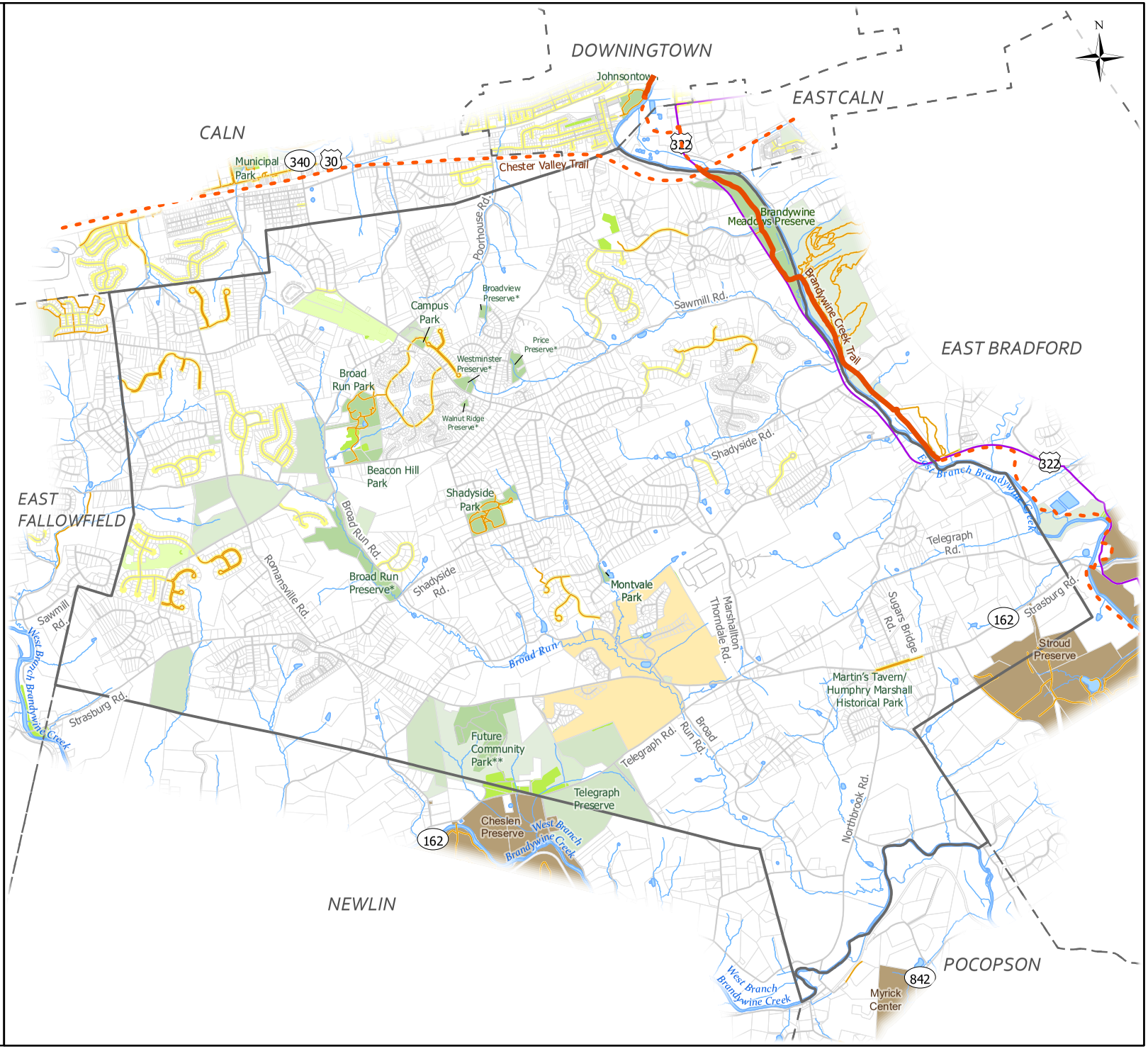
BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2020

Map Created: December 9, 2020

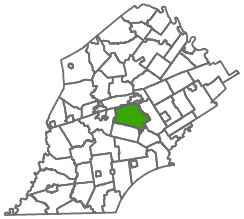
Date Exported: 7/26/2022



Map 2-3

Protected Lands

West Bradford Township, Chester County



- Public School
- Roads
- Streams
- Water Bodies
- Estimated Tax Parcels
- Agricultural Easements (160.19 acres)
- Conservation Easements (1,782.32 acres)
- HOA and Other Protected Lands (665.34 acres)
- Municipal Parks and Preserves* (140.13 acres)
- Municipal Property (not open to the public) (632.2 acres)
- Township Boundary
- Adjacent Municipalities

* Municipal Preservers may not have public access or amenities.

Feet
0 2,000 4,000 6,000

BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2020; Land Use data from DVRPC, 2015.

Map Created: December 9, 2020

Date Exported: 10/12/2022

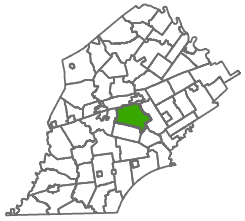
DOWNINGTOWN
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Caln Elementary School
Bradford Heights Elementary School
West Bradford Elementary School
Marshallton Thorndale Rd.
Poorhouse Rd.
Sawmill Rd.
Shadyside Rd.
Broad Run Rd.
Romansville Rd.
Strasburg Rd.
Telegraph Rd.
Northbrook Rd.
Sugars Bridge Rd.
East Branch Brandywine Creek
West Branch Brandywine Creek
Broad Run

Note: Not all lands shown as protected or as open space are open for public use. Many parcels encumbered by a conservation or agricultural easement are in private ownership, and certain municipally owned lands are not open for public use.

Map 2-4

Existing Land Use

West Bradford Township, Chester County



- Roads
- Streams
- Water Bodies
- Estimated Tax Parcels
- Agriculture ~ 2,570 ac. (22%)
- Commercial ~ 72 ac. (0.01%)
- Industrial ~ 8 ac. (0.001%)
- Institutional ~ 150 ac. (0.01%)
- Recreation ~ 378 ac. (0.03%)
- Residential ~ 3,858 ac. (32%)
- Transportation ~ 14 ac.
- Undeveloped ~ 460 ac. (0.04%)
- Utility ~ 299 ac. (0.03%)
- Water ~ 64 ac. (0.01%)
- Wooded ~ 4,030 ac. (34%)

0 2,000 4,000 6,000 Feet

BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2020; Land Use data from DVRPC, 2015 and updated to reflect current land use 2021.

Map Created: December 9, 2020

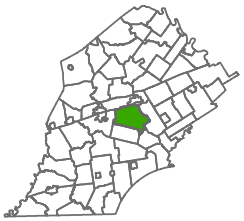
Date Exported: 1/25/2022

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Poorhouse Rd.
Sawmill Rd.
Shadyside Rd.
Broad Run Rd.
Romansville Rd.
Strasburg Rd.
Sugars Bridge Rd.
Telegraph Rd.
Broad Run
West Branch Brandywine Creek
Northbrook Rd.
N

Map 2-5

Water Resources

West Bradford Township, Chester County



- Streams
- 1st Order Streams
- Roads
- Water Bodies
- Wetlands
- Hydric Soils
- Floodplains
- BEAVER CREEK
- BROAD RUN
- EAST BRANCH BRANDYWINE CREEK
- VALLEY RUN
- WEST BRANCH BRANDYWINE CREEK
- Estimated Tax Parcels
- Township Boundary

Feet
0 2,000 4,000 6,000

BRANDYWINE CONSERVANCY

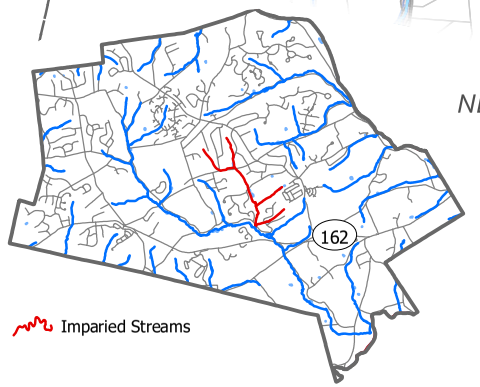
Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2020; Land Use data from DVRPC, 2015.

Map Created: December 9, 2020

Date Exported: 1/21/2022

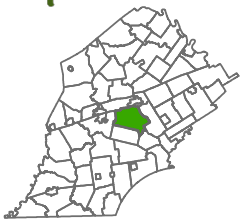
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VALLEY RUN
BEAVER CREEK
EAST BRANCH BRANDYWINE CREEK
WEST BRANCH BRANDYWINE CREEK
BROAD RUN
Marshalltown Thorndale Rd.
Poorhouse Rd.
Sawmill Rd.
East Branch Brandywine Creek
Shadyside Rd.
Broad Run Rd.
Romansville Rd.
Sugars Bridge Rd.
Telegraph Rd.
Strasburg Rd.
West Branch Brandywine Creek
Northbrook Rd.



Map 2-6

Woodland and Riparian Resources

West Bradford Township, Chester County



- Roads
- Streams
- Water Bodies
- PA Natural Heritage Areas: Core Habitat
- Interior Woodlands
- Woodlands
- Estimated Tax Parcels
- Adjacent Municipalities

Feet
0 2,000 4,000 6,000

BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2020; Land Use data from DVRPC, 2015.

Map Created: December 9, 2020

Date Exported: 5/19/2022

CALN

EAST CALN

EAST BRADFORD

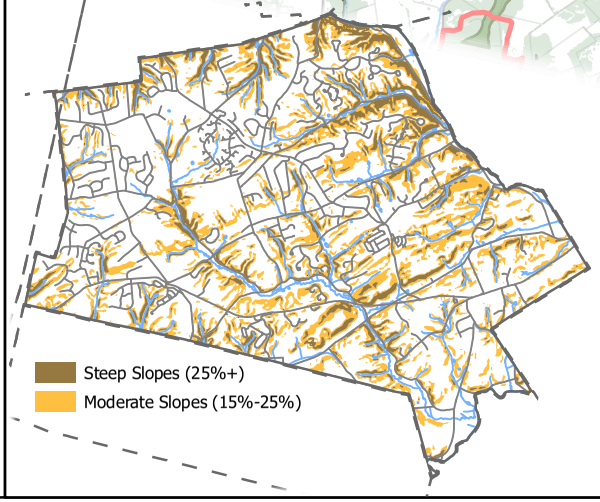
EAST FALLOWFIELD

NEWLIN

POCOPSON

30 340 322 162 842

Marshallton Thorndale Rd.
Poorhouse Rd.
Sawmill Rd.
Broad Run Rd.
Shadyside Rd.
Sugars Bridge Rd.
Telegraph Rd.
Strasburg Rd.
Romansville Rd.
Broad Run
West Branch Brandywine Creek
Northbrook Rd.



Steep Slopes (25%+)
Moderate Slopes (15%-25%)

interior woodland patches exist across the municipality, larger blocks are concentrated in the very northern and southern portions of the Township where steeper slopes or a lack of development pressure has left woodlands intact.

The woodlands of West Bradford also provide protection for the waters of the municipality's streams. Forested riparian buffers, an area of trees adjacent to a water body, lower water temperatures, help stabilize banks and filter runoff from nearby land uses. Not only do these areas protect water quality, but they also provide important habitat for both aquatic and terrestrial species. The areas of unforested riparian areas on the map offer opportunities for buffer restoration, which would further enhance water quality benefits. Wetlands (shown on the previous water resources map) and riparian buffers should be avoided when planning active recreational uses and be protected from disturbance, since the protection and enhancement of these areas are important for the protection and improvement of water quality and flood mitigation. Passive recreation uses, such as trails and passive, nature-oriented parks, could be considered appropriate uses in some riparian buffer areas.

West Bradford contains several small areas of Core Habitat as identified by the Pennsylvania Natural Heritage Program. Core habitat are areas that contain plant or animal species of concern at the state or federal levels, are exemplary natural communities, or exceptional native diversity. Core habitats delineate essential habitat to those species or communities that cannot absorb significant levels of activity without substantial impact to the elements of concern.

In conjunction with the update to this Open Space, Recreation, and Environmental Resources Plan, a Botanical Inventory and Report for West Bradford Township was completed. This report identifies over 800 plants within the Township, 65% of which are considered native to the area. The survey also identified several endangered, threatened, and rare species within the municipality. In addition, the report identifies and delineates several unique collections of plant communities considered Exceptional Natural Areas. These represent areas composed of relatively intact, species rich, native plant dominated communities that are worthy of permanent protection. The full Botanical Survey of West Bradford can be found in Appendix B.

Areas with multiple natural and water resources offer great opportunities for open space protection. Some of these areas may also offer opportunities for interpretive programs and diverse trail experiences, however areas identified as Core Habitat or Exceptional Natural Areas should be avoided as any disturbance may threaten them.

Agricultural Resources

Chester County is rich with agriculturally suited soils, including prime agricultural soils and soils of statewide importance. These soils are classified by the US Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) and are characterized by lands that produce high crop yields, although soils of statewide importance may require more management. Map 2-7 illustrates the agricultural soil resources present in West Bradford. This map shows that agricultural soils are plentiful in West Bradford, especially in the western and southern portions of the Township. A large portion of this land is used for agricultural purposes. In general, the areas that do not show agricultural soils are primarily developed. The impervious cover shows areas where agricultural soils have been impacted by development. Once altered or paved, agricultural soil cannot easily be returned to its original condition. Therefore, this important non-renewable resource must be protected and conserved whenever possible. The preservation of agricultural lands also helps to preserve the agrarian character that much of West Bradford is known for.

Protected and Developed Lands

Map 2-8 depicts the amount of protected land, the amount of unprotected land, and the amount of developed land in West Bradford. The corresponding graph included on the map shows that developed lands make up the largest portion of land at almost 40% of the Township. Protected lands in West Bradford

account for 24% of the land, while the remaining 37% of land is undeveloped and unprotected at this time, much of which is located on larger parcels, some of which are in close proximity to each other and result in an agglomeration of undeveloped lands.

Roadways and Utilities

Map 2-9 highlights the major roadways through West Bradford by classifying principal arterial, major arterial, major collectors, minor collectors, local distributors and local roads. This map also shows the estimated locations of existing pipeline corridors and easements. There are a variety of road classifications within West Bradford Township.

1. Principal Arterial: Route 322 runs along the eastern boundary of the Township and connects West Chester and Downingtown Boroughs.

2. Major Collector: There are several major collector roads bisecting West Bradford Township; Rt 162 which runs east/west, Shadyside Road which also runs in a general east/west direction, and Marshallton-Thorndale Road which runs northwest/southeast, intersecting with both of the other major collectors.

3. Minor Collector: These include Telegraph Road, Sugars Bridge Road, Romansville Road, and Glenside Road.

4. Local Distributor: Local distributors primarily serve to connect neighborhoods and other abutting land to roads with a higher functional classification. These roads include Broad Run Road, Northbrook Road, and Poorhouse Road.

These road classifications can help inform the placement and safety of trail locations. For instance, local roads and local distributors are designed for lower volumes and speeds and may be appropriate and safe for limited shared use with pedestrians and bicycles. Separate trails and other safety elements may need to be considered for trails along road corridors that see higher speeds and volumes.

Map 2-10 identifies the key destinations in West Bradford Township and the surrounding municipalities that Township residents and visitors like to go. This map shows local parks, recreational facilities, historic districts, and local schools. Transportation networks are also shown on this map, including roads, sidewalks, and trail networks.

Community Survey Results

A community survey was conducted to gather input from the West Bradford Township community on topics related to open space, natural resources, trails, and recreation. The survey was available from February 2021 until June 2021 and could be accessed online through a Survey Monkey link posted on the project's website. The survey was also widely publicized through social media outlets and also through municipal communications with Township residents.

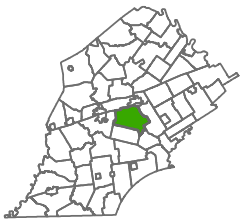
The survey consisted of 21 questions. An opportunity at the end of the survey allowed respondents to provide input on any related topic not addressed elsewhere in the survey. Responses varied by question, but a total of 632 respondents either fully completed or partially completed the survey.

Respondents of the survey expressed an interest in passive/nature-based activities and supported open space preservation efforts for the protection of natural resources and to limit development in the municipality. These sentiments tended to outweigh the demand for more active recreation facilities, however, there was interest in the addition of certain active recreation facilities, including an all-abilities playground and the addition of more soccer/multi-purpose fields. Park use within the Township is concentrated, not unsurprisingly, to Broad Run and Shadyside Parks, and to a lesser degree the Natural Lands properties of Stroud Preserve and ChesLen Preserve. Respondents also expressed a demand for additional online/print resources

Map 2-7

Agricultural Resources

West Bradford Township, Chester County



- Roads
- Streams
- Water Bodies
- Agricultural Soils
- Impervious Surfaces
- Developed Lands
- Estimated Tax Parcels
- Township Boundary
- Adjacent Municipalities

0 2,000 4,000 6,000 Feet

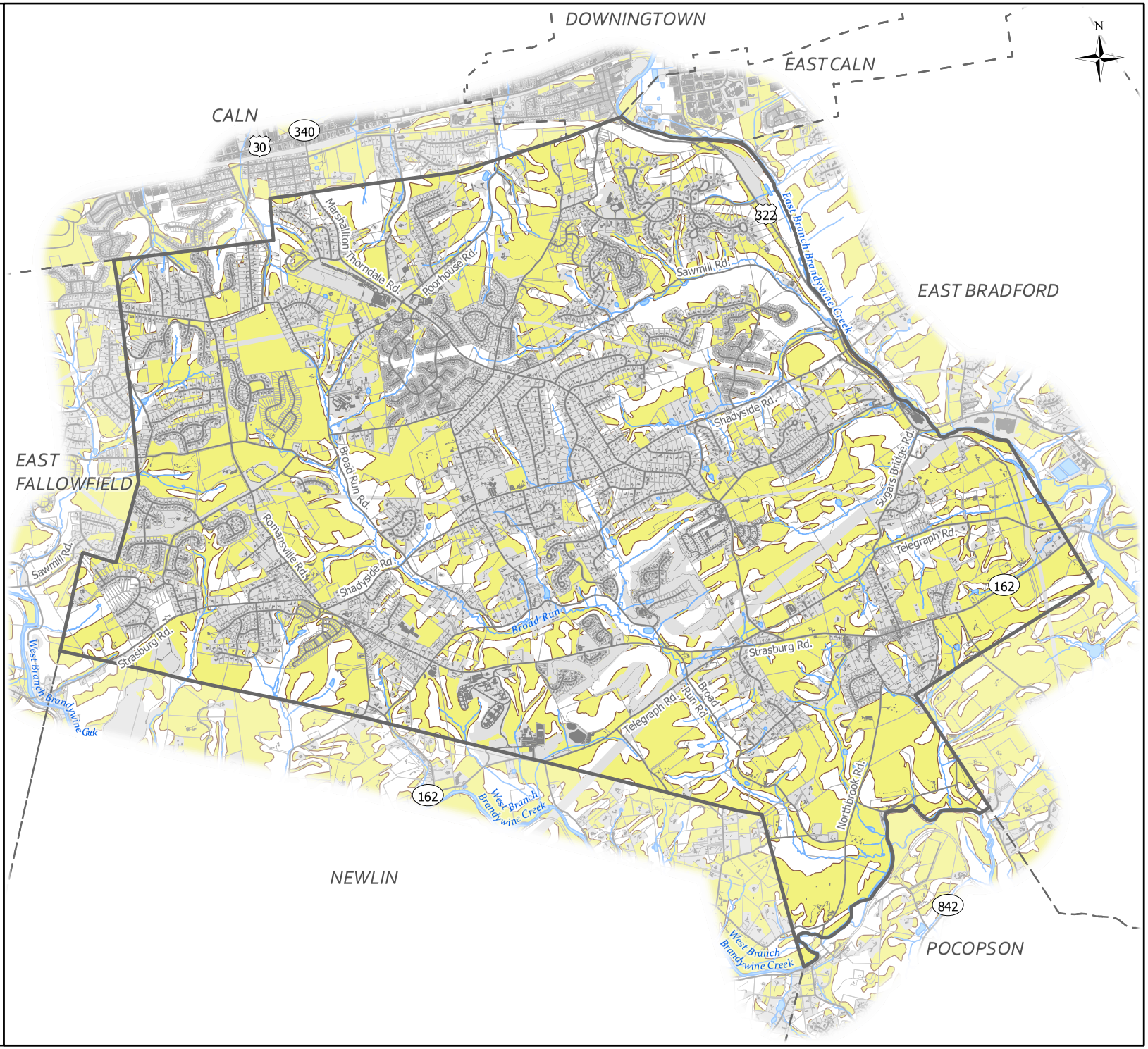
BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2020; Land Use data from DVRPC, 2015.

Map Created: December 9, 2020

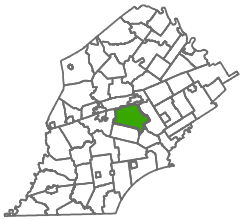
Date Exported: 1/21/2022



Map 2-8

Protected & Developed Lands

West Bradford Township, Chester County



- Roads
- Streams
- Water Bodies
- Protected Lands
- Undeveloped Parcels
- Developed Parcels
- Estimated Tax Parcels

Note: Not all lands shown as protected or as open space are open for public use. Many parcels encumbered by a conservation or agricultural easement are in private ownership, and certain municipally owned lands are not open for public use.

Feet
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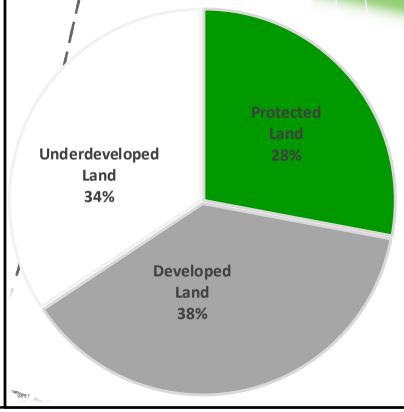
BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2020; Land Use data from DVRPC, 2015.

Map Created: December 9, 2020

Date Exported: 10/12/2022



DOWNINGTOWN
EAST CALN
CALN
EAST BRADFORD
EAST FALLOWFIELD
NEWLIN
POCOPSON
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162
Marshalltown Thorndale Rd.
Poorhouse Rd.
Sawmill Rd.
Shadyside Rd.
East Branch Brandywine Creek
Romansville Rd.
Broad Run Rd.
Strasburg Rd.
Sugars Bridge Rd.
Telegraph Rd.
Northbrook Rd.
West Branch Brandywine Creek
Broad Run

Map 2-9

Transportation & Utilities

West Bradford Township, Chester County



- Regional Rail Station
- Rail Lines
- Principal Arterial
- Major Collector
- Minor Collector
- Local Distributor
- Local
- Pipeline
- Utility
- Streams
- Water Bodies
- Estimated Tax Parcels

0 2,000 4,000 6,000 Feet

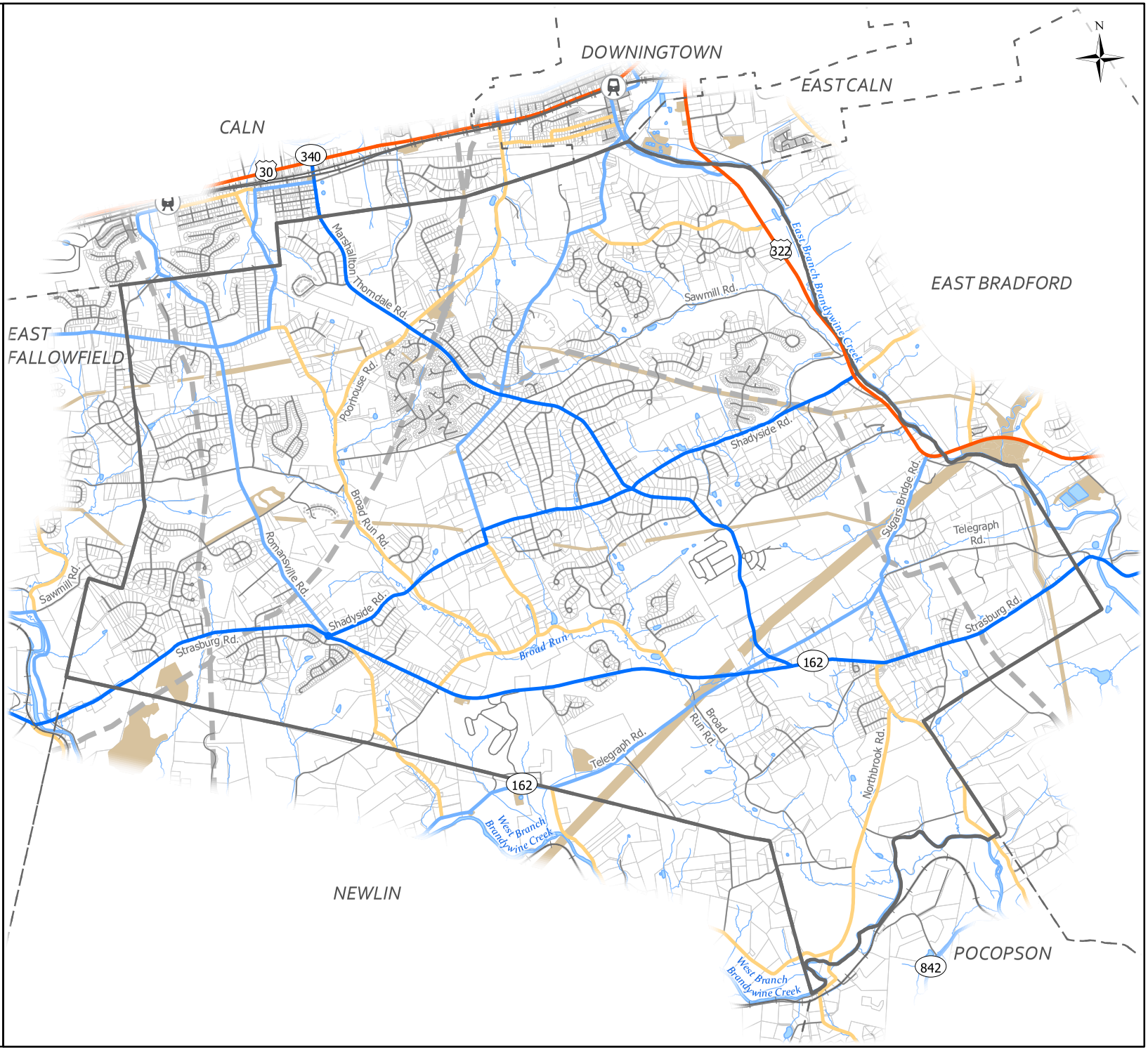
BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2020

Map Created: December 9, 2020

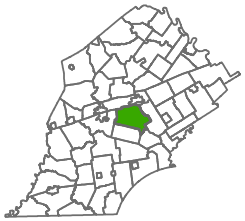
Date Exported: 1/21/2022



Map 2-10

Key Destinations

West Bradford Township, Chester County



- Public School
- Regional Rail Station
- Rail lines
- Existing Regional Trails
- Planned Regional Trails
- Existing Trails
- Sidewalks
- PA Bike Route L
- Golf Courses
- Public Preserves
- Private Preserves
- Public Recreational Facilities
- Private Recreational Facilities
- Commercial
- Municipal Campus
- Municipal Property (not open to the public)
- Municipal Parks and Preserves*

* Municipal Preservers may not have public access or amenities.

0 2,000 4,000 6,000 Feet

BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2020; Land Use data from DVRPC, 2015.

Map Created: December 9, 2020

Date Exported: 2/14/2022

EAST BRANDYWINE
CALN
DOWNINGTOWN
EAST BRADFORD
EAST FALLOWFIELD
ROMANSVILLE
VILLAGE OF MARSHALLTON
NEWLIN
POCOPSON
Downingtown Transit Station
Thorndale Transit Station
Bradford Heights Elementary School
West Bradford Elementary School
United Sports
Harmony Hill Nature Area
Highland Orchards
Broad Run Golfer's Club
Embreeville Property
Embreeville Athletic Complex
Cheslen Preserve
Stroud Preserve
Myrick Center
The Laurels
Chester Valley Trail
Brandywine Meadows Preserve
Brandywine Creek Trail
Valley Run
Broad Run
Valley Creek
West Branch Brandywine Creek
Buck Run
Marshallton Thorndale Rd.
Poorhouse Rd.
Sawmill Rd.
Broad Run Rd.
Romansville Rd.
Shadyside Rd.
Sugars Bridge Rd.
Telegraph Rd.
Strasburg Rd.
Northbrook Rd.
282
322
340
30
162
842

(maps, descriptions, etc.) about the parks and preserves in the Township. Survey questions and full survey results can be found in Appendix D.

Community Open House

In addition to an online survey, public input on the project was solicited at a Community Open House held at Broad Run Park on May 20, 2021 from 4-7pm. Due to COVID concerns, the Community Open House was held outside in a socially distanced manner. Attendees were provided with a variety of informational boards with which to provide their own thoughts and feedback on. These boards focused on natural resources, open space, trails, and recreation. Approximately 25-30 individuals attended the Open House, with a large proportion of those in attendance being Boy Scouts who expressed an interest in seeking a camp facility for their group within the municipality. Overall, attendees expressed an interest in conserving open space and natural resources, increasing access to creeks and streams, the provision of walking and biking connections within the municipality, the rehabilitation of older parks, and an interest in learning more about invasive species management, natural habitat management, and tree preservation that they may implement on their own properties.

Images of the completed boards from the Community Open House can be seen in Appendix E.

Key Person Interviews (Parks and Recreation)

The Steering Committee identified nine individuals (listed below) in the community to be interviewed with respect to Parks and Recreation for Update 2022. Interviews were conducted via telephone or virtual meetings and resulted in the general findings listed below.

Interviewees:

Director of Maintenance - West Bradford Little League (WBLL)

Soccer Commissioner - West Bradford Youth Athletics (WBYA)

President - West Bradford Youth Athletics

Township Buildings and Parks Supervisor - West Bradford Township

Director - Downingtown Area Recreation Consortium (DARC)

Member, Recreation Commission - West Bradford Township

Township Manager - West Bradford Township

General Manager - United Sports Training Center

Director - Chester County Parks and Preservation

Assets

Township Support of Recreation Partners

WBLL and WBYA have strong relationships with the Township. The Township is very helpful and easy to communicate with. Having financial support from the Township and use of the recreation facilities at the parks is critical to offer youth sports opportunities for Township families. DARC also has a strong relationship with the Township and feels the Township Manager and Buildings and Parks Supervisor are very supportive and accommodating. The community parks are able to be used for many different DARC programs, even the parking lots.

Township Recreation Commission

The special events sponsored by the Recreation Commission are well received. The Recreation Commission has new members to help support the parks and recreation system that can lead to more community involvement.

Township Parks

The parks are clean and well-maintained. A nice diversity of recreation facilities is available. The Township keeps recreation facilities up-to-date and looks at trends to provide facilities, such as the outdoor pod classrooms at Broad Run Park. WBLL and WBLL help to maintain fields at the Township parks, including mowing and fertilizing areas.

Issues/Challenges

Accessibility

ADA accessibility is a major issue, particularly at Beacon Hill Park and the Embreeville Athletic Fields. Parking at the Embreeville Athletic Fields is a problem. Visitors have to walk through a wetlands area to get to the fields from the parking lot. The Challengers special needs soccer program needs to have closer parking to the fields.

Staffing

The Township lacks the workforce to keep up with the maintenance needs of the parks, especially as the parks and recreation system grows. Some facilities could be better maintained. Safety issues need to be addressed, such as mending fences.

Private Youth Sports Competition

Competition for facility use from private youth sports leagues who can afford to pay more for use, due to charging higher program fees, is a huge issue. In particular, travel programs are using School District gymnasiums making them unavailable to WBYA.

Finances

The spin-off of Little League Baseball and Softball from WBYA to a separate organization has left its budget and finances up in the air, as the baseball and softball programs contributed a good amount of net revenue to WBYA. The COVID pandemic also shut down many DARC programs, meaning a significant amount of revenue was lost leading to staff being let go. Summer day camp is the largest revenue producing program for DARC and was not able to be held in 2020. Ashbridge Manor hosted all DARC fitness programs and is going out of business. Registration fees generally cover WBYA program expenses, but don't allow for sufficient funds for needed capital improvements. For instance, the ballfields have major drainage problems and need to be leveled.

Not Enough Fields

Having adequate field space is an issue, as soccer and lacrosse are growing and compete for field time. The fall season is manageable; spring is more difficult. Keeping the fields in good playing condition is problematic. Soccer is in a better position than baseball for facilities. The flat storm water area at Shadyside Park is usually dry and has been used for soccer practices. The Embreeville site will be a great help once it is developed as a park. Two areas at the current Embreeville Athletic Fields could be leveled to provide more field space.

High Indoor Rental Fees

WBYA has to pay to rent School District gymnasium space for its basketball program and pays fees for custodians as well. This pushes up the program cost for families.

Promotion

Getting the word out about DARC programs is difficult. The School District does not allow DARC to distribute program flyers in the schools or allow access to its email system to send information to families. It does allow flyers to be placed in the school offices. The Township helps by putting DARC program information in its newsletter and will soon send program information out with sewer bills. Marketing of programs by all Township recreation partners needs to be improved, especially enhanced use of social media. There should be more promotion of what's available at the parks and why people should get outside and be active. The parks could be used more for self-directed use and could be programmed more as well.

Inadequate Use of Schools/Lack of Indoor Program Space

At the time of the interviews associated with this plan, DARC was not permitted use of the school buildings because of the COVID pandemic. Not having gymnasium access is a big issue. DARC has no gymnasium to run programs in. Once the pandemic is over, DARC will have about 75 percent of the indoor space it needs if the School District allows them access again. DARC needs indoor spaces to run classes and programs for 10-15 people. Daytime access is especially needed.

Large Program Service Area

The DARC service area is very large. DARC cannot offer programs in all of the municipalities. People from one end of the service area will not drive more

than 15-20 minutes for programs; they see that as too far away. West Bradford Township is at the southern end of the service area.

Priorities for Parks and Recreation

- Accessing indoor program space (gymnasiums and meeting rooms)
- Expanding the Township trail network, including nature trails, and linking existing trails
- Develop a prioritized hierarchy of field improvements required across the park system
- Providing more hands-on play opportunities for children at the parks
- Providing more recreation opportunities for older adults at the parks
- Providing non-sports related activities for children
- Providing restrooms at the Brandywine Trail
- Better promotion of recreation opportunities, both facilities and programs
- Adding nature-based programming and signage at the parks
- Promote Leave-No-Trace ethics at municipal parks and trails.
- WYBA would like to start field hockey and flag football programs and expand soccer and lacrosse programs.
- DARC would like to offer programming for ages 5 and under, parent-child classes, adult sports leagues such as kickball, and more teen programs. Placing mileage markers on the loop trails at the community parks would help DARC to run a walking program.

Chapter 3 Open Space and Natural Resources



A large American Sycamore tree gracefully arcs over preserved agricultural land in West Bradford Township

Open Space Prioritization

West Bradford's rural character is, in part, a reflection of the preservation of open space in the past, especially in the southern half of the Township. Residents of West Bradford are also afforded access to several Township preserves and parks that provide passive and active recreational opportunities, as well as access to nature and fresh air. Since the adoption of a one-quarter of one percent earned income tax for open space in 2016, the preservation of open lands has accelerated with the acquisition of several conservation and agricultural easements in West Bradford Township. In addition, the acquisition of the former Embreeville Hospital property by the Township demonstrates a continued commitment and broad vision for open space preservation and recreation for its residents.

Figure 3.1 provides a summary of preserved lands by category throughout West Bradford Township. As of the adoption of this Plan, West Bradford has preserved almost 30% of the municipality, utilizing a variety of methods. Conservation easements, generally under private ownership and not open to the public, account for the largest portion of protected lands in the Township, the vast majority of which are in the southern half of West Bradford (see Map 2-3). The protected lands in the northern half of the municipality are primarily HOA lands, which are generally only accessible to property owners within those residential developments, although many offer opportunities for trail connections between residential areas or to nearby public open space.

West Bradford Township Summary of Open Space		
	Acres (2021)	***Percentage***
Overall Township	11,901.64	100%
Easements		
Agricultural Land Easements	160.19	1.35%
Conservation Easements*	1,782.32	11.17%
Township Owned		
Parks and Preserves	140.13	1.18%
Open Space**	632.20	5.31%
Developments		
HOA Open Space	665.34	5.59%
Summary		
Total Protected Open Space (Current)	**3,380.18**	**28.40%**

**39.98 acres are part of Stroud Preserve and are open to the public*
***includes Embreeville Property*

Figure 3.1 Open Space in West Bradford Township

As West Bradford continues to utilize its open space funds and the additional funding it allows the municipality to leverage from County and State grants, it will benefit from having the tools and resources that allow the municipality to efficiently and cost-effectively secure the greatest preservation impact possible for its residents and the environment.

The Open Space Prioritization Review is a tool used by municipalities in Chester County to identify parcels of land that have high agricultural value or high natural resources value. The open space prioritization mapping is based on the most up to date GIS data available, but field verification is required at the parcel level to confirm the presence of existing agricultural or natural resources to ensure preservation potential. Township representatives can use the maps generated from this review to identify priority opportunities for farmland or open space preservation through conservation or agricultural easements, and to identify priority parcels with natural resources that should be protected through zoning and the subdivision and land development process. The maps can also be used as effective supporting documentation for County, State, and other grant applications. Below are descriptions of the criteria used to identify parcels with important agricultural and natural resources.

Agricultural Open Space Preservation Priorities

The two major factors that were analyzed for agricultural prioritization were parcel size and prime agricultural soils. The following method provides data that can be used by Township representatives and Chester County to rank agricultural lands for preservation through the County's Agricultural Land Preservation Board. First, all existing protected lands were removed from the analysis. Then, parcels of twenty-five acres or greater were selected, as well as clusters of smaller parcels that were owned by the same landowner and together exceeded 25 acres. All parcels of ten acres or greater were selected if they were adjacent to existing protected land. Once all properties that met the size criteria were selected, soils were analyzed for each property. Using soil information provided by the USDA, the percent of agricultural soils for each property were determined and properties were classified into one of three categories:

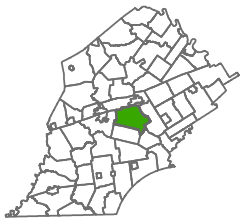
- Agricultural soils greater than 75%
- Agricultural soils between 50% and 75%
- Agricultural soils less than 50%.

The resulting analysis map shows all existing protected lands and prime agricultural land eligible for protection. The map illustrates several opportunities to preserve additional agricultural land in the Township, with selected concentrations of higher scoring eligible parcels (higher percentages of prime agricultural soils) in the northwest and southeast of the Township. Significant agricultural lands remain throughout the Township with less than 50% prime agricultural soils, and while these are still eligible for preservation funds, they will likely rank lower in a competitive grant scenario. As Map 3-1 illustrates, many of these lands are adjacent to existing protected lands, so their preservation will further enhance and maintain the rural character of West Bradford, especially in the southern half of the Township. In addition, there is greater environmental benefit in preserving large contiguous areas of agricultural lands than preserving a fragmented patchwork of smaller farm parcels. Protecting parcels that are contiguous with existing protected farmland provides greater agricultural value than protecting par-

Map 3-1

Agricultural Resource Priorities

West Bradford Township, Chester County



Estimated Tax Parcels

Township Boundary

Protected lands ~ 3,380 ac. (28.40% of township)

Preservation Opportunities* ~ 2,771.3 ac. (23.3% of township)

- Properties with 75% and greater prime ag. soils ~ 158 ac. (1.3% of twp.)
- Properties with 50-75% prime ag. soils ~ 355.7 ac. (3% of twp.)
- Properties with less than 50% prime ag. soils ~ 2,257.6 ac. (19% of twp.)

* Unprotected properties 25 acres or greater or 10 acres or greater if adjacent to protected lands.

0 2,000 4,000 6,000 Feet

BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2021; Land Use data from DVRPC, 2015.

Map Created: March 4, 2021

Date Exported: 10/12/2022

DOWNINGTOWN

EAST CALN

CALN

EAST FALLOWFIELD

EAST BRADFORD

NEWLIN

POCOPSON

30

322

162

Poorhouse Rd.

Sawmill Rd.

Shadyside Rd.

Sugars Bridge Rd.

Telegraph Rd.

Broad Run Rd.

Romansville Rd.

Marshallton Thorndale Rd.

Broad Run

Strasburg Rd.

Northbrook Rd.

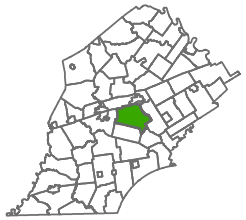
West Branch Brandywine Creek

Note: Not all lands shown as protected or as open space are open for public use. Many parcels encumbered by a conservation or agricultural easement are in private ownership, and certain municipally owned lands are not open for public use.

Map 3-2

Natural Resource Priorities

West Bradford Township, Chester County



Estimated Tax Parcels

Township boundary (11,901.6 ac.)

Protected lands ~ 3,380 ac. (28.40% of township)

Natural resource priorities - 2,764 ac. (23% of township)

- 1 (656.5 ac.)
- 2 (743 ac.)
- 3 (565 ac.)
- 4 (439 ac.)
- 5 (91 ac.)
- 6+ (269 ac.)

0 2,000 4,000 6,000 Feet

BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2021; Land Use data from DVRPC, 2015.

Map Created: March 4, 2021

Date Exported: 10/12/2022

NATURAL RESOURCE SCORE= ONE POINT FOR EACH
- 1,500' of stream
- 3 ac. of woodland within 100' of stream
- 2 ac. of wetland
- 15 ac. of Class 1 woodlands
- Tax parcels over 15 ac. containing interior forest
- Adjacent to existing protected open space
- Contains habitat for species of special concern (DCNR)
- Within Broad Run watershed
- Within strategic historic landscape (Marshallton and Trimble's Ford)

CALN
DOWNINGTOWN
EAST CALN
EAST BRADFORD
EAST FALLOWFIELD
NEWLIN
POCOPSON
Beaver Creek
Valley Run
Buck Run
West Branch Brandywine Creek
Broad Run
Poorhouse Rd.
Sawmill Rd.
Shadyside Rd.
Broad Run Rd.
Romansville Rd.
Strasburg Rd.
Sugars Bridge Rd.
Telegraph Rd.
Marshallton Thorndale Rd.
Northbrook Rd.
340
282
322
30
162
842
N

Map 3-3

Greenways

West Bradford Township, Chester County



Roads
Water Bodies
Streams
Estimated Tax Parcels

Number of overlapping features
1
2
3
4 - 5
6 - 8
Greenways

Greenways were delineated as areas where the natural resources listed below are concentrated in the Township, resulting in natural area corridors that provide for wildlife movement and habitat diversity.

- woodlands
- interior woodlands
- water bodies
- riparian buffers (100 ft)
- hydric soils
- core habitat and supporting landscapes (PNDI)
- moderate (15%-25%) and steep (25%+) slopes
- floodplains
- wetlands

Feet
0 2,000 4,000 6,000

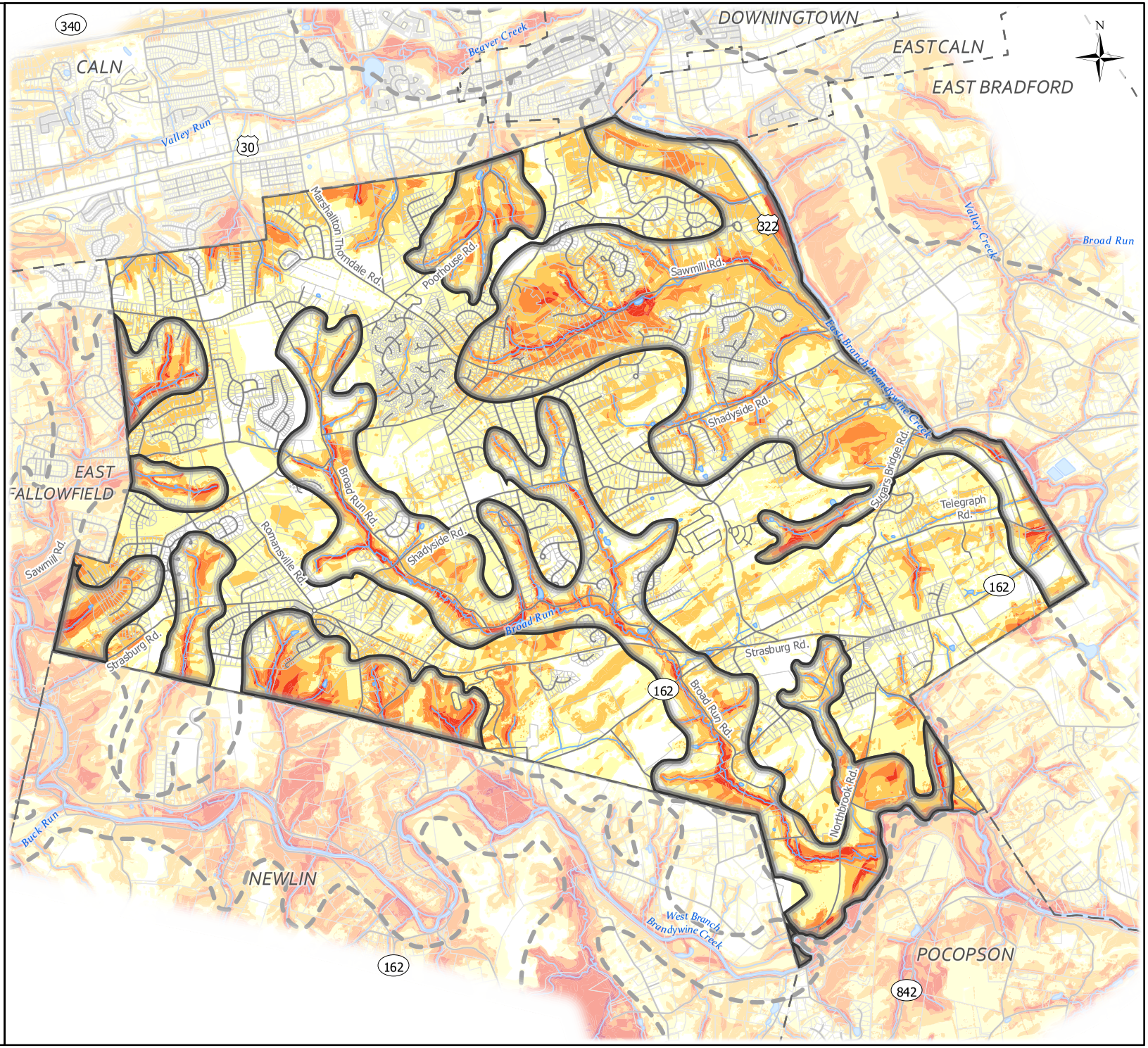
BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2020; Land Use data from DVRPC, 2015.

Map Created: December 9, 2020

Date Exported: 1/24/2022



cels that are isolated and surrounded by developed areas.

Natural Resource Preservation Priorities

A set of criteria was developed to identify areas that are rich in natural resources and important for protection in West Bradford Township. The criteria used to prioritize the importance of properties from an open space and natural resource perspective were:

- 1,500 feet or more of stream
- 3 acres or more of woodland within 100' of a stream
- 2 acres or more of wetlands
- 15 acres or more of Class I woodlands
- Parcels containing over 15 acres of interior woodland (woodland surrounded by an additional 300-feet of woodland)
- Parcels that are adjacent to existing protected open space
- Parcels that contained habitat for species of special concern
- Parcels within the Broad Run watershed
- Parcels within the Strategic Historic Landscapes of Marshallton and Trimble's Ford

One point was assigned for each criterion and points were totaled to determine the overall natural resources score for each parcel. All parcels less than four acres were eliminated from the analysis as well as existing protected lands. Unlike the agricultural prioritization, this analysis was conducted at a parcel level in order to pinpoint, with more detail, where natural resources are concentrated. The resulting map classifies parcels into one of six categories based upon their cumulative score of natural resource criteria.

Unprotected parcels with high natural resource value are found throughout West Bradford Township, with the highest scoring parcels located in the southern half of the Township, adjacent to large areas of protected lands and within the lower Broad Run watershed. Additional clusters of high scoring parcels are centered around Highland Orchards, Poorhouse Road, and the Broad Run corridor. As new subdivision land development proposals are submitted, the Township should continue to require the protection of sensitive natural features. It should also consider where it would be beneficial to provide open space for new recreational uses such as pocket parks. For example, pocket parks and neighborhood parks might be suitable in residential areas that currently have limited access to public or private (HOA) recreational open space.

In general, there is greater environmental benefit in preserving large contiguous areas of habitat/natural resources than preserving a fragmented patchwork of smaller natural areas and habitats. Protecting parcels that are contiguous with existing protected lands provides greater habitat and wildlife conservation value than protecting parcels that are isolated by developed areas. The map illustrates several opportunities, especially within the central and southern portions of the Township, to strategically preserve parcels that will expand existing contiguous open space, affording even greater conservation benefits for residents and local wildlife. However, the map also illustrates opportunities to providing open space opportunities in more developed areas that may be underserved at this time. Balancing these two perspectives should be taken into consideration when prioritizing land preservation activities within the Township.

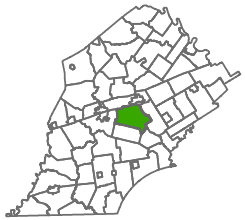


Aerial view across the Village of Marshallton

Map 3-4

Natural Resource Priorities and Greenways

West Bradford Township, Chester County



Estimated Tax Parcels

Township boundary (11,901.6 ac.)

Protected lands ~ 3,380 ac. (28.40% of township)

Natural resource priorities - 2,764 ac. (23% of township)

- 1 (656.5 ac.)
- 2 (743 ac.)
- 3 (565 ac.)
- 4 (439 ac.)
- 5 (91 ac.)
- 6+ (269 ac.)

Greenways

0 2,000 4,000 6,000 Feet

BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2021; Land Use data from DVRPC, 2015.

Map Created: March 4, 2021

Date Exported: 10/12/2022

NATURAL RESOURCE SCORE= ONE POINT FOR EACH

- 1,500' of stream
- 3 ac. of woodland within 100' of stream
- 2 ac. of wetland
- 15 ac. of Class 1 woodlands
- Tax parcels over 15 ac. containing interior forest
- Adjacent to existing protected open space
- Contains habitat for species of special concern (DCNR)
- Within Broad Run watershed
- Within strategic historic landscape (Marshallton and Trimble's Ford)

Greenways

The protection and restoration of natural greenways, areas where a high concentration of natural resources form “green corridors”, enhances biodiversity, provides a visual buffer to development, allows for wildlife migration, and potentially offers opportunities to accommodate natural surface trails. The combined ecological services that these resources provide can also significantly contribute to protecting water sources, reducing flooding and erosion, mitigating the impacts of climate change, and providing important habitat for pollinator species that support agricultural production. To identify potential greenways in West Bradford Township, a set of natural resource datasets were layered in GIS (Geographic Information Systems) to visualize their connectivity and concentration. The datasets analyzed were:

- Woodlands
- Interior woodlands
- Water bodies
- Riparian buffers (100 feet of existing woodland adjacent to streams)
- Hydric soils (often an indicator of the presence of wetlands)
- Core Habitat and Supporting Landscapes (as defined by the PA Natural Heritage Program)
- Steep slopes (15% or greater)
- Floodplains
- Wetlands

Map 3-3 is the resulting combination of the above natural resources and their distribution and concentration throughout West Bradford Township and its neighboring municipalities. Areas in lighter shades represent areas that have fewer resources overlapping, while areas in brighter tones reflect areas that have more than six resources occurring in one location. From this analysis, greenways were defined by generalizing the areas of concentration into core areas, and can be seen as outlines on the same map. As the map demonstrates, these greenways connect and interact with resources in neighboring communities, which is important to recognize in maintaining their functional benefits. The primary drivers for these greenways are the Township's stream corridors and its wooded areas, which often overlap. What is also important to note is the importance of stewardship at the homeowner level to either maintain or restore connections along these greenways. The cumulative impact of beneficial backyard stewardship (the planting of native trees and plants, and minimizing impervious surfaces and lawn area), can have a significant impact on the function and maintenance of greenways, as well as a multitude of other ecological benefits. As subdivision and other land development proposals are brought to the Township, special consideration should be given to maintaining these greenway corridors and their associated natural resources. Map 3-4 overlays the designated greenways with the natural resource priorities, illustrating those parcels where preservation would also be contributing to the maintenance and possible restoration of the greenways.

Recommendations for Open Space and Natural Resource Protection

Just as the Township has been quite successful at spearheading efforts to permanently protect open space, especially since the adoption of the earned income tax for open space, West Bradford has also instituted a variety of efforts and regulatory measures to protect natural resources Township-wide, regardless of ownership. The recent adoption of the 2020 Comprehensive Plan Update includes a number of open space, recreation, and natural resource recommendations, many of which are also appropriate for inclusion and consideration in this Plan, and some of which are already being implemented.

The following recommendations for open space and natural resource protection for this Plan flow from the overall goals and objectives introduced in Chapter 1, from the resource inventory mapping and assessment included in Chapter 2, and from review of the Comprehensive Plan Update and existing land use regulations. Specific recommendations for trails, parks, and recreation are found in Chapter 4 and Chapter 5. The Township should continue to look creatively at a broad spectrum of open space and natural resource protection issues, including the following:

Continue to Acquire Interests in Open Space

3.1 - Continue to assess opportunities to acquire interests in open space in proximity to, or potential interconnection, with existing protected open space, including open space that may be designated through development. Particular attention should be focused on opportunities to connect natural resources and open space both within designated greenways, to create large contiguous areas of protected land, protect scenic and historic landscapes and viewsheds, and where the potential for trail continuity or connectivity exists. Fee title acquisition should be utilized for situations where passive or active recreational or trail priorities can be met or where negotiation of conservation or trail easements fail.

3.2 - Continue to leverage municipal funds for the acquisition of agricultural and conservation interests with funds available from state, county, and private resources to maximize the extent and benefits of land preservation efforts relative to cost to the Township. The completion and adoption of this Plan is intended to support applications for grant funding.

3.3 - Explore land preservation opportunities in areas currently underserved or in areas of potential growth to provide for green infrastructure, parks and preserves for recreation, and trails.

Promote Action to Enhance Natural Resource Protection

3.4 - Continue to work with and support local water quality programs and initiatives and partner with both public and private organizations working to improve water quality in the region, especially within the Broad Run watershed. Identify partners to help coordinate mitigation efforts that will enhance or protect natural resources within the Township, including stormwater management improvements, streambank and floodplain restoration, and riparian reforestation.

3.5 - Continue to monitor and participate in regional planning efforts regarding land use and resource protection issues in neighboring municipalities, particularly within watershed areas draining into and out of West Bradford and along designated Greenways that may extend across municipal boundaries. Consider the creation of a multi-municipal committee to coordinate issues of open space, recreation, sustainability, and trails in the area.

3.6 - Continue to consider formal partnerships aimed at enhancing natural, agricultural, and greenway resource protection, including partnerships with Chester County, adjoining municipalities, and other organizations such as Trout Unlimited, and local land trusts.

Support and Promote Land Use and Stewardship for Resource Protection

3.7 - Continue to guide the placement of land development activities to minimize impacts to natural and scenic resources and promote formal open space designation during development plan review by the Township Planning Commission, and other agencies and commissions, as applicable. Wherever feasible, the Township should condition development and building approval on demonstrable and enforceable adherence to the resource protection objectives of this Plan, including incorporation of binding open space management plans and land management criteria where applicable.

3.8 - Continue to focus, during development plan review, on stormwater management, promoting infiltration (including the use of pervious surfaces for parking and other facilities) and successful implementation of water quality Best Management Practices (BMPs).

3.9 - Continue to monitor and promote agricultural practices and land management efforts which maximize soil conservation and minimize negative impacts to water quality, promoting the establishment of best management practices on appropriate public or private open space lands, in coordination with the Chester County Conservation District and the Pennsylvania Department of Agriculture.

3.10 - Promote reforestation of riparian buffers and the enhancement of forest interior and woodland edge conditions through native plantings and the planting of native trees on municipally owned land, conserved property, and in residential areas.

3.11 - Work with agency and non-profit partners to encourage and promote “catch the rain” and other small scale BMPs to minimize stormwater runoff and

enhance native habitat on residential, municipal, institutional, and commercial properties throughout the Township.

3.12 - Pursue designations/certifications/awards that enhance and incentivize habitat and resource protection and increase residents' knowledge of and pride in the natural characteristics of the Township, such as , but not limited to, Tree City USA (Arbor Foundation), the Sustainable Pennsylvania Community Certification (PA Municipal League), and the Community Wildlife Habitat Program and Mayor's Monarch Pledge (National Wildlife Federation).

Refine Regulatory Tools

3.13 - Periodically review the effectiveness and consistency of regulation of natural resources, in both the Zoning and Subdivision and Land Development Ordinances, from perspectives of development plan review, resource management and ecosystem health, stormwater requirements and management, and regulatory enforcement, including adherence to any open space management plans associated with HOA common land and stormwater facilities. Revision to existing regulation and policy should be considered as necessary.

3.14 - Consider incorporating an Open Space Design Option within the Zoning Ordinance to promote resource protection on tracts that do not qualify for the current Unified Development Area overlay.

3.15 - Consider incorporating provisions within the Zoning Ordinance that would help establish and protect the Greenways identified in this Plan.

3.16 - Consider heritage tree protection and replacement provisions within the Zoning Ordinance. Such provisions help protect specimen vegetation and can help preserve scenic and historic landscapes.

3.17 - Assess landscaping plant guidelines in the municipality's Code to ensure it only contains native, climate resilient species and that planting a diversity of species is encouraged.

3.18 - Review and update the Township's Official Map to reflect the open space, recreation, and trail goals identified in the 2020 Comprehensive Plan Update and this Plan.

Promote Education and Appreciation for Resource Protection

3.19 - Consider partnering with local agricultural producers to promote and market their products, aiding in the economic viability of agricultural operations in the Township, and provide opportunities to educate residents about local agriculture and locally produced goods through special events, municipal communications, including the Township's website, and a newly established farmers market within the Township.

3.20 - Partner with local agencies, non-profits, and environmentally focused landscape contractors to promote public informational programs that feature and install natural resource focused stewardship projects on private and municipal lands that are consistent with this Plan. Examples of such informational programs might include: promotion of tree planting and riparian restoration; stormwater management on residential properties, turf grass reduction; meadow management; safe and sustainable wildlife management; agricultural practices consistent with water resource protection objectives; reduction in lawn and garden chemical and nutrient application; proper disposal of oil and other hazardous wastes; recycling opportunities; energy-use reduction strategies; alternative clean energy supplies; and conservation planning and estate planning.

3.21 - Support the continued education of landowners, residents, and other stakeholders regarding natural and agricultural resources, the economic and social benefits derived from them, and their role in combating and mitigating the impacts of climate change, through the expanded use of the Township website, newsletter, and community events such as West Bradford Day.

Chapter 4 Pedestrian and Bicycle Network Plan



Exuberant fall colors frame a walking path in West Bradford Township

Analysis of Pedestrian and Bicycle Network Needs

Sidewalks and trails in West Bradford Township can be found along Romansville Road, Strasburg Road, and in recreational destinations such as Township Parks and United Sports. Sidewalks and trails in West Bradford Township are primarily clustered within neighborhoods located in the northern and southern portion of the Township. Key destinations are located between Broad Run Road and Marshallton Thorndale Road in the north, between Strasburg Road and the Township border in the south, and in municipalities immediately north, east, and south of West Bradford Township. Expanding existing sidewalk and trail networks and developing bicycle routes in West Bradford Township can help connect residents to local recreational, educational, cultural, and transportation related destinations in an efficient, effective, and environmentally friendly manner.

Establishing connections between West Bradford Township, Caln Township, East Bradford Township, and Newlin Township would provide a unique opportunity for residents of West Bradford Township to link into developing regional trail networks in neighboring communities and have access by foot or bike to regionally significant destinations, such as ChesLen Preserve and Stroud Preserve. Establishing northern and eastern connections between West Bradford Township, Caln Township, and East Bradford Township would provide opportunities to link into existing and future regional trail routes, including the Brandywine Trail, the Struble Trail, and the Chester Valley Trail.

Feasibility of Community Trails

The trails and bikeways identified in this chapter are ***conceptual in nature and represent a long-range plan that could take upwards of 20 years to partially or fully realize.*** While some elements of this conceptual plan may require minimal additional study, most will require many years of additional grant writing, study, engineering, and construction. The routes identified on Map 4-1 reflect input received from the public during the first public meeting, the community survey, key stakeholder interviews, and input from the Steering Committee. As a next step, the identified trail and bikeway routes will require further study to determine their feasibility, preferred infrastructure type, and potential alignments. Key intersections as identified on Map 4-1 will also require further study to ensure they are designed to safely facilitate pedestrian and bicyclist crossing movements. As the vision for trails in West Bradford Township is realized, additional areas for parking, such as designated trailheads, may be beneficial to establish to increase resident access to local community trails.

Local Support

West Bradford Township has been working to provide active transportation opportunities within the community. Broad Run Park, Beacon Hill Park, Shadyside Park, and the West Bradford Township Municipal Building property all have existing trails or sidewalks. As development has occurred in the Township, the community has seen an increase in trails and sidewalk infrastructure, primarily in the northern portion of West Bradford Township. Support for the continued construction of sidewalk, trail, and bikeway connections in the community, including developing longer distance walking and biking routes, emerged as a desirable goal from the input generated through the public outreach process for this Plan.

Future Opportunities for Trails

Public comments related to bicycle and pedestrian connections were gathered throughout the planning process via key person interviews, an online survey, input from the Steering Committee, and activities during a public workshop held at Broad Run Park. One theme that emerged as a result of this public outreach was the desire for bicycle and pedestrian connectivity to key destinations within West Bradford Township, including neighborhoods, schools, and parks.

Destinations

During the public workshop and as homework after a Steering Committee meeting, residents used stickers to map their homes and key destinations in West Bradford Township and in surrounding municipalities to which they would iike to walk and/or bike. Participants drew potential walking routes and bicycling routes to those destinations (See Appendix E). Key destinations that were identified, as illustrated on Fig 4-1 Public Meeting Input for Conceptual Trails and Bikeways on the following page, include:

- **Recreation Amenities**
    - Broad Run Park
    - Future Park at Embreeville
    - Shadyside Park
    - United Sports
    - Brandywine Creek
    - ChesLen Preserve
- **Schools**
    - Bradford Heights Elementary School
- **Villages**
    - Village of Marshallton
- **Transit Stations**
    - Downingtown Station
    - Thorndale Station

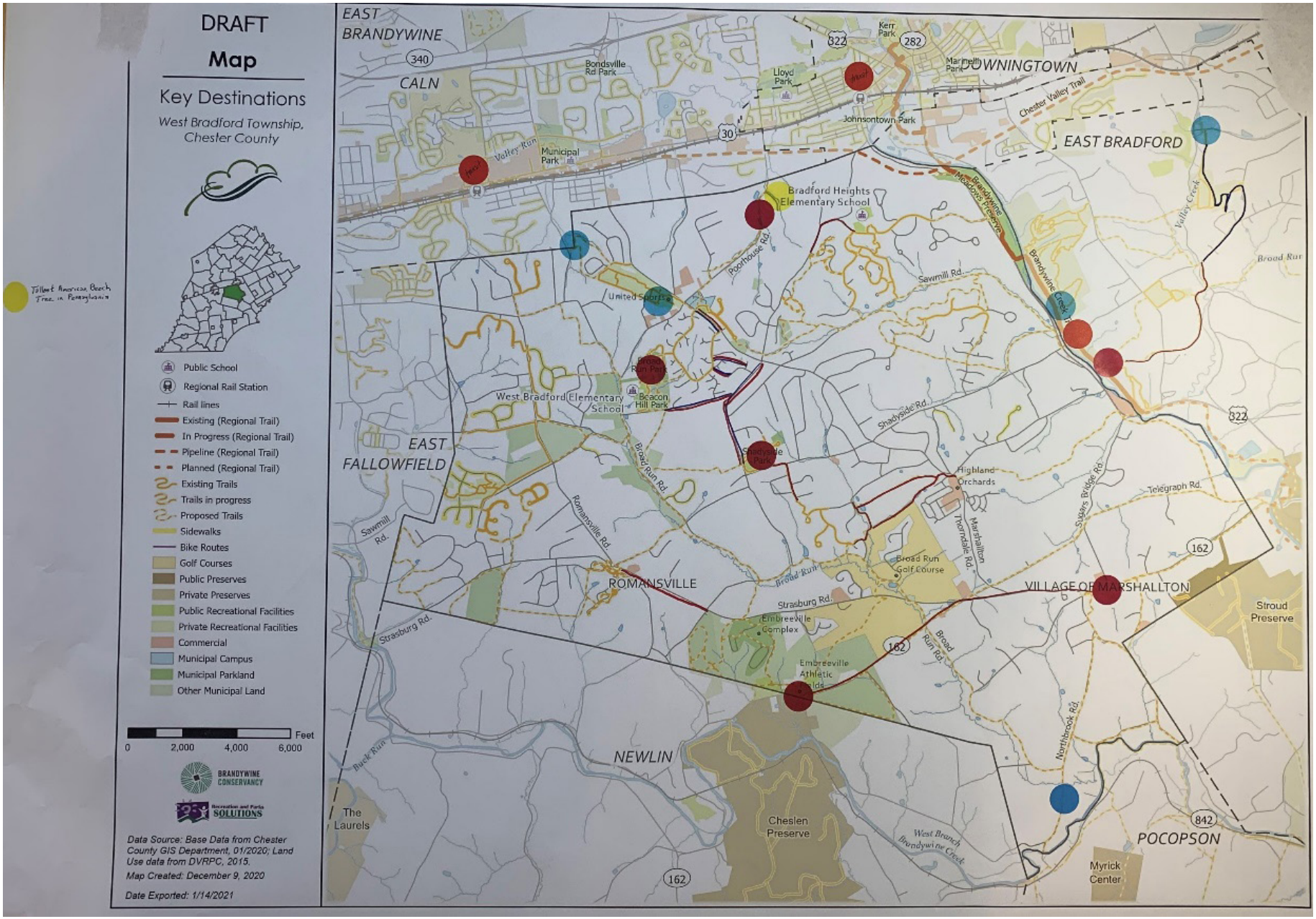


Figure 4-1 Public Meeting Input for Conceptual Trails and Bikeways

A separate activity, focused on the top four priorities for future bicycle and pedestrian trail connections, saw "general nature/hiking trails" and "connections to Stroud and ChesLen Preserves" receive the highest marks. Additionally, "connections between and to residential neighborhoods," "connections to Marshallton Village," "connections to Embreeville property," and "connections to Township Parks" all also received a high number of votes from public meeting participants (See Appendix E).

The community survey included questions relating to open space, environmental resources, and parks and recreation. In several of the questions relating to parks and recreation priorities, walking and biking connections ranked highly. Developing walking or biking connections between schools, parks, or neighborhoods was the second highest parks and recreation priority identified for the Township over the next ten years, while developing longer distance walking or biking trails was the fourth. The survey also asked how frequently members of your household visited specific parks and recreation areas. The top responses for weekly and monthly visitation at destinations in West Bradford Township and surrounding municipalities occurred at:

- Weekly
    - Shadyside Park (29.6%)
    - Broad Run Park (23.8%)
    - ChesLen Preserve (20.8%)

- Monthly
    - Shadyside Park (28.9%)
    - Stroud Preserve (27.7%)
    - Brandywine Trail (24.3%)
    - ChesLen Preserve (24.2%)

A Conceptual Trails Plan, Map 4-1, was prepared based on public feedback and input from the Steering Committee, as described above. The input received from the public outreach process was used to develop a set of design principles to shape and inform the design of the trail network. These design principles focus on two scales: establishing local connections within West Bradford Township to key destinations and establishing regional connections to key destinations outside West Bradford Township in neighboring municipalities. These design principles include:

- Local
    - Connect neighborhoods to schools
    - Connect neighborhoods to neighborhoods
    - Connect parks to neighborhoods
    - Connect parks to parks
    - Connect to villages

- Regional
    - Connect to regional trails and preserves
    - Connect to transit

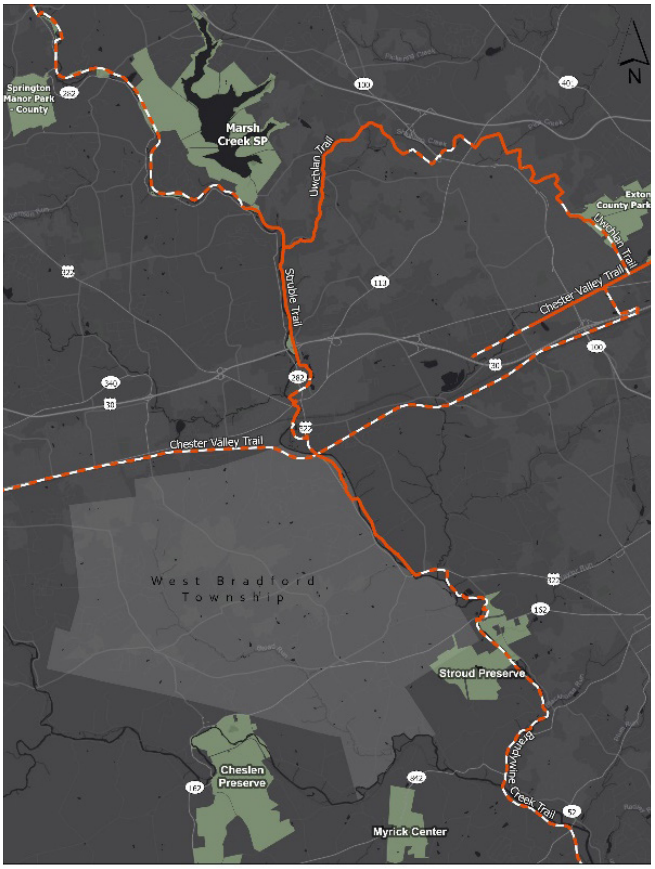


Figure 4-2 Regional Trails in proximity to West Bradford Township

The plan illustrates a long-term vision for an integrated network of trails and bikeways in West Bradford Township at a very broad, conceptual level. The plan routes are not intended to show the actual

Map 4-1

Trail Plan

West Bradford Township, Chester County



- Streams
- Water Bodies
- Roads
- Estimated Tax Parcels
- Sidewalks
- Existing Regional Trails
- Planned Regional Trails
- Existing Trails
- PA Bike Route L
- 10 ft wide trail easement
- 20-25 ft wide trail easement area
- 50 ft wide trail easement area
- Trail easement width varies
- Public Preserves
- Municipal Parks and Preserves*
- Municipal Property (not open to the public)
- Recreational Facilities
- Private Recreational Facilities
- Golf Courses

* Municipal Preservers may not have public access or amenities.
** The future community park is not currently open to the public.

Feet
0 2,000 4,000 6,000

BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2020

Map Created: December 9, 2020

Date Exported: 8/26/2024

DOWNINGTOWN
EAST CALN
CALN
EAST BRADFORD
EAST FALLOWFIELD
POCOPSON

Johnsontown
Downingtown Transit Station
Chester Valley Trail
Municipal Park
Thorndale Transit Station
Bradford Heights Elementary School
Brandywine Meadows Preserve
Harmony Hill Nature Area
Poorhouse Rd.
Broadview Preserve*
United Sports
Campus Park
Price Preserve*
Westminster Preserve*
Sawmill Rd.
Broad Run Park
West Bradford Elementary School
Walnut Ridge Preserve*
Beacon Hill Park
Romansville Rd.
Broad Run Rd.
Broad Run Preserve
Shadyside Park
Marshallton Thorndale Rd.
Shadyside Rd.
Brandywine Creek Trail
East Branch Brandywine Creek
Telegraph Rd.
Highland Orchards
Montvale Park
Sugars Bridge Rd.
Strasburg Rd.
Marshallton Village & Heritage Center
Martin's Tavern/ Humphry Marshall Historical Park
Stroud Preserve
Future Community Park**
Telegraph Preserve
Ches-Len Preserve
Northbrook Rd.
West Branch Brandywine Creek
Myrick Center

Legend

- Trail, Regional, multi-modal, existing
- Trail, Regional, multi-modal, potential future
- Trail, Community, multi-modal, existing
- Trail, Community, multi-modal, potential future, road conversion
- Trail, Community, multi-modal, potential future
- Trail, sidewalk or natural surface, pedestrian, potential future
- Bikeway, in road, sharrow, potential future
- Bikeway, in road or off road, potential future, improvement needed
- Public Parking, existing
- Public Parking, potential future
- Pedestrian road crossing improvements
- Destination

Map 4-1 Conceptual Bicycle and Pedestrian Trails (Destinations)

alignment of each trail. Their purpose is to illustrate conceptual, future connections between key destinations in West Bradford Township and adjacent communities. The exact alignment of each planned off-road trail and in-road bikeway would be determined through future feasibility studies conducted for each segment, future detailed design and engineering development, and would involve substantial public participation, review, and comment. The general concepts for the bicycle and pedestrian trails plan are illustrated on the following pages.

Township-Owned Parks and Open Space

West Bradford Township owns multiple properties that can be incorporated into the community trail network. Those properties include the municipal building with 5 acres, Broad Run Park with 29 acres, Beacon Hill Park with 12.5 acres, Shadyside Park with 31 acres, the Future Park at Embreeville with approximately 245 acres, and other Township owned parcels. Each of these municipally owned parks will become a destination in the trail network.

Semi-Public Open Space

The Downingtown Area School District owns 27.8 acres of land in West Bradford Township at the Bradford Heights Elementary School and the West Bradford Elementary School. Opportunities to connect the two schools into a comprehensive active transportation network benefit both area students and the overall community. The development of this network would enable students and teachers to access local recreational amenities for educational and recreational purposes.

Conservation Easements

There is a significant amount of land in West Bradford Township with agricultural easements or conservation easements. While trail easements cannot be placed on properties with agricultural easements, land that has conservation easements could incorporate trails, should the property owners be amenable to them.

HOA-Owned Open Space

Open space owned by a Homeowners Association provides opportunities for trail expansion into neighborhoods which may become key destinations within the trail network. The Township can negotiate with Homeowners Associations to acquire a new trail easement in commonly owned open space.

Roads And Public Rights-Of-Way

In West Bradford Township many of the roadways do not have sufficient right-of way width to accommodate a multi-modal off-road trail. If roads have narrow rights-of-way, and have low traffic counts, low speeds, and favorable sight lines, then they would be candidates for share the road designation. This would require signage and potential painted markings. Where possible, off-road trails, separated from vehicular traffic are preferred to encourage multi-modal circulation for residents.

Potential Benefits of Trails

The many benefits of greenways and trails are documented in Benefits of Greenways: A Pennsylvania Study which was published by the Pennsylvania Greenways Partnership in 2002.

Health and Fitness

According to the 2014-2019 Pennsylvania Outdoor Recreation Plan published by the Department of Conservation and Natural Resources (DCNR), walking was identified as the topmost popular outdoor activity in Pennsylvania as over 70% of the population participated in walking activities. Creating new opportunities for walking and biking can encourage a more active lifestyle and improve overall health and fitness. In its publication, A Step in the Right Direction, the American Hiking Society describes the many physical and mental health benefits of hiking and trails. Such benefits include weight loss, prevention of heart disease, decreased blood pressure, improved mental health, preventing osteoporosis, controlling diabetes, and relieving arthritis and back pain.

Transportation Options

Trails provide a means of connecting popular destinations that may otherwise be only accessible by car. If planned strategically, trails can provide links to a network of open spaces, parks, shopping areas, schools, and other semi-public facilities. People are more likely to use an alternative means of transportation, such as walking or biking, if a trail is easily accessible and safe to use.

Educational Advantage

Trails are often located in natural areas such as along creeks or hedgerows. They can be designed to bring users closer to the flora and fauna that are unique to that place or to places of historic interest. Education is enhanced with the placement of interpretive signage along trail routes. Trails can become outdoor education centers for history, science, and biology and facilitate the connection between people and our natural environment.

Environmental Protection

The green corridors that are associated with trails, or greenways, are beneficial to the environment. They provide linear networks of natural habitat that many species of wildlife depend on for food and shelter. Green corridors promote biodiversity as they provide avenues for separate populations to inter-breed and maintain genetic diversity. Greenways and trails also promote walking and biking as alternative means of transportation, thereby reducing automobile emissions.

Social and Cultural Implications

Where trails connect neighborhoods, schools, parks, and other popular destinations, there is a greater sense of community. Trails become places in themselves where people gather, meet, and engage in conversations or share the latest news. Trails encourage healthy interaction among neighbors and strengthen sense of community.

Economic Impact

Communities and businesses prosper in areas where recreational trails provide health, recreation, and fitness features. Outdoor adventure and tourism is a rapidly growing industry in Pennsylvania and throughout the country. As trails become more popular, recreation-related industries will grow.

Conceptual Trail Routes

The destinations identified as desirable for future walking and/or bicycling connections are dispersed throughout West Bradford Township and adjacent municipalities, with a cluster in the northern central area of the Township, between Broad Run Road, Shadyside Road, and Marshallton Thorndale Road. As a result of West Bradford Township's ongoing efforts to enhance non-motorized connectivity, sidewalks and trails currently exist in multiple locations within this area and in neighborhoods to the west, east, and south of this section. This proposed bicycle and pedestrian trails plan builds upon past successes and is intended to further develop an efficient, interconnected network within the community. The general concept focuses on the following elements:

- A multi-modal, regional trail spine along the northern and eastern borders of West Bradford Township, comprised of the Chester Valley Trail and the Brandywine Trail
- A multi-modal, community trail connector that links into the regional trail spine, and connects neighborhoods with local destinations such as Broad Run Park, Beacon Park, Shadyside Park, and West Bradford Elementary School and a multi-modal perimeter trail loop in the Future Park at Embreeville
- Pedestrian-oriented connections, connecting neighborhoods to the multi-modal community trails
- Bicycle-oriented connections, linking neighborhoods, Marshallton village, and recreational amenities with the multi-modal community trails
- A pedestrian-oriented connections linking Marshallton village with a preserve

Multi-Modal, Regional Trail Spine

Existing and planned, multimodal trails that connect to major destinations across the region are located within the northeastern corner of West Bradford Township. These trails include the Chester Valley Trail and the East Branch Brandywine Trail. The East Branch Brandywine Trail leads to the Struble Trail and Marsh Creek State Park, to the north. Future projects to advance the development of these connections are identified in the following area:

- Parcels adjacent to Broad Run Road, from border with Downingtown Borough to East Caln Township

Multi-Modal, Community Trail Connectors

Conceptual, multimodal trail corridors would serve as the primary connectors between West Bradford Township's three community parks. One trail is proposed to begin at the West Bradford Township border with Caln Township and run east-west through West Bradford Township, following Sawmill Road and terminating at the Brandywine Trail in East Bradford Township, east of Brandywine Creek. This trail would link key destinations identified by community members as important for bicycle and pedestrian access. Destinations along this bicycle and pedestrian trail route include neighborhoods, schools, and parks, such as Broad Run Park, Beacon Hill Park, West Bradford Elementary School, the West Bradford Township building and grounds, Brandywine Creek and the Harmony Hill Nature Area in East Bradford Township.

A multi-modal, community trail connector extends from this corridor, following Broad Run Road south and linking to Shadyside Park. A perimeter trail loop is proposed at the Future Park at Embreeville, to be explored as a concept through future studies, including master plans and feasibility studies.

Designated on Map 4-1 by a wide, dotted black line or dashed black line, the proposed multimodal trail corridor would provide a safe and dedicated off-road facility for bicyclists and pedestrians alike. It is recommended that the trail be 8 to 10 feet in width, consists of an impervious materiality, and be ADA accessible. Several sidewalks or trails currently exist within this corridor. Future projects to advance the development of this multimodal concept could include the development of new sidewalk or trail projects, as well as projects to widen existing sidewalks within the corridor.

Future projects to advance the development of these connections are identified along the following roadways:

- Romansville Road, from Caln Township to West Chester Road
- West Chester Road, from Romansville Road undeveloped parcel
- Broad Run Road, from undeveloped parcel to connection linking to Shadyglen Drive
- Connection, Broad Run Road to Shadyglen Drive
- Shadyglen Drive, from above Connection to perimeter trail in Shadyside Park
- Shadyside Road, from perimeter trail in Shadyside Park to crossing at Hiddenview Drive
- West Bradford Elementary School Drive, from Broad Run Road to existing trail in Broad Run Park (existing trail may require widening)
- Connection, Westminster Drive to Glenside Road
- Connection, Glenside Road to Sawmill Road
- Sawmill Road (may require improvements)
- Old Shadyside Road, Sawmill Road to Brandywine Trail
- Connection, Sawmill Road to Old Shadyside Road
- Old Shadyside Road, above connection to Sawmill Road

- Perimeter trail loop in the Future Park at Embreeville

Proposed/Conceptual Pedestrian-Oriented Connections

Conceptual pedestrian-oriented connections link the multimodal community trails connectors with neighborhoods, connect villages with preserves, and connect neighborhoods to parks and regional trails. Pedestrian-oriented connections link Marshallton Village with Stroud Preserve, neighborhoods to the Future Park at Embreeville, and neighborhoods to Shadyside Park and Beacon Hill Park.

Designated on Map 4-1 by narrow, dotted gray lines, the proposed pedestrian connections would primarily consist of sidewalks or trails, providing safe and dedicated off-road facilities to the greatest extent practicable. In one select instance, a pedestrian connection may be possible as an in-road segment that utilizes a low-stress street and cul-de-sac within a neighborhood (Hiddenview Drive). It is recommended that the sidewalk or trail connections be six feet in width, consist of an impervious materiality, and be ADA accessible. Future projects to advance the development of these connections could include the development of new sidewalk or trail projects, as well as projects to widen existing sidewalks or trails.

Future projects to advance the development of these connections are identified along the following roadways:

- Strasburg Road, from Marshallton Village to Lucky Hill Road
- Lucky Hill Road, from Strasburg Road to Stroud Preserve
- Hiddenview Drive, from Shadyside Road to cul-de-sac trail
- Romansville Road, West Chester Road to Alton Way
- Connections at Romansville Road and Chestnut Lane intersection
- Chestnut Lane, from Romansville Road intersection to Smithfield Lane
- Smithfield Lane, from Chestnut Lane to Florence Court
- Connection, from Smithfield Lane to Broad Run Road
- Wetherhill Drive, connection between existing sidewalks
- Connection, Isabella Court to multimodal community trail connector
- Buckingham Drive, from Marshallton Thorndale Road to Westminster Drive
- Marshallton Thorndale Road, from Campus Drive to Poorhouse Road
- Romig Road, from Hampton Drive to Brandywine Trail
- Fox Trail Road, from Steeple Chase Road to Sawmill Road
- Connection, Sawmill Road to Mason Drive
- Creagh Knoll Lane, from trail north of Maine Circle to multimodal community trail connector
- Connection, from Broad Run Road to trail loop in the Future Park at Embreeville (natural surface footpath)

Proposed/Conceptual Bicycle-Oriented Connections

Conceptual, bicycle-oriented connections link key destinations in West Bradford Township, including the Village of Marshallton, the Future Park at Embreeville, and neighborhoods in the eastern and northwestern sections of the Township, with multi-modal, community trails.

Designated on Map 4-1 by narrow, dotted purple lines, the proposed bicycle connections would primarily consist of Share-the-Road or sharrows to provide on-road, signed facilities to accommodate bicyclists. These roadways have the lowest Level of Traffic Stress, or LTS, as analyzed by the Delaware Valley Regional Planning Commission (DVRPC). All bike routes represented by a purple dashed line fall on roadways determined by DVRPC to be an LTS 1

or LTS 2. LTS 1 roadways are "relaxing, suitable for most riders" while LTS 2 roadways are "comfortable for most adults." A significant number of roadways in West Bradford Township fall into one of these two categories. However, several of these corridors are fragmented due to sections that are rated an LTS 4, or "not comfortable for most." Those areas are denoted on the map by purple dotted lines. These areas require further study and may benefit from widened shoulders, bike lanes, or dedicated off road trails to link with low stress streets and create continuous corridors that promote bicycle circulation to key destinations within West Bradford Township.

Future projects to advance the development of these connections are identified along the following roadways:

Dashed

- South Bailey Road/Oakwood Road, from Stouff Road to Chestnut Lane
- Chestnut Lane, from Oakwood Road to Broad Run Road
- Broad Run Road, Shadyside Road to Clayton Road
- Clayton Road, from Broad Run Road to Strasburg Road
- Lieds Road, from Broad Run Road to Strasburg Road
- Glen Drive/Campus Drive, from Broad Run Park to West Bradford Township Building
- Westminster Drive, from Township Building to Township Open Space
- Tuckaway Trail, from Broad Run Road to St. Andrews Drive
- St. Andrews Drive, from Tuckaway Trail to Linda Drive
- Linda Drive, from St. Andrews Drive to Montvale Circle
- Hall Road, from Marshallton Thorndale Road to Hall Lane
- Edgemont Drive, from Montvale Circle to Sylvan Drive
- Sylvan Drive, from Edgemont Drive to Woodward Drive
- Woodward Drive, from Edgemont Drive to Crestmont Drive
- Crestmont Drive, from Woodward Drive to future multi-modal community trail

Dotted

- Broad Run Road, from trail easement to Shadyside Road
- Marshallton Thorndale Road, from Montvale Circle to Hall Road

Off-Road Facilities

A Multi-Use Trail, like the Regional Trail Spine or Community Trail Connector, is an arterial trail that is intended for use by pedestrians and cyclists for recreation and active transportation. The trail surface may be crushed stone, asphalt, or concrete. This route will be a primary connector between major destinations in the Township and may be the most frequently used routes identified in the Concept Plan. The trail width can range from 8' to 12', but a range of 8' to 10' in width is suggested as part of this Plan. Local examples of comparable multi-use trails include the Chester Creek Trail in Middletown Township, the Struble Trail north of Downingtown, the East Branch Brandywine Trail in East and West Bradford Townships, and the Chester Valley Trail in Chester County.

An Improved Surface Trail is intended for use primarily by pedestrians. The trail surface may be crushed stone, asphalt, or concrete depending upon the context of the trail, the anticipated volume, and the type of anticipated users. The width may be between 6' and 8', but a 6' width is suggested for West Bradford Township to be consistent with the sidewalks identified below. Local examples of an improved surface trail include Sandy Hollow Park in Birmingham Township (asphalt), at Pocopson Township's municipal open space on Wawaset Road (asphalt), and at Kennett Township's Anson B. Nixon Park (crushed stone).

Sidewalks are intended for pedestrian use only and are constructed of cast in place concrete. Typical



On-road sharrows, with associated signage, can be used to denote shared use of the roadway between vehicles and bicycles. Photo by BikeCleveland.org

sidewalk widths are 5' to 6', but 6' wide sidewalks are recommended to be consistent and equal in width to the Improved Surface Trails identified above. Some existing sidewalks within the Township may be less than 5' in width and would benefit from being widened to align with ADA standards.

A Natural Surface Footpath is intended for use by pedestrians are identified in this Plan solely within the Future Park at Embreeville Concept Plan. The trail surface for a natural surface footpath can be mowed grass, compacted earth/mineral soil, or crushed stone depending upon the site conditions. The width is typically between 4' and 6' but can be as wide as 8' to 10' depending upon the anticipated volume of use. Examples of a natural surface footpath include trails in White Clay Creek Preserve (mineral soil), Darlington Trails in Middletown Township (mowed and mineral soil), the Brandywine Trail (mineral soil), and John Heinz National Wildlife Refuge (mowed).

Each type of off-road trail envisioned within the West Bradford Township's trail network has its own advantages and disadvantages. The following table, Table 4-1 Off-Road Trail Surfaces, provides a summary of the various proposed off-road trail surface types described in this chapter.

On-Road Facilities

A Standard Bike Lane is separated from the travel lane with line striping, is one-way, and flows in the direction of the adjacent vehicle travel lane. Cars are not allowed to drive in bike lanes except when avoiding obstacles or merging to make a turn. Cars and trucks' ability to stop or stand in these lanes varies depending on the location. Bike lanes are typically 5' in width and include signage and paint markings. Bike lanes are commonly used in urbanized areas of Philadelphia and West Chester Borough and in suburban centers such as portions of West Whiteland Township.

A Shared Use Lane is a signed bicycle route along existing low volume local PennDOT roads, low volume rural major collector PennDOT roads, and municipal roads that are attractive to bicycles and currently being used by cyclists. The existing asphalt roadways would be shared by vehicles and bicycles, and bicycle routes would be identified using signage and road striping (known as sharrows) to designate the shared use. While signage and paint markings do not improve safety for bicycles, they serve to alert motorists to be aware of bicycle traffic. They also serve as wayfinding to help cyclists navigate through designated routes. The American Associa-

tion of State Highway and Transportation Officials (AASHTO) recommends that bike route signs be placed every ¼ mile, at every turn, and at all signalized intersections. One example of sharrows can be found on S. Church Street in West Chester Borough.

Site Feasibility

The inventory maps identified in Chapter 2 were used as analysis tools to determine where it may be possible to locate new trails. Constraints to new trails are likely to include private properties, driveway crossings, road crossings, existing agricultural easements, stream crossings, woodland vegetation, floodplain, wetlands, proximity to roads, and proximity to residential areas. Careful design and engineering will be required if trails are to be in physically constrained areas. Generally, disturbance to wetlands should be avoided. Analysis from the Township's consulting botanist identifying sensitive plant communities and significant woodlands should be consulted when evaluating a trail route's feasibility. Trails which run near Natural Heritage Areas and other sensitive landscapes should include fencing or landscape barriers to discourage access to sensitive natural areas.

Trail Use and Users

West Bradford Township trails will be used primarily by residents for exercise, recreation, and travel within the community and to key destinations within neighboring municipalities. Users from outside the Township may use the multi-use trails, pedestrian trails, or share the road facilities or bike lanes that could connect with Caln Township, East Bradford Township, and Newlin Township, if planned and implemented. Paved off-road trail facilities identified in the concept plan are intended to solely accommodate nonmotorized users, including pedestrians and bicycles, and will accommodate several types of bicycle travel including commuting, recreation, and

Table 4-1

Off-Road Trail Surfaces

Trail Surface	Advantages	Disadvantages
Crushed Stone	Accommodates a variety of users, can be compacted into a firm surface, compatible with the natural environment, moderately priced	Stone varies by source, will retain moisture thus vegetation will grow, can rut or erode with heavy rainfall, not suitable for flood-prone areas or steep slopes
Asphalt	Provides a hard, smooth surface, works well for bicycles, all weather, good for sloped sections, complies with ADA guidelines, provides access for emergency vehicles	High installation cost, costly to repair, construction vehicles need access
Mowed grass **Mineral soil**	Requires less preparation of the trail bed, costs substantially less, natural look, can be improved in the future, easy for volunteers to build and maintain	Maintenance requires fixing drainage problems, repairing eroded areas, removing unwanted vegetation, limited use, not ADA accessible in all situations
Wood Chips	Soft spongy surface, moderate cost, natural material	Decomposes, requires constant replenishment, not typically ADA accessible, not appropriate for flood-prone areas

Source: Trails for the Twenty-First Century, Rails to Trails Conservancy, pp. 69-74

Table 4-2

Trail User Types

	Pedestrians	Bicyclists
Types	Walkers, joggers, runners, those with baby strollers, bird watchers, mobility-assisted	Recreational, touring, commuters, mountain bikers
Travel/Design Speeds	3 to 7 mph	10 to 30 mph
Tread Width	High Use: 6' to 8'	Multi-Use Trails: 12' to 14'
Vertical Clearance	7' minimum	8' minimum

touring. All paved off-road trails will be designed to meet the standards outlined in the Americans with Disabilities Act (ADA). Natural surface footpaths in parks and improved surface trails will accommodate pedestrians and possibly bicycles depending upon site conditions and the terrain. It is anticipated that portions of the natural surface footpaths and improved surface side trails will be designed to meet ADA standards. Table 4-2 Trail User Types describes the users and basic design standards for each type of trail.

General Trail Guidelines

Several public agencies have published design recommendations for trails. Each identifies general design guidelines and criteria such as safety, screening, landscaping, and accessibility. The descriptions and design parameters described in this Chapter are based on best practices, design standards, and guidelines from the following publications.

- Design Manual Part 2 (DM-2): Highway Design, Publication 13M, PennDOT, 2015
- Smart Transportation Guidebook, PennDOT and NJDOT, 2008
- A Policy on Geometric Design of Highways and Streets, 6th Edition, American Association of State Highway and Transportation Officials (AASHTO), 2011
- Guide for the Development of Bicycle Facilities, 4th Edition, American Association of State Highway Officials (AASHTO), 2012
- Guide for the Planning, Design, and Operation of Pedestrian Facilities, American Association of State Highway Officials (AASHTO), 2004
- Manual on Uniform Traffic Control Devices, Federal Highway Administration, 2009

Trail Safety

The most important element of trail design is safety. Primary safety issues within the trail network typically include lighting and visibility. Off-road bicycle trails and pedestrian paths that parallel local roadways are highly visible and are considered the safest type of trails. Their high visibility facilitates the enforcement of trail rules and increases user safety. Security concerns tend to increase where trails cross less visible lands. However, most security problems reported along established trail networks occur in parking areas and trailheads where vehicular access is provided. In its Community Trails Handbook (1997) the Brandywine Conservancy recommends the following trail design features for safety and security:

- To the greatest extent feasible, trails should be visible from public roads, public parks, and buildings.
- Parking facilities and trailheads should be located where there is a high degree of visibility and human activity.
- Trail use should be limited to daylight hours to reduce problems associated with visibility.
- To the greatest extent feasible, the number of locations where a trail crosses a public roadway should be minimized.

- Where trails cross a public road, adequate signage, adequate sight distances, clear views at the trail crossing, and crosswalk striping should be provided.

During daylight hours when the trails are open for public use, particularly on the weekends when visitation will likely be highest, periodic patrols of the trail by Township staff or resident volunteers should be routine. The Township could consider recruiting and training volunteer stewards to help patrol the trails during peak use periods. Many of these stewards could be recruited from adjacent neighborhoods.

Trail Landscaping

Landscaping is an important design consideration for trails, especially in areas where trails are near existing residential development. Vegetation along a trail contributes to the scenic character, provides visual interest, and can be used to enhance privacy, reduce the effects of wind, create oases of shade, and frame views. In its Community Trails Handbook (1997) the Brandywine Conservancy recommends the following:

- Leave a five-foot groomed area adjacent to a trail to enhance visibility. The cleared shoulder also provides an area where users may step off the trail and rest without obstructing other trail users.
- Shade trees should be planted to provide shelter from the sun and the heat in the summer.
- Evergreens may be used to provide a wind break from winter winds or to enhance privacy for adjacent landowners.
- Landscaping along the trail can be used to create an identity for the trail with signature features such as fencing, boulders, or specimen trees.
- Vegetation with thorns or prickly leaves can be used to discourage trail users from leaving the trail corridor and trespassing on adjacent property.
- Fences and earthen berms can be used to keep trail users on the trail.
- Trails should provide for access by safety patrols, either vehicular or bicycle.

Accessibility

Plan Goal #8 relates to removing barriers and serving residents equitably to provide all people with opportunities to play, learn and explore. To support this goal, trails in West Bradford Township can incorporate universal design to accommodate a wide range of ages and abilities. In order to facilitate trail usage by people with disabilities, the following design standards should be considered (from the Community Trails Handbook, Brandywine Conservancy, 1997):

- Wheelchair users prefer hard surface trails such as asphalt or compacted stone.
- Limit trail grades (slopes) to 5% or less (only 1-foot grade change over 20 feet).
- For two wheelchairs to pass, a ten-foot-wide trail is required.
- Provide ramps and designated accessible parking areas at trailheads.
- All trails that are intended to provide access for people with disabilities must be designed in accordance with American with Disabilities Act (ADA) standards and requirements.

Trail Signage

There are three types of signage that can be implemented along trails. Regulatory signs are used for providing operational instructions and for traffic control. They include stop and yield signs, right-of-way signs, and speed limit signs. Stop signs should be installed for trail users where the trail intersects a roadway.

Cautionary signs should be placed along roadways where there are trail crossings to warn motorists of pedestrian and bicycle traffic. These signs identify potentially hazardous conditions along the trail so that trail users can reduce their speed and be more aware of their surroundings. Such signs are typically near intersections, tunnels, and bridges. They may also indicate grade changes, steep

slopes, or changes in surface conditions. The U.S. Department of Transportation's Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices details standardized shapes and colors for trail signs. For more information go to www.mutcd.fhwa.dot.gov.

Informational signage is non-regulatory and is used to provide trail users with trail-related information. It can be used to orient users to the surrounding areas, identify important support facilities such as water and restrooms, or highlight local points of interest along the trail. Distance markers can be used to orient trail users, and informational kiosks along the route help to make users more familiar with their surroundings. Trail maps can be provided in kiosks to show trail connections, pedestrian trails, bicycle trails, and connections to parks, schools, and local attractions. Signs can be used to describe natural, historic, and cultural attractions along the route.

Guidelines for Trail Alignment

Developing trails to connect people with nature, while ensuring the protection of wildlife, open space, and natural resources is a best practice in trail planning and design. The following basic rules should be applied to trail design in general (from Lightly on the Land, Student Conservation Association, 2nd edition, 2005):

- Take advantage of south-facing slopes
- Stay on ground that drains well
- Bypass large trees or rocks
- Contour the route into and out of drainages
- Incorporate grade dips
- Route the trail to incorporate scenic overviews and natural features
- Avoid sensitive natural areas such as wetlands and areas critical for wildlife feeding and breeding
- Be sensitive to fragile plant communities, and limit disturbance to fragile or endangered species
- Locate trails to avoid bridges which can be costly and high maintenance
- If the trail must cross wet areas, use bridges or boardwalks that minimize obstruction to flood waters
- Do not add fill. If gravel or asphalt is required to construct the trail, remove an equal amount of soil and sub-grade material to maintain an unimpeded flood pathway

Recommendations

The following recommendations build on the goals and objectives set forth in this Plan, from the inventory mapping and assessment included in this Plan, to review of planning documents in the Township, adjacent municipalities, and the larger region, and based on public input gathered from the community survey and Public Meeting. The Township has and should continue to look creatively at opportunities to strategically connect people to the unique recreational opportunities, villages and businesses, and open spaces in the community and greater region, including the following:

Strategic Planning, Design, and Implementation

4.1 - Apply for grant funding from public and/or private entities to fund feasibility studies for West Bradford Township, to study the concepts identified in this Plan in greater detail and outline the prioritization of bicycle and pedestrian projects.

4.2 - Update West Bradford Township's Official Map and ordinance to help facilitate the continued development of a pedestrian and bicycle network in West Bradford Township in a cost effective and strategic manner. The Official Map can be used to prioritize land for purchase, donation, easement, or lease agreement for use as public trails and leverage the land development process to help achieve community-wide goals.

4.3 - The Planning Commission should ensure future land developments are designed in keeping with bicycle and pedestrian improvements identified in this Plan and any future Conceptual Trail Master Plan, Official Map, or feasibility studies.

4.4 - Develop new and improve existing sidewalks,

trails, and bikeways consistent with recommendations in this plan and future feasibility studies. The bicycle and pedestrian routes conceptualized in this plan will require further study for each segment's feasibility, prior to design and engineering, funding acquisition, and implementation. West Bradford Township will take the lead for the feasibility studies, design, engineering, and construction of the following local/community bicycle and pedestrian facilities, as deemed appropriate.

- 10' Wide Multi-Modal Trails
    - Parcels adjacent to Broad Run Road, from border with Downingtown Borough to East Caln Township (Regional Trails)
    - Romansville Road, from Caln Township to West Chester Road
    - West Chester Road, from Romansville Road undeveloped parcel
    - Broad Run Road, from undeveloped parcel to connection linking to Shadyglen Drive
    - Connection, Broad Run Road to Shadyglen Drive
    - Shadyglen Drive, from above Connection to perimeter trail in Shadyside Park
    - Shadyside Road, from perimeter trail in Shadyside Park to crossing at Hiddenview Drive
    - West Bradford Elementary School Drive, from Broad Run Road to existing trail in Broad Run Park (existing trail may require widening)
    - Connection, Westminster Drive to Glenside Road
    - Connection, Glenside Road to Sawmill Road
    - Sawmill Road (may require improvements)
    - Old Shadyside Road, Sawmill Road to Brandywine Trail
    - Connection, Sawmill Road to Old Shadyside Road
    - Old Shadyside Road, above connection to Sawmill Road
    - Perimeter trail loop in the Future Park at Embreeville
- 6' Wide Sidewalks or Trails
    - Strasburg Road, from Marshallton Village to Lucky Hill Road
    - Lucky Hill Road, from Strasburg Road to Stroud Preserve
    - Hiddenview Drive, from Shadyside Road to cul-de-sac trail
    - Romansville Road, West Chester Road to Alton Way
    - Connections at Romansville Road and Chestnut Lane intersection
    - Chestnut Lane, from Romansville Road intersection to Smithfield Lane
    - Smithfield Lane, from Chestnut Lane to Florence Court
    - Connection, from Smithfield Lane to Broad Run Road
    - Wetherhill Drive, connection between existing sidewalks
    - Connection, Isabella Court to multimodal community trail connector
    - Buckingham Drive, from Marshallton Thorndale Road to Westminster Drive
    - Marshallton Thorndale Road, from Campus Drive to Poorhouse Road
    - Romig Road, from Hampton Drive to Brandywine Trail
    - Fox Trail Road, from Steeple Chase Road to Sawmill Road

    - Connection, Sawmill Road to Mason Drive
    - Creagh Knoll Lane, from trail north of Maine Circle to multimodal community trail connector
- 6' Wide Natural Surface Footpaths
    - In the Future Park at Embreeville, from Broad Run Road to the multi-modal trail loop
- In-Road Signed Bicycle Routes
    - South Bailey Road/Oakwood Road, from Stouff Road to Chestnut Lane
    - Chestnut Lane, from Oakwood Road to Broad Run Road
    - Broad Run Road, Shadyside Road to Clayton Road
    - Clayton Road, from Broad Run Road to Strasburg Road
    - Lieds Road, from Broad Run Road to Strasburg Road
    - Glen Drive/Campus Drive, from Broad Run Park to West Bradford Township Building
    - Westminster Drive, from Township Building to Township Open Space
    - Tuckaway Trail, from Broad Run Road to St. Andrews Drive
    - St. Andrews Drive, from Tuckaway Trail to Linda Drive
    - Linda Drive, from St. Andrews Drive to Montvale Circle
    - Hall Road, from Marshallton Thorndale Road to Hall Lane
    - Edgemont Drive, from Montvale Circle to Sylvan Drive
    - Sylvan Drive, from Edgemont Drive to Woodward Drive
    - Woodward Drive, from Edgemont Drive to Crestmont Drive
    - Crestmont Drive, from Woodward Drive to future multi-modal community trail
- Off-Road or In-Road with Improvements Bicycle Routes
    - Broad Run Road, from trail easement to Shadyside Road
    - Marshallton Thorndale Road, from Montvale Circle to Hall Road

4.5 - Collaborate with adjacent communities on the planning, design, and implementation of sidewalk, trail, and bikeway routes. Collaborate with adjacent municipalities, especially Caln, East Bradford, and Newlin Townships, on intermunicipal active transportation efforts and implement the recommendations of the Chester County Active Transportation Inventory for West Bradford Township. Jointly plan and implement pedestrian and bicycle connections when opportunities arise.

4.6 - Evaluate and update, where necessary, Township trail standards in the Subdivision and Land Development Ordinance to ensure the planning, design, and construction of future infrastructure is conducted in a manner that factors in climate resiliency and future projections related to extreme heat and extreme precipitation.

Trail Maintenance

4.7 - Township staff and public works staff will have direct oversight over the maintenance of future trails in the community.

Marketing and Public Awareness

4.8 - Engage the public in future bicycle and pedestrian planning efforts, including feasibility studies that assess segments identified in the trail concept plan within this Plan.

4.9 - As the multi-modal transportation network continues to grow, develop a map to promote sidewalks, trails, and bikeways in West Bradford Township and in adjacent municipalities, highlighting infrastructure type, lengths, ADA routes, and degree of difficulty.

4.10 - Update the Township's webpage to include a map of local trail routes and links to information about trail routes in neighboring communities and/or the region.

Collaboration and Partnership

4.11 - Consider supporting programs that highlight the unique aspects of West Bradford Township and its neighbors. Such programs may include 5Ks, bike rides, or walking tours to highlight the unique natural resources, open space, cultural resources, and historic resources in the community. As the sidewalk, trail, and bikeway network continues to grow, continue collaborating and partnering with area nonprofits, businesses, schools, and recreation organizations.

4.12 - Explore partnership opportunities with the Downingtown Area School District, including investigating trail opportunities on the West Bradford Elementary School property.

Financing

4.13 - Develop a multi-year Township capital budget for trail projects. Including a mix of private resources and strategic alliances with other providers will be important. Applying for grants and foundation funds will help to leverage Township funds for trail planning, design, easements, and development.

Projected Costs

Implementation – planning, design, engineering, construction

While the conceptual pedestrian and bicycle facilities shown on Map 4-1 may appear to be a significant undertaking, the implementation of such infrastructure will not fall to any single entity. Rather, it will be shared by many partners and implemented in a series of phases. Partners will be involved in various aspects and projects over time, some of whom may take the lead with fundraising, planning, design, engineering, construction, and/or maintenance. The Township anticipates that the following trail segments will be implemented by others:

- Paved trails – several sections could be constructed through the land development process
- Paved trails – several sections could be constructed through improvements to properties by local partners
- Bikeways – several sections could be constructed by PennDOT

There are many costs associated with the planning, design, engineering, construction, and maintenance of a new trail. Perhaps the first cost to be considered is the cost to purchase land in fee, a trail easement, or lease agreement from a willing landowner. Table 4-3, Table 4-4, Table 4-5, and Table 4-6 provide a summary of the typical costs at a high level including generalized trail easement costs per linear or square foot, bridge and road crossing assumptions, estimated construction cost by terrain type, and other trail facilities costs. More detailed cost estimates are typically prepared during the feasibility study phase of a trail project. The estimated construction costs can be increased by more than $15 per square foot where the trail crosses woodlands, steep slopes, or floodplains. The basic overland cost includes the cost of design, engineering, construction, and stormwater management.

Table 4-3

Generalized Trail Easement Costs

Average Easement $/Acre	$31,240
Average Easement $/Square Foot	$0.71
Average Easement $/Linear Foot (assume 20' width)	$14.34

Table 4-4

Bridge and Road Crossing Cost Assumptions

Bridge		Surface Crossing	
Crossing <5 ft	$10,650	**Driveway Crossing**	$2,550
Crossing >5 ft and <10 ft	$21,300	**Railroad Crossing**	$6,900
Crossing >10 ft	$35,00	**State Road Crossing**	$6,900
Roadway Overpass	$200,000 - $1,000,000	**Township Road Crossing**	$5,500

Table 4-5

Estimated Construction Costs by Terrain Type

	Basic Overland Cost	Steep Slopes (additional cost)	Through Woodlands (additional cost)
On-Road Bicycle Route (Signs, Lines)	$0.48/LF		
Stone Dust Trail	$10/SF	$10/SF	$10/SF
Mowed Trail	$5/SF	$10/SF	N/A
Paved Trail	$15/SF	$10/SF	$10/SF

Table 4-6

Other Trail Facilities Costs

Trail Feature	Cost per foot	Cost per unit
Landscaping	$4.73	
Fencing	$20	
Restrooms		$40,000
Parking lot: 10 cars		$10,000
Information sign		$1,000
Direction/warning signs		$200
Bike racks		$500
Bench		$500
Drinking fountain		$2,000

Maintenance

As the Township pedestrian and bicycle trail network is completed, it will be maintained by various partners including West Bradford Township, Homeowners Associations, and potentially other partners. Effective management is critical for the ultimate acceptance and success of the trail system.

The following tables identify estimated costs per unit associated with the maintenance of stone dust trails, mowed trails, and paved trails. The following maintenance costs were obtained from Trails for the Twenty-First Century, Rails to Trails Conservancy, 2001 (with adjustments up 42% to reflect an average inflation rate of 2.08%/year).

Table 4-7

Annual Maintenance Costs - Stone Dust Trail

Task	Times per Year	Cost/Mile	Cost/Ft
Drainage and storm channel maintenance	2	$710	$0.13
Sweep/blow debris from trailhead	4	$1,700	$0.32
Pick up/removal of trash	8	$1,700	$0.32
Weed control and vegetation management	2	$1,420	$0.27
Mow grass shoulder	4	$1,700	$0.32
Minor repairs to trail furniture/safety features	2	$710	$0.13
Maintenance supplies for Public Works crew	N/A	$710	$0.13
Equipment fuel and repairs	N/A	$1,420	$0.27
Total Annual Costs		**$10,070**	**$1.89**

Table 4-8

Annual Maintenance Costs - Mowed and Mineral Soil Trail

Task	Times per Year	Cost/Mile	Cost/Ft
Drainage and storm channel maintenance	1	$710	$0.13
Pick up/removal of trash	4	$1,700	$0.32
Weed control and vegetation management	2	$1,420	$0.27
Mow 8ft grass trail	10	$3,408	$0.65
Maintenance supplies for Public Works crew	N/A	$710	$0.13
Equipment fuel and repairs	N/A	$1,420	$0.27
Total Annual Costs		**$9,368**	**$1.77**

Table 4-9

Annual Maintenance Costs - Paved Trails

Task	Times per Year	Cost/Mile	Cost/Ft
Drainage and storm channel maintenance	2	$710	$0.13
Sweep/blow debris from trailhead	4	$1,700	$0.32
Pick up/removal of trash	8	$1,700	$0.32
Weed control and vegetation management	2	$1,420	$0.27
Mow 2ft grass shoulder	4	$1,700	$0.32
Minor repairs to trail furniture/safety features	2	$710	$0.13
Maintenance supplies for Public Works crew	N/A	$710	$0.13
Equipment fuel and repairs	N/A	$1,420	$0.27
Total Annual Costs		**$10,070**	**$1.89**
Trail resurfacing $74,900 Cost/Mile or $14.18 Cost/FT (Every 7-15 years resurface and replace)		Not Included	

Chapter 5 Parks and Recreation Plan



A playground at Broad Run Park, West Bradford

Parkland and Recreation Facility Assessment

Availability of parkland, diversity of recreation facilities, and access to open space contributes to a community's quality of life. West Bradford Township offers a mix of community and neighborhood parks, trails, and natural resource areas for its residents. A variety of active sports facilities, coupled with pavilions, playgrounds, and loop trails, draw residents of all ages and backgrounds to the parks. In addition to the parks, Township preserves provide residents with the opportunity to enjoy passive recreation activities and spend time outdoors in nature.

West Bradford Township Parks and Preserves

Developed Parks

The Township owns and operates two community parks. The 29-acre Broad Run Park opened in 1999 is located behind West Bradford Elementary School. The park features a paved loop trail, playground areas, volleyball courts, tennis courts, basketball court, picnic pavilions, restrooms, an inline hockey rink, and a pond. Shadyside Park, developed in 2006, is 31.7 acres and is centrally located in the Township. The park contains a paved loop trail, bocce courts, horseshoe courts, exercise court, volleyball courts, picnic pavilions, restrooms, basketball court, tennis courts, inline hockey rink, baseball field, and playground areas.

The 12.5-acre township-owned Beacon Hill Park is home to the West Bradford Little League. Beacon Hill Park was acquired in 1979. The park contains Little League-sized baseball fields as well as a softball field and a snack bar. Paved trails are available to walk or ride bicycles from the Victoria Crossing development, West Bradford Elementary School, and Broad Run Park.

Located next to the Township building, the 13-acre Campus Park features a softball field and a tot lot for younger children. The Township also owns the small 2.8-acre Montvale Park, which contains a pond, benches, and a stream.

The Brandywine Trail is a paved walking and biking trail along the Brandywine Creek, with a secondary unpaved trail located closer to the creek. The paved trail distance, including the East Bradford Township section, is 2.5 miles one way. The trail will connect to a future planned section of the Chester Valley Trail.

The Martins' Tavern/Humphry Marshall Historical Park in Marshallton is an anticipated future historical pocket park in the village of Marshallton that is a partnership between the Friends of Martin's Tavern and West Bradford Township. The park will educate the public on the history of Martin's tavern, the village of Marshallton and the acclaimed botanist, Humphry Marshall.

Undeveloped Sites

West Bradford Township owns eight natural preserve areas, most of which are protected and maintained for residents to enjoy for passive recreation: Brandywine Meadows, Broad Run, Broadview, Price, Telegraph, Walnut Ridge, and Westminster Preserves, and the Lieds Park property, which is currently in active agricultural use. The preserve areas do not have parking areas, signs, or trails. Many housing developments within the Township also have dedicated open space areas which are maintained by homeowners' associations for residents to use for passive recreation.

In addition, West Bradford Township owns the approximately +/- 195 acre property at the site of the former Poorhouse and Embreeville State Hospital. An Embreeville Park Master Plan was developed for the property, and includes Lieds Park property (see Appendix F). The overarching goals of the Master Plan are to create an inclusive park that: provides passive and active recreation opportunities; preserves open space, protects natural resources, and recognizes the historic significance of the property; and enables opportunities for special events and community gathering. The proposed improvements and enhancements include: historical markers and kiosks; gardens; trails; a playground; picnic areas; sports fields; a Township maintenance area; and an area for the Scouts.

Parkland and recreation facilities in West Bradford Township are assessed based on six factors:

1) Configuration of parkland
2) Amount of parkland
3) Location of parks
4) Types of recreation facilities
5) Population demographics
6) Condition of parkland and recreation facilities

Configuration of Parkland

Different types of parks provide different opportunities for residents. The National Recreation and Park Association (NRPA) categorizes parks into eight types as shown in Table 5-1. The classification system shows the range of park types, their benefits, typical amenities, typical size and service area, and the appropriate maintenance level for each park type.

Park, Trail, and Recreation Facility Inventory

Table 5-2 presents an inventory of Township-owned parkland, preserves, trails, and recreation facilities; school-district-owned recreation facilities; and privately-owned recreation facilities in West Bradford Township. West Bradford Township owns 13 park, preserve, and trail sites totaling 403.7 acres.

Table 5-1

NRPA Park and Recreation Classification System

Type/Size/ Service Radius	Definition	Benefits	Appropriate Amenities	Maintenance Level
Mini Park 0-5 acres ¼-mile service radius	Smallest park type; addresses limited recreation need.	▪ Provides close-to-home recreation	▪ Playground ▪ Benches	High level of maintenance associated with well-developed park and playground and reasonably high visitation.
Neighborhood Park 5-15 acres minimum ½-mile service radius	Focus of neighborhood; in walking/ biking distance of residents.	▪ Provides access to basic recreation opportunities ▪ Contributes to neighborhood identity ▪ Establishes sense of community	▪ Play areas ▪ Ballfields and game courts ▪ Picnic, seating ▪ Pathways ▪ Community gardens	High level of maintenance associated with well-developed park and reasonably high visitation.
Community Park 30-50 acres, preferably 50-80 acres 2-mile service radius	Large park for active and passive recreation; serves residents municipality-wide. Accommodates large groups.	▪ Variety of recreation opportunities for all ages and interests ▪ Space for organized, large scale, high participation events ▪ Family destination ▪ Fitness and wellness opportunities	▪ Play areas ▪ Organized sports facilities ▪ Pavilions ▪ Permanent restrooms ▪ Lighting ▪ Amphitheaters ▪ Pools, Rinks ▪ Pathways ▪ Parking	Moderate level of maintenance associated with moderate level of development, budget restrictions, inability to perform higher levels of maintenance. Potential for park "friends" or adopt-a-park partners.
School/ Community Park Variable	Parkland adjoining a school developed and used for both recreation and education under an agreement between municipality and school district.	▪ Combines two public entities for expanded year-round recreation. ▪ Maximizes public resources ▪ Expands recreation opportunities	▪ Youth-oriented game courts and ball fields ▪ Play areas ▪ Seating ▪ Pathways ▪ Lighting ▪ Parking	Moderate level of maintenance associated with moderate level of development, budget restrictions.
Sports Complex 30+ acres; preferably 50-80 acres	Consolidates sports fields and related facilities in a centralized location.	▪ Economy of scale ▪ Improved management ▪ Municipal showcase ▪ Attracts visitors who stimulate local economy	▪ Ball fields ▪ Lighting ▪ Spectator areas ▪ Restrooms ▪ Concessions ▪ Landscaping ▪ Parking	State-of-the-art maintenance applied to high quality facilities. Associated with high visitation, revenue generating facilities, tourism.
Special Use Facility Variable	Facility for a single purpose use.	▪ Provides special focus recreation opportunities ▪ Contributes to community identity	▪ Depends on purpose	High level of maintenance associated with well-developed park and reasonably high visitation.
Greenway and Trail Variable	Ties park areas and community together to form a contiguous park environment.	▪ Connects community ▪ Reduces auto dependency ▪ Improves air quality ▪ Desired recreation facility ▪ Attracts visitors	▪ Pathways – multipurpose ▪ Trailheads ▪ Support facilities ▪ Signage	Lowest level of maintenance. Focus on trailheads and trail safety.
Natural Resource Area/ Preserve Variable	Natural areas for the protection and management of natural environment.	▪ Protects resources ▪ Provides wildlife habitat ▪ Offers opportunities for environmental education	▪ Trails ▪ Signage ▪ Support facilities	Lower level of maintenance.

Table 5-2

West Bradford Township Park, Preserve, Trail, and Recreation Facility Inventory

Park/Trail/Recreation Site	Property Acres	Park Type (NRPA)	Comments/Facilities
Township Sites			
Beacon Hill Park	12.5	Special Use Facility	Little League baseball (2) and softball fields (1), batting cages (2), small grass t-ball field, snack bar, restrooms, picnic tables, electronic scoreboards (2), portable restroom, paved parking lot, gated entrance
Brandywine Meadows Preserve	48.0	Natural Resource Area/Preserve	Open space with meadows, wetlands, woodlands, pond, trail
Brandywine Trail	N/A	Greenway and Trail	2.5-mile paved and unpaved trail (one-way) extends into East Bradford Township, gravel parking lot, kiosk
Broad Run Park	29.0	Community	.6-mile paved loop trail, pavilions (4), scattered picnic areas with tables and grills, wooden shelter, little free library, youth playground, tot lot, sand volleyball courts (2), natural outdoor classrooms (2), lighted tennis courts (2), lighted basketball court, lighted inline hockey rink, pond, bathrooms, lighted paved parking lot, gated entrance
Broad Run Preserve	17.1	Natural Resource Area/Preserve	Open space
Broadview Preserve	2.5	Natural Resource Area/Preserve	Open space
Campus Park	13.0	Neighborhood	Softball field, tot lot, storage shed, portable restroom, sidewalks linking park to neighborhood
Embreeville Property	200	Future Community Park (55 acres) Future Natural Resource Area/Preserve (145 acres)	Currently undeveloped and being prepared to open to the public, and implement the Master Plan (see Appendix F).
Lieds Park	56.8	Natural Resource Area/Preserve	Currently undeveloped and in agricultural use; adjoins Embreeville property
Martin's Tavern/Humphr Marshall Historical Park	0.4	Historical Park	Future historical pocket park in the village of Marshallton.
Montvale Park	2.8	Natural Resource Area/Preserve	Pond, benches, stream, no parking area
Price Preserve	8.2	Natural Resource Area/Preserve	Open space
Shadyside Park	31.7	Community Park	1-mile paved loop trail, pavilions (3), bocce courts (2), horseshoe courts (4), lighted tennis courts (2), exercise court, volleyball courts (2), lighted inline hockey rink with spectator seating, lighted basketball court, lighted youth playground and tot lot, little free library, sand box, baseball field, benches, water fountains, bathrooms, lighted paved parking lot, gated entrance
Telegraph Preserve	177.0	Natural Resource Area/Preserve	Open space
Walnut Ridge Preserve	1.4	Natural Resource Area/Preserve	Open space

Table 5-2

West Bradford Township Park, Preserve, Trail, and Recreation Facility Inventory

Park/Trail/Recreation Site	Property Acres	Park Type (NRPA)	Comments/Facilities
Westminster Preserve	3.7	Natural Resource Area/Preserve	Open space
Total Acres*	404.1		*Does not include the Embreeville property; total acreage will be 603.7 when the Township takes ownership of this property in late 2021
Quasi-Public Recreation Sites			
Embreeville Athletic Complex	20	Sports Complex	Multi-purpose flat fields (6), snack bar, storage shed; will be owned by the Township in late 2021
Stroud Preserve	571 (approx. 40 in WBT)	Natural Resource Area/Preserve	Hiking trails, equestrian trails, waterways
Schools			
Bradford Heights Elementary	21	N/A	Basketball court, youth playgrounds
West Bradford Elementary	28	N/A	Ballfields (2), basketball courts (2), youth playgrounds, flat field area, property is adjacent to Broad Run Park
Private Recreation Sites			
United Sports Training Center	72	Sports Complex	127,000 square-foot indoor facility with 136 x 64-feet sport court, turf fields (2), 225 x 160-feet fieldhouse, inflatable bounce area, meeting space, lighted outdoor turf fields (4), outdoor grass fields (6), vending, machines, concession trailer
Broad Run Golfer's Club	372	Special Use Facility	Par 72 18-hole golf course, practice area, clubhouse
Highland Orchards	200	Special Use Facility	Active farm and orchard with pick-your-own fruits and vegetables, farm market, bakery, educational and school tours, special events, hayrides

Regional Parks and Recreation Areas

In addition to Township-owned sites, parks and recreation opportunities are available to residents at state and county parks, and municipal parks in other communities. Valley Forge, Marsh Creek, French Creek, and Ridley Creek State Parks serve West Bradford Township. Hibernia County Park and the Struble Trail are also within the service area of the Township. Approximately 40 acres of the 571-acre Stroud Preserve is in West Bradford Township. The 1,282-acre ChesLen Preserve is located adjacent to West Bradford Township. Both preserves are owned and operated by Natural Lands.

Amount of Parkland

How much parkland does West Bradford Township need to meet the recreation needs of residents according to NRPA standards? Currently West Bradford Township owns 403.7 acres of parkland in 13 park and preserve sites. Categorizing the acreage as active or passive parkland shows that West Bradford Township currently owns 86.2 acres of active parkland and 317.5 acres of passive parkland. School district-owned property is not considered parkland and is not factored into calculations of parkland acreage. It is not open to the public except for after school hours, and the use of the property by the public is not guaranteed.

The following analysis of parkland acreage excludes passive parkland areas. The 1995 NRPA publication, Park, Recreation, Open Space, and Greenway Guidelines, notes the following about natural resource area/preserve lands:

> "There are no specific standards for how much natural resource area land a community should have. Instead, it is dependent on

the number and quality of natural resources in the area. Preservation and conservation of natural resources cannot be constrained by arbitrary acreage standards or locational guidelines. The protection and management of these resources must, by their nature, be within the context of the community."

Parkland is typically evaluated on a population ratio method that considers the acres of active parkland per 1,000 residents. A population ratio method follows the logic that the amount of active parkland in a community should relate to the population to be served by the parkland. Simply put, the population of a community will drive the number of ballfields and basketball courts a community needs to provide. As a community's population grows, so does the need for active parkland. A population calculation can readily be updated as a community grows.

The prevailing standard for active parkland acreage has been 10-acres per 1,000-population. This standard was first referenced in National Park, Recreation, and Open Space Standards published by NRPA in 1969. In 1995, in its Park, Recreation, Open Space, and Greenway Guidelines, NRPA promoted a shift away from reliance on an absolute national standard (10 acres/1,000 persons), to increasing community self-direction where the number of acres of active parkland is based on what residents determine is best for themselves. NRPA recognized that each community is different and decisions on the amount of active parkland for a community should be made on a local level.

The 10-acre standard is still used across the country as a starting point to evaluate if communities have sufficient active parkland. The first step in assessing if West Bradford Township has enough parkland to meet the 10-acres per 1,000 resident standard is to evaluate the current active parkland acreage, based on population. A calculation reveals that West Bradford Township has 7.05-acres of active parkland per 1,000 residents based on the Township's 2010 U.S. Census population of 12,223.

- 12,223 (2010 population) ÷ 1,000 = 12.223
- 86.2-acres (active parkland acreage) ÷ 12.223 = 7.05-acres of active parkland/1,000 residents
- West Bradford Township 2010 Active Parkland Acreage Standard = 7.05-acres of parkland/1,000 residents

For assessment purposes, the minimum standard of 10-acres is divided between community parks (8 acres) and neighborhood parks (2 acres). Table 5-3

Table 5-3

West Bradford Township
Active Parkland Acreage/NRPA Standards Analysis
10-Acre Standard – 2010 Population

Park Type	Existing Active Parkland Acreage	Recommended Acres	2010 Difference (-) Excess (+)
Community Parks @ 8 Acres/1,000 Population	60.7	97.8	(-37.1)
Neighborhood Parks @ 2 Acres/ 1,000 Population	25.5*	24.4	(+1.1)
Totals (Total Community Park + Neighborhood Park)	86.2	122.2	(-36)

**Includes Beacon Hill Park as it contains active recreation facilities.*

compares the 2010 Township population with the existing active parkland acreage when divided by community and neighborhood parks.

When approximately 55 acres of the Embreeville property is developed as a community park, the Township will have 141.2-acres of active parkland, which is 19 acres over the recommended total active parkland acreage amount for the Township. This will bring the active parkland acreage standard to 11.6-acres of active parkland per 1,000 residents, based on the Township's 2010 population. At 11.6-acres per 1,000 residents, West Bradford Township will have more than the minimum 10-acre standard first recommended in 1969. This acreage standard hinges on a portion of the Embreeville property being developed as a future community park. With the Embreeville Athletic Field property added, total active parkland acreage will be 161.2, which is 39 acres over the total recommended amount.

Population Forecasts

Population projections are used for many planning and public service programs to guide decisions and allocate resources. According to the Delaware Valley Regional Planning Commission (DVRPC), by 2045 the population for Chester County is projected to reach 662,283. The population of West Bradford Township is projected to be 16,634. The Township is projected to experience a 30.2 percent growth in population, while Chester County's overall population is projected to grow by 28.4 percent. The DVRPC forecasts serve as the official adopted forecasts for Chester County government.

The need for active parkland is expected to grow, based on the DVRPC population projection increases. Table 5-4 explores the active parkland acreage deficit based on NRPA standards, the 2015 Township United States Census population estimate, and the DVRPC population projections through 2045.

Table 5-4

West Bradford Township DVRPC Population Forecasts
Active Parkland Acreage Needs 2015 to 2045

	2015	2020	2025	2035	2045	# Change 2015-45	% Change 2015-45
Population	12,779	13,519	14,255	15,651	16,634	3,855	30.2
Recommended Acres	122.2	135.2	142.6	156.5	166.3	44.1 acres	
Current Acres*	86.2	86.2	86.2	86.2	86.2		
Current Excess+/ Deficit-*	-36	-49	-56.4	-70.3	-80.1		
Excess+/Deficit- *Including Embreeville property*			-1.4	-15.3	-25.1		
Excess+/Deficit- *Including Embreeville property and Embreeville Athletic Fields*			+18.6	+4.7	-5.1		

**Does not include the projected 55-acres of community parkland at the Embreeville property or the 20-acre Embreeville Athletic Fields.*

Source: DVRPC 2015-2045 Population Forecasts, July 2016

Location of Parks

The parkland distribution analysis evaluates the location of parks relative to existing residential development and considers physical barriers that limit easy access to park sites. Service radiuses, which define the geographic area generally served by a park, have been applied to existing Township parks on the Park Service Areas Map.

Convenient access to parks promotes an active, healthy lifestyle. Parks provide opportunities and facilities for physical activity for people of all ages and abilities. A person's propensity to use a park is greatly reduced if they perceive it to be difficult to access or not within a reasonable distance. Map 5-1, Park Service Areas, illustrates the location of parks, preserves, and other recreation parcels in West Bradford Township.

Types of Recreation Facilities

The Township's two community parks provide a diversity of active recreation facilities for residents to enjoy. Facilities include baseball and softball fields, basketball and tennis courts, picnic pavilions, bocce courts, horseshoe pits, tot lots and youth playgrounds, and inline hockey rinks. Statewide, walking is ranked as the recreation activity with the highest participation and trails are the highest desired park facility. Both community parks offer loop trails. In addition, the 2.5-mile Brandywine Trail helps to meet this recreation need.

The Township community parks feature plenty of traditional active recreation facilities. Considering the addition of recreation facilities such as an off-leash dog park, skate park, amphitheater, all-abilities boundless playground, disc golf course, bicycle pump track, community gardens, and dedicated pickleball courts would open up the parks to some new visitors and uses.

Population Demographics

As the West Bradford Township population grows and changes, the need to carefully plan for future recreation opportunities is essential. Parks and recreation planning must be appropriate for the number and type of people living in the Township. The following section examines various aspects of the Township's population demographics.

West Bradford Township is a rural/suburban community with a 2010 population of 12,223. Table 5-5 shows that the Township gained population over the 2000 census by 1,448 persons, or 13.4 percent; the population of Pennsylvania and Chester County expanded as well.

Age

Table 5-6 shows the number of residents in each age category from the 2010 U.S. Census and the 2017 American Community Survey (ACS) 5-Year Estimates. Since 2010, the Township's population of residents age 55 and over has seen the biggest in-

Table 5-5

Pennsylvania, Chester County, and
West Bradford Township
Population Changes 2000-2010

Area	2000 Population	2010 Population	# Change 2000-2010	% Change 2000-2010
Pennsylvania	12,281,054	12,702,379	421,325	3.4%
Chester County	433,501	498,886	65,385	15.1%
West Bradford Township	10,775	12,223	1,448	13.4%

Source: U.S. Bureau of the Census, 2000 and 2010

Table 5-6

Chester County and West Bradford Township
Age of Population 2010 and 2017

Age Group	Chester County Population 2010	Chester County Population 2017	Percent of County Population 2017	WB Township Population 2010	Percent of Township Population 2010	WB Township Population 2017	Percent of Township Population 2017
Under 5 yrs.	31,126	28,965	7.6	929	7.6	757	5.9
5 – 19 yrs.	107,047	105,995	22.7	2,780	22.8	2,769	21.7
20 – 34 yrs.	84,757	90,519	13.0	1,583	13.0	1,611	12.7
35 – 44 yrs.	68,933	63,858	15.7	1,925	15.8	2,027	15.9
45 – 54 yrs.	81,576	77,530	18.0	2,198	18.0	1,995	15.6
55 – 64 yrs.	61,572	70,738	13.8	1,684	13.7	2,071	16.2
65 – 74 yrs.	34,016	44,473	5.9	718	5.9	1,075	8.4
75 – 84 yrs.	20,592	21,538	2.5	306	2.5	346	2.7
85 yrs. +	9,267	11,036	0.8	100	0.8	121	0.9
Totals	498,886	514,652		12,223		12,772	
Median Age	***39.3***	***40.3***		***39.6***		***42.2***	

Source: U.S. Bureau of the Census, 2010 and ACS 5-Year Estimates, 2017

Table 5-7

Chester County and West Bradford Township
Race and Education – 2017

Area	White	African American	Asian	American Indian or Alaskan Native	Hispanic or Latino of Any Race	High School Diploma or Higher	Bachelor's Degree or Higher
Chester County	87.7	7.0	5.5	.5	7.2	92.9	51.0
West Bradford Township	90.5	3.1	4.1	0.0	3.9	95.9	55.4

Source: U.S. Bureau of the Census ACS 5-Year Estimates, 2017

Table 5-8

Chester County and West Bradford Township
Income and Housing – 2017

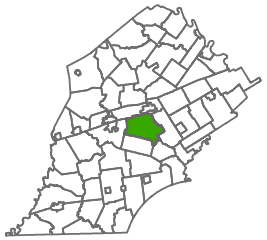
Area	Median Household Income	Per Capita Income	Percent in Poverty	Median House Value	Median Rent	Percent Owner Occupied
Chester County	$92,417	$46,256	6.7	$355,000	$1,250	75.4
West Bradford Township	$115,000	$47,126	2.5	$331,200	$1,033	94.6

Source: U.S. Bureau of the Census ACS 5-Year Estimates, 2017

Map 5-1

Park Service Areas

West Bradford Township, Chester County



- Roads
- Municipal Campus Park Service Area- 1/2 mile
- Future Community Park Service Area- 2 miles
- Broad Run Park Service Area- 2 miles
- Shadyside Park Service Area- 2 miles
- Municipal Campus
- Municipal Parks and Preserves*
- Private Preserves
- Other Municipal Land
- Existing Regional Trails
- Planned Regional Trails

0 2,000 4,000 6,000 Feet

BRANDYWINE CONSERVANCY

Recreation and Parks SOLUTIONS

Data Source: Base Data from Chester County GIS Department, 01/2020

Map Created: December 9, 2020

Date Exported: 7/26/2022

crease. 2017 estimates show that 28.2 percent of the Township's population is age 55 and over, compared with 22.9 percent in 2010. The 5 to 19 age group had a slight decline in population, from 22.8 percent in 2010 to 21.7 percent of the total population in 2017. When combined with the under 5 age group, the percent of residents ages 0 to 19 in 2010 was 30.4; in 2017, it decreased to 27.6 percent. The percent of residents ages 45-54 also declined, from 18 percent of the total population in 2010 to 15.6 percent in 2017. According to the 2010 U.S. Census, the median age for Chester County was 39.3, while West Bradford Township's population was slightly older with a median age of 39.6. According to the 2017 ACS 5-Year Estimates, the median age of Township residents has increased to 42.2. The median age of Chester County residents increased also, to 40.3.

The age groups in the Township showing the largest increases since 2010 were those age 55-64 (13.7 percent to 16.2 percent), and age 65-74 (5.9 percent to 8.4 percent).

Race and Education

Table 5-7 shows the percentage of residents by race in Chester County and West Bradford Township from the 2017 American Community Survey (ACS) 5-Year Estimates. West Bradford Township was slightly less diverse than Chester County with 90.5 percent of the population being white, compared to 87.7 percent white in the County. Asians made up 4.1 percent of the Township population, African Americans made up 3.1 percent, and Hispanic or Latino of any race made up 3.9 percent. West Bradford Township's population of non-whites has increased since the 2010 Census, from 6.5 percent to 11.1 percent in 2017, with the most growth in the Asian population (from 2.6 to 4.1 percent) and the Hispanic or Latino population (from 2.0 to 3.9 percent).

Table 5-7 also shows the percentage of residents by educational attainment in Chester County and West Bradford Township from the 2017 American Community Survey (ACS) 5-Year Estimates. The 2017 ACS 5-Year Estimates indicated that 55.4 percent of West Bradford Township residents, 25 years and older, held a bachelor's degree or higher. 95.9 percent of residents were high school graduates or higher. Residents of West Bradford Township were slightly more educated than Chester County residents overall.

Income and Housing

Table 5-8 presents income and housing values for Chester County and West Bradford Township, based on the 2017 ACS 5-Year Estimates. The median household income for West Bradford Township was 24.4 percent higher than the Chester County average in 2017. In addition, 2.5 percent of the Township population was living in poverty, while 6.7 percent of County residents were living in poverty.

The median value of a house in West Bradford Township, according to the 2017 ACS 5-Year Estimates, was $23,800 lower than the median house value in Chester County. Median rent was approximately $400 per month lower. Nearly 95 percent of the Township's housing stock was owner occupied compared to 75 percent of Chester County's housing stock, showing that the proportion of rental housing in the Township is extremely small. The average household size in the Township was 2.93 people.

Condition of Parkland and Recreation Facilities

Field visits were made to West Bradford Township parks to view and assess the park amenities and facilities and observe recreation activities. The Township parks are well-maintained and busy places that provide a diversity of active and passive recreation areas and facilities for residents of all ages to enjoy. ADA accessibility is an issue at all of the parks, with missing accessible connections to recreation facilities.

Specific findings of site observations for each park are outlined below.

BEACON HILL PARK

Type: Special Use Facility
Location: Beacon Hill Road
Size: 12.5 acres
Service Area: N/A
Uses: Active recreation
Parking and Park Access

The paved parking lot sits above the park with lined

Map 5-2

Recreational Facilities

West Bradford Township, Chester County



- Streams
- Water Bodies
- Roads
- Estimated Tax Parcels
- Sidewalks
- Existing Regional Trails
- Planned Regional Trails
- Existing Trails
- PA Bike Route L
- Public Preserves
- Municipal Parks and Preserves*
- Municipal Property (not open to the public)
- Recreational Facilities
- Private Recreational Facilities
- Golf Courses

* Municipal Preservers may not have public access or amenities.
** The future community park is not currently open to the public.

0 2,000 4,000 6,000 Feet

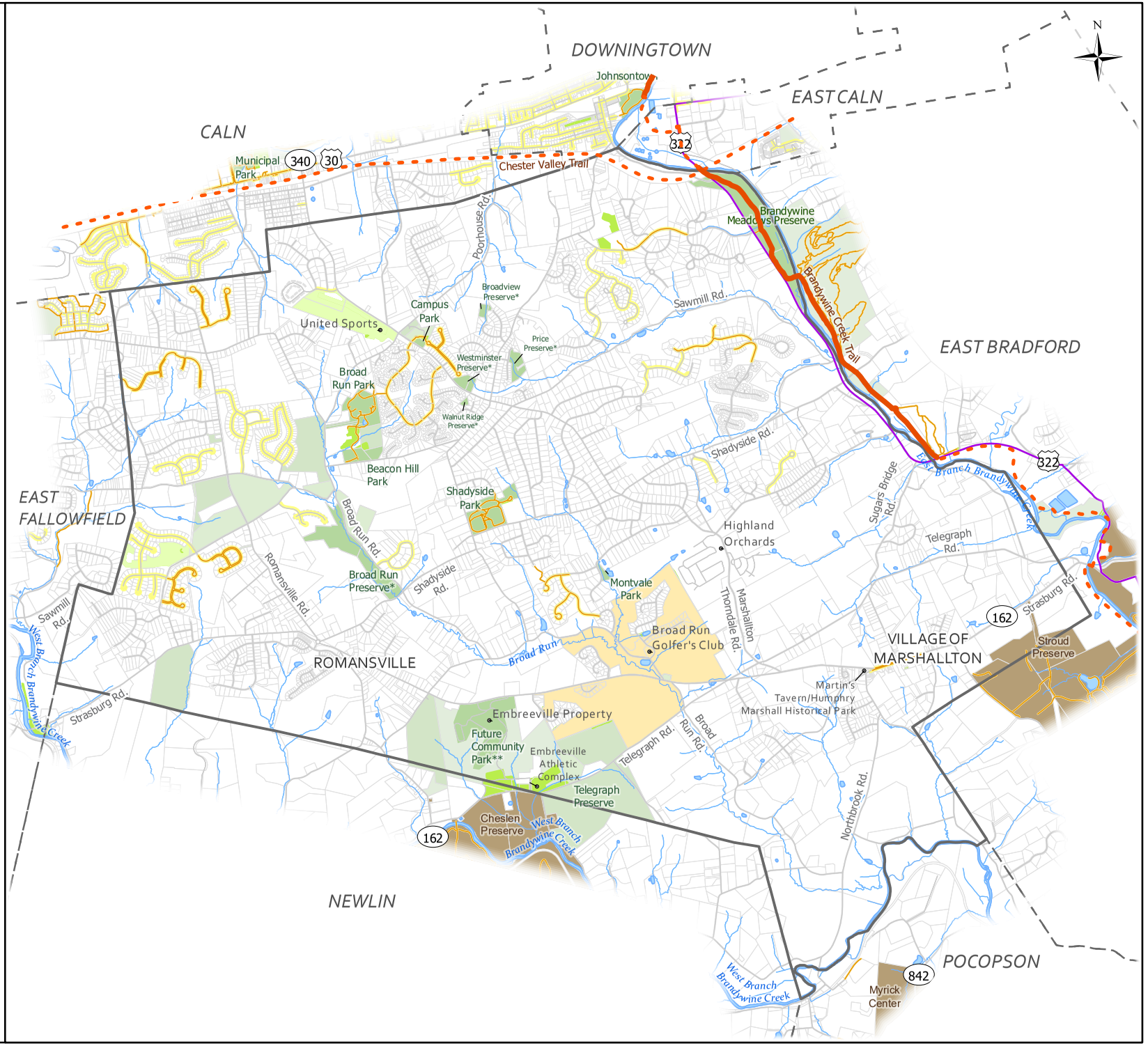
BRANDYWINE CONSERVANCY

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space for approximately 25 cars, including three handicapped parking spaces. Both parking lot entrances are gated. Each end of the parking lot has a paved walkway. One leads to the baseball fields, snack bar, and restrooms; the other pathway leads to the softball field. Both pathways travel a short distance and end in the grass a good distance away from the ballfields. Wooden steps also lead from the parking lot to the snack bar. A wooden park sign is located near the base of the steps. A 'mutt mitt' dog waste station is provided. A paved pathway links the park to the adjacent West Bradford Elementary School property and Broad Run Park. The parking lot and park facilities are not lighted.

Baseball and Softball Fields

The park is the home of the West Bradford Little League (WBLL). The park contains four ball fields, two baseball, one softball, and one t-ball grass field that is located between the baseball and softball fields. The ball fields are maintained by WBLL, including dragging and lining the field, and paying for diamondtex infield mix. WBLL contracts the mowing of the grass. With the exception of the t-ball field, the fields have backstops, protective fencing for players and spectators, and sideline and outfield fencing, which is all in fairly good shape. There are some fencing issues and drainage issues that need attention. The dugouts have concrete floors, roofs, aluminum benches, and equipment cubbies and are fully protected from foul balls. There are no accessible pathways into the dugouts. Equipment boxes are located behind each backstop. Electronic scoreboards are located at the softball field and one baseball field. Wooden bleachers are placed beyond the outfield fences in centerfield and along the sidelines of the fields. The bleachers sit on grass and are not ADA accessible. The bleachers are sturdy, framed with metal, and have wood plank seats. The park has two batting cages located above the ball fields. Permanent restrooms are located in the same cinder-block building as the snack bar. A grassy area adjacent to the snack bar has approximately six wooden picnic tables. A portable restroom is located near the softball field, which is the field furthest from the restroom/snack bar building. A storage shed houses maintenance equipment for the ballfields.

BRANDYWINE TRAIL

Type: Greenway and Trail
Location: Downingtown Pike
Size: 2.5-mile trail
Service Area: N/A
Uses: Active and passive recreation
Parking and Park Access

The parking area is gravel and fairly large. In addition to the parking area, an information kiosk with an indoor storage area and two park benches is located near the beginning of the trail. No restrooms are available. A 'mutt mitt' station for cleaning up dog waste is attached to the park rules and regulations sign.

The paved 2.5-mile multi-use trail runs along the banks of the Brandywine Creek into East Bradford Township. It connects with the Sugar's Bridge Nature Area, Harmony Hill Nature Area, and M. John Johnson natural trail systems. Horses and ATV's are not permitted on the paved trail; bicycles are permitted on many of the natural surface trails in East Bradford Township. An unpaved trail is adjacent to the paved trail and located closer to the creek. The site features 48 acres of open space, with meadows, wetlands, woodlands, and a pond.

BROAD RUN PARK

Type: Community Park
Location: Broad Run Road
Size: 29 acres
Service Area: 2 miles
Uses: Active and passive recreation
Parking and Park Access

The roadway entrance to the park is shared with West Bradford Elementary School. A park entrance sign is located along Broad Run Road. One large lighted and paved parking lot serves the park. The parking lot has two ADA spaces. The adjacent elementary school provides overflow parking, if needed. Off the parking area is an information kiosk with space to post notices and flyers.

Trails and Walkways

The park has no interior roadways. The park facilities are connected by a paved loop walkway that begins and ends at the parking lot and traverses the perimeter of the park, making nearly all areas of the park accessible. The walkway has paved spurs which connect the different areas and provides one

large loop around the park that is approximately six tenths of a mile in length. In addition, a trail spur provides a connection to West Bradford Elementary School, Beacon Hill Park, and the adjacent residential development of Victoria Crossing. Directional signs are placed along the loop to point visitors towards the park facilities.

Courts

Tennis Courts – The court surface, fencing, and nets at the two tennis courts are in good condition. There is no landscaping around the tennis courts, leaving them completely exposed to the sun during the heat of the summer. Pickleball lines have been painted on the courts. This is distracting to tennis players. To access the tennis courts, a key must be purchased. This limits use of the courts by some populations, especially children.

Basketball Court – The basketball court is lighted to extend play. The court surface is pervious pavement.

Volleyball Courts – The park contains two sand volleyball courts, one of which could be converted for Pickleball use.

Pavilions and Picnic Areas

The park has four pavilions, each with eight picnic tables and grills. The pavilions have security lighting and concrete floors. Electric is available but marked for maintenance use only. One ADA accessible picnic table is provided at each pavilion. Scattered areas with groups of picnic tables and grills on the grass provide more picnicking options for visitors. A wooden shelter with a concrete floor and bench seating is located on a hillside near the front of the park.

Youth Playground and Tot Lot

The play areas are age-segregated. One handicapped swing is provided. The safety surfacing material is mulch. Park benches are provided for seating. The play area has a colorful little free library with a wooden bench nearby to sit on.

Inline Hockey Rink

The inline hockey rink is centrally located in the park and is lighted for evening play. No formal spectator seating area is available; however, there is a grassy area located above the rink for viewing. A key must be purchased to access the hockey rink.

Other Amenities

Two outdoor classroom areas with chalkboards and tree stump seating are located under the trees near the play equipment area. A small pond allows for catch and release fishing. The park has permanent restrooms. Water fountains are located at the inline hockey rink. Trash and recycling receptables are located throughout the park. Bluebird boxes are located along the paved loop trail.

CAMPUS PARK

Type: Neighborhood Park
Location: Campus Drive
Size: 13 acres
Service Area: 1/2 mile
Uses: Active and passive recreation
Parking and Park Access

Parking is available at the Township building with a paved pathway leading to the tot lot and softball field. A sidewalk connects the park to the neighborhood for walking and biking access.

Tot Lot

A tot lot is located behind the softball field. Mulch is used for the safety surfacing material. A picnic table and benches provide seating.

Softball Field

The ballfield does not have an outfield fence. It may not be needed due to the youth use of the field. Sidewalks are provided to the dugouts and end in diamondtex under the player benches.

MONTVALE PARK

Type: Natural Resource Area/Preserve
Location: Montvale Circle
Size: 2.8 acres
Service Area: N/A
Uses: Passive recreation

Parking and Park Access

This park area appears to be used only by the residents of the surrounding homes. There is no parking area or on-street parking. The park currently has no formal access area, accessible paths, or park sign. Two benches are located near the pond. A 'mutt mitt' dog waste station is provided.

SHADYSIDE PARK

Type: Community Park
Location: Shadyside Road
Size: 31.7 acres
Service Area: 2 miles
Uses: Active and passive recreation
Parking and Park Access

A park entrance sign is located along Shadyside Road. One large lighted and paved parking lot serves the park. The parking lot has two ADA spaces. An information kiosk area with brick pavers and park benches is located off of the parking lot.

Trails and Walkways

The park has no interior roadways. The park facilities are connected by an accessible loop trail that traverses the perimeter of the park, making nearly all areas of the park accessible. The trail provides an upper and lower loop around the park. The trail loop starts at the parking area and travels around the perimeter of the park and back to the parking area. This large loop is approximately one mile in length and includes sitting benches along it. A circular seating area with brick pavers and benches is located between the activity areas. All of the activity areas lack shade.

Courts

Tennis Courts – The court surface, fencing, and nets at the two tennis courts are in good condition. The courts are lighted for evening play. To access the tennis courts, a key must be purchased. This limits use of the courts by some populations, such as children.

Basketball Courts – The court surface is pervious pavement.

Volleyball Courts – The volleyball courts are overgrown with grass and do not appear to be in use. Consideration should be given to converting these for Pickleball use.

Exercise Court – The exercise court contains about one dozen stations on a rubberized surface, laid out in a large square.

Bocce and Horseshoe Courts – The two bocce courts are overgrown with grass and do not appear to be in use.

Pavilions and Picnic Areas

The park contains three pavilions, two with four picnic tables and two grills, and one larger octagonal-shaped pavilion near the center of the park's facilities. The pavilions have security lighting. Electric is available but marked for maintenance use only. One ADA accessible picnic table is provided at each pavilion. Scattered areas with groups of picnic tables and grills on the grass provide more picnicking options for visitors.

Youth Playground and Tot Lot

The play areas are age-segregated and lighted. One handicapped swing is provided. The safety surface material is mulch. A sand box is located adjacent to the play areas.

Inline Hockey Rink

The inline hockey rink is lighted, with spectator seating provided on one side of the rink.

Baseball Field

The baseball field is completely fenced. Drainage issues are apparent. Lighting the ballfield could extend the playing season.

Other Amenities

Restrooms are centrally located, heated, and well maintained. Water fountains are located at the inline hockey rink and the basketball court. Trash and recycling receptables are located throughout the park. A large flat open area is located to the side of the park facilities, near the front of the park. The park has a colorful little free library with a

bench nearby to sit on. Bluebird boxes are located along the paved loop trail.

Parks and Recreation Organization, Management, Programming, and Financing Assessment

West Bradford Township has a strong commitment to preserving open space and natural resources and providing parks, recreation facilities, trails, and recreation programming for residents. Open spaces, recreation facilities, and environmental resources in the Township are recognized as critically important to quality of life. Close-to-home parks and recreation facilities and recreation programs serve many essential functions: building community and providing opportunities for residents to improve their health, improving nearby property values and encouraging new development and investment, building community identity, cohesion, and pride, providing an affordable source of recreation, and preserving the environment.

West Bradford Township operates under the Pennsylvania Second-Class Township Code. The code defines the governmental structure as well as the general and specific powers of local government, including enabling West Bradford Township to acquire land, construct, improve, maintain, regulate, and govern a public parks and recreation system.

West Bradford Township provides for the day-to-day parks and recreation needs of residents through a system of community and neighborhood parks, including playgrounds, hard surface courts, athletic fields, and picnic areas, as well as passive and natural areas. The Township also plays an important role in the provision of public recreation programs for residents. Residents rely on West Bradford Township's parks and recreation opportunities to engage in active healthy living, connect with nature, and socialize with family and friends.

Organization and Management

Township Board of Supervisors

The governing body of West Bradford Township is a three-member Board of Supervisors who are elected at large for six-year overlapping terms. The Chair of the Board is voted on by the members and traditionally rotates every year. The Board of Supervisors secures the health, safety, and welfare of Township residents by adopting resolutions and ordinances, determining the level of services provided to residents, hiring a Township Manager and staff to manage the operation of Township services, adopting a budget, establishing tax rates, and appointing residents to advisory and special purpose boards and commissions to help oversee legislative activities and operational functions, including playing a role in the provision of parks and recreation opportunities for residents.

The Board of Supervisors sets policy regarding West Bradford Township parks and recreation functions including park land, recreation facilities, rules and regulations, fees and charges, planning, goal setting, and administration. The Board of Supervisors also adopts the Township Comprehensive Plan, which determines community goals and objectives, and the Township Open Space, Recreation, and Environmental Resources Plan, which addresses the future open space, parks and recreation, and environmental resource needs of the Township.

Township Advisory Boards

West Bradford Township has two advisory boards that focus their volunteer efforts on parks and recreation and open space and land preservation.

- **Recreation Commission**
  To best serve residents with parks and recreation opportunities, the Township formed an advisory Recreation Commission in 1987. The Recreation Commission consists of seven Township residents who serve four year terms without compensation. The Recreation Commission makes recommendations to the Board of Supervisors on the maintenance, use, and improvement of existing recreational facilities and the acquisition and development of new facilities. An important duty is the review of new land development proposals regarding the adequacy of open space, park land, trails, and other recreation areas. The Recreation

Commission serves as the point of contact for the public and promoter of self-directed parks and recreation opportunities in the Township. It is also a direct provider of a few signature events to bring the community together at the Township parks. Other duties include working closely with the Township Parks Department to facilitate and monitor contracts for recreation programs such as fitness and wellness, nature, and arts programs in the Township parks by DARC and other community organizations and recommending the creation of recreation programs. The Recreation Commission monitors and updates the Township Open Space, Recreation, and Environmental Resources Plan for approval by the Board of Supervisors.

- **Land Preservation and Sustainability Committee**
  The Land Preservation and Sustainability Committee is a seven-member advisory committee appointed by the Board of Supervisors for terms of three years. The members serve without compensation and must be residents of the Township. This Committee's responsibilities include matters related to open space and land preservation such as tree planting along stream corridors, education programs teaching sustainability, investigating recycling methods, community reforestation efforts, energy conservation, use of renewable energies, and other activities at the request of the Board of Supervisors.

Township Parks Department

West Bradford Township is fortunate to have a full-time Buildings and Parks Supervisor and seasonal part-time maintenance support staff to oversee daily parks and recreation operations. In addition to the responsibilities surrounding managing and maintaining Township buildings, parks, and preserves, the Buildings and Parks Supervisor serves as the primary liaison to the West Bradford Youth Association (WBYA), Downingtown Area Recreation Consortium (DARC), and the Township Recreation Commission.

The parks are very well maintained. A general written plan of the day-to-day maintenance needs of the parks is in place. Most of the mowing in the parks is contracted out. Public Works Department staff assist with park work when needed. Community service workers help with general park clean-up duties. In addition to caring for the parks, the Parks Department does light maintenance, mowing, and property cleanup at the Township preserves.

The Township owns the major vehicles and equipment needed for park maintenance and has a capital equipment plan in place for purchase and replacement.

Security cameras are used at the restrooms and main pavilions at Broad Run Park and Shadyside Park. The Township has occasional problems with vandalism in the bathrooms. Shadyside Park has a large storage shed for park maintenance equipment items. Broad Run Park has a small storage room that houses cleaning supplies and security camera equipment.

The Buildings and Parks Supervisor is a Certified Playground Safety Inspector. Written records are kept for playground inspections, which are completed on a biweekly or monthly basis depending on the age of the playground. Seasonal park maintenance staff are trained in-house prior to starting employment.

Rules and regulations for the parks and preserves have been adopted by Township ordinance. Parks are open from 6:30 a.m. until dark most of the year. Use of recreation facilities is restricted to one hour of use at a time, particularly basketball, volleyball, tennis, and inline hockey facilities. Dogs are permitted but must be on a leash. Smoking and alcoholic beverages are prohibited.

West Bradford Township publishes a quarterly newsletter that is mailed to each household which includes information on the Township parks, preserves, and trails, and the recreation opportunities provided by the Recreation Commission and the Township's community recreation partners.

Parks, Recreation, Open Space, and Trail-Related Organizations

West Bradford Township is fortunate to have several

organizations that provide important services related to parks and recreation.

- **Chester County Planning Commission**
  The Chester County Planning Commission fosters excellence in planning and implementation through technical assistance publications and hands-on assistance to municipalities and partner organizations undertaking parks, recreation, open space, and trails projects. County planners provide information, examples, and encouragement, and participate in community meetings. *Landscapes3*, Chester County's long-range comprehensive plan adopted in November 2018, provides municipalities with general guidelines they can use to responsibly protect park land and open space, since Pennsylvania law grants them, and not the County government, with the ultimate authority regarding land use. This countywide vision also focuses on restoring and maintaining parks to ensure that they retain their ecological and recreational qualities. With the County Planning Commission's help, municipalities develop plans that advance their own municipal goals as well as play a role in regional efforts recommended in *Landscapes3*. The Chester County Planning Commission also operates the Vision Partnership Program to promote cooperation between the County and local governments in the implementation of *Landscapes3*. Grants awarded to municipalities under the Vision Partnership Program help them in achieving consistency with the principles of *Landscapes3* through their local planning activities.

- **Chester County Department of Parks and Preservation**
  The Chester County Department of Parks and Preservation operates the Preservation Partnership Grant Program that provides funding to municipalities and non-profit land conservation organizations to permanently preserve signifcant natural, recreational, agricultural, historic, and cultural land resources; enhance public access to those lands; provide public benefit; and implement County and municipal land use policies. The Department of Parks and Preservation also manages the County park system, the closest of which to West Bradford Township is Hibernia County Park. The County's Struble Trail is also in close proximity to the Township.

- **Marshallton Conservation Trust**
  The Marshallton Conservation Trust (MCT) is a 501c3 nonprofit formed in 2009. MCT promotes the preservation and improvement of the Marshallton community through initiatives focused on maintaining and improving its livability along with its distinctive character. MCT's goals are to steward and preserve Marshallton's history and culture, create a local community forum to address mutual concerns and implement projects, facilitate educational and social opportunities among the residents, organizations, and enterprises of the village; protect and improve the quality of life, safety, health, and environment of the Marshallton community-both within the village boundaries and the countryside surrounding it; and enable a sustainable capability so that the mission and goals survive beyond the current generation of concerned friends and residents of the village of Marshallton.

- **Friends of Martin's Tavern**
  The Friends of Martin's Tavern has been operating for 20 years with the mission to further the historical and cultural heritage of Marshallton through recognition, preservation and education. Friends of Martin's Tavern owns the Marton's Tavern site, owns and controls the historical content at the Marshallton Village Heritage Center, one of several in the County, and hosts community events and conducts historical tours throughout the village.

- **Downingtown Area School District**
  The Downingtown Area School District is committed to supporting community recreation and the use of school district facilities for the public good. School district facilities are important to the community for

both education and recreation. Community organizations use school district facilities for sports, recreation programs, day camps, and special events. In addition, the School District is a strong supporter of the area's municipal recreation program provider, the Downingtown Area Recreation Consortium (DARC).

Recreation Programming

West Bradford Township supports the provision of a broad range of recreation programs for all ages and abilities by its Recreation Commission and community recreation partners. In addition to West Bradford Township recreation facilities and those of nearby municipalities, the Downingtown Area School District opens its sports fields and gymnasiums for recreational sports, league play, and recreation programs.

Role of the Township in Recreation Programming

The Township primarily:

- Facilitates recreation by providing safe, inclusive, and welcoming parks and recreation facilities
- Sponsors community-wide special events to bring residents together
- Supports the efforts of other providers who offer organized scheduled programs
- Promotes parks and recreation through the Township's website, newsletters, and social media
- Provides outdoor opportunities for residents that are mainly self-directed
- Engages in partnerships with other public and private entities

Township Recreation Commission Programs

The Recreation Commission offers seasonal community events which are free to the public. The largest of these events is West Bradford Day, held at Broad Run Park in May. Other family activities include Summer Splash Day at Shadyside Park, Thursday Night Movies at Broad Run Park, Thursday Kids Nights at Shadyside Park, and the Fall Family Fun Festival and Ghost Walk in the village of Marshallton. Parks Department staff work at most of the community events. The Recreation Commission also sponsors a 10 and Under Summer Tennis Program at Broad Run Park.

Township Community Recreation Partners

The Township partners with a number of community agencies to offer a wide range of recreation programs for residents.

- **West Bradford Youth Athletics, Inc. (WBYA)**
  WBYA, a nonprofit volunteer organization funded by its members, offers boys and girls ranging in age from five to 18 the opportunity to participate in field hockey, golf, lacrosse, basketball, street hockey, and soccer programs. WBYA utilizes the Shadyside Park inline hockey rink, Ingleside Golf Club, Downingtown Area School District facilities, and Embreeville Athletic Complex soccer/lacrosse fields for its youth sports programs.
- **Downingtown West Little League (DWLL)**
  DWLL utilizes the Beacon Hill Park, Campus Park, and Shadyside Park baseball and softball fields for its Little League baseball and softball programs for ages five to 18.
- **Downingtown West Basketball League (DWBL)**
  DWBL is a joint venture between West Bradford Youth Athletics (WBYA) and East Brandywine Youth Athletics (EBYA). The league includes elementary and middle school programs for boys and girls, and a high school program for boys. Practices and games are played at West Bradford Elementary, Brandywine-Wallace Elementary, Bradford Heights Elementary, and Downingtown Middle School gymnasiums.
- **Downingtown Area Recreation Consortium (DARC)**
  Downingtown Borough, Caln, East Brandywine, East Caln, Upper Uwchlan, Uwchlan, Wallace, West Bradford, and West Pikeland Townships, and the Downingtown Area School District jointly operate regional recreational and educational programs

for residents through the nonprofit DARC. DARC employs three full-time staff and provides wide range of recreation opportunities for children and adults, from fitness classes, adult softball and basketball leagues, and summer camps, to computer workshops, dance, and art classes. West Bradford Township residents pay the resident discount rate for DARC programs. Via the DARC website, West Bradford Township residents can submit reservation requests and complete payment to reserve picnic pavilions within each park.

Other Recreation Program Providers

- **Downingtown Library**
  Downingtown Library provides various activities, such as book clubs, story times, ukulele lessons, film forums, and educational programs for all ages. Located in the Borough of Downingtown, next to Kerr Park, Downingtown Library is a 501c3 nonprofit public library that is financially supported by governmental contributions, donations, grants, and special events.

- **Brandywine Valley Active Aging**
  The Downingtown campus of Brandywine Valley Active Aging offers educational opportunities, fitness classes, art classes, special events, and healthy meals for Township residents ages 50 and over. This is the closest senior center to West Bradford Township residents. The center operates Monday to Friday from 8 a.m. to 3 p.m.

- **United Sports Training Center**
  United Sports Training Center is a 127,000 square-foot indoor building with sport courts, turf fields, rock climbing wall, and moon bounce area; and a 60-acre outdoor sports complex with grass and turf fields located in West Bradford Township. Many of the outdoor fields are lighted for night play. This privately-funded project transformed a historic, long-neglected airport into a major center for public recreation and field access. Programs include leagues and tournaments for youth and adults in sports such as basketball, field hockey, flag football, futsal, lacrosse, pickleball, soccer, softball, and volleyball; before and after school sports enrichment programs, in-service sports days, preschool play dates, summer day camps, and youth sports camps, classes, and clinics such as cheer, gymnastics, baseball, dance, intro to sports, Taekwondo, track and field, and tennis.

- **Highland Orchards**
  Highland Orchards, a 200-acre active fruit and vegetable farm, offers outdoor family activities. A wide variety of crops are grown and available to pick-your-own including rhubarb, strawberries, sweet and sour cherries, raspberries, blueberries, peaches, sweet corn, pumpkins, and apples. Public and private group hayrides are offered including bonfires in the evenings, as well as farm animals to feed, educational tours, and special events such as the Easter Bunny Barn and Harvest Festival weekends.

Other Township Community Events

A wide variety of special events are sponsored by other organizations. They include the Marshallton Triathlon, Marshallton Memorial Day Parade, Marshallton Village Celebration and Tree Lighting, Bradford Friends Annual Christmas Sing, Community Yard Sale, Breakfast with Santa, Winterfest Gala, Operation Santa, Marshallton Town Tour, Plein Air Brandywine Valley, and Summer Solstice Ice Cream Social at Highland Orchards.

Financing

The following section presents information on Township parks and recreation revenues and expenditures. It also includes comparisons of West Bradford Township parks and recreation financing with that of nearby municipalities.

Funding for public parks and recreation falls into two major categories: operational funding and capital funding. Operational funding is for the day-to-day maintenance and operation of the public parks and recreation system. This includes park maintenance, recreation programs, staffing, utilities, equipment, supplies, and materials. Capital funding is general-

Table 5-9

West Bradford Township General Fund Revenues and Expenses 2019 and 2020

	2019	2020
Revenues		
Act 511 Taxes	$3,579,000	$4,113,899
Licenses, Permits and Fees	$291,160	$291,160
Fines and Forfeits	$20,400	$17,400
Interest	$5,500	$7,500
Other Government Levels	$192,972	$192,350
Charges for Services	$474,612	$518,625
Total Revenues	**$4,531,644**	**$5,140,934**
Expenses		
Board of Supervisors and Communications	$231,086	$261,332
Administration	$442,144	$471,635
Finance	$198,379	$199,896
Legal	$78,000	$102,000
Engineering	$92,500	$36,000
Buildings	$312,052	$337,585
Fire and Animal Control	$166,186	$167,686
Planning and Regulation	$506,958	$504,723
Zoning Hearing Board	$29,250	$26,713
Community Health Services	$27,628	$31,310
Streets General	$948,372	$968,053
Snow Removal	$159,839	$159,839
Signs and Traffic Control	$28,500	$28,500
Street Lights	$2,760	$2,760
Storm Sewers	$200,000	$84,000
Machinery and Tools	$8,200	$8,200
Road Maintenance	$236,075	$234,640
Road Construction	$10,000	$10,000
Stormwater Management	---	$195,382
Parks and Recreation	$280,540	$325,197
Libraries	$44,414	$46,270
Debt Service	---	$405,000
Miscellaneous	$526,061	$534,212
Total Expenses	**$4,528,944**	**$5,140,934**
Excess (Deficiency) of Revenues Over Expenses	**$2,700**	**$0**

Source: West Bradford Township 2020 Budget

ly expenditures of more than $10,000 for improvements that last more than five to seven years.

Approximately 80 percent of the Township's operating budget is funded through local tax revenues, including its park operation and maintenance costs.

West Bradford Township provided $19,064 to DARC to help fund its operations in 2020. The contribution amount is calculated by Township resident participation in DARC programs. The Township also supports the Downingtown and Coatesville Area Libraries with an annual contribution. In addition, WBYA receives financial support from the Township. In 2020, the Township's contribution to WBYA was $36,068.

The Township generates a small amount of operating revenue for parks and recreation through pavilion rentals and tennis and inline hockey facility key fees. Sponsors are obtained to help offset the cost of Township special events.

The Township has a capital fund and budget in place, with parks and recreation as an expenditure line item. Mandatory dedication funds are placed into a capital improvement fund for park improvements and maintenance.

Table 5-9 lists West Bradford Township budgeted general fund revenues and expenses by category for 2019 and 2020.

Local Municipal Parks and Recreation Spending Comparisons

Listed below in Table 5-10 is 2018 financial data for similarly-sized and/or nearby municipalities in Chester County. The per capita expense for parks and recreation for each municipality is calculated using the net parks and recreation expenses of the municipality and the 2010 U.S. Census figures.

Based on data from the Pennsylvania Department of Community and Economic Development, from 2008-2012, municipalities statewide spent about $457 million in operating budget funds on parks and recreation, or an average of $36 annually per capita. Pennsylvania municipal parks and recreation spending is closely correlated to population. The larger the municipal population, the higher the spending. The national average per capita operating budget spending by municipalities on parks and recreation is $83.

Capital Spending on Parks and Recreation

The Township invests capital funds into its park system for both development and acquisition. Mandatory dedication funds are set aside and a capital budget is developed. Table 5-11 details the actual 2018 capital spending and the budgeted spending for 2019 and 2020.



Broad Run Park offers four covered pavilions which can be reserved for group use for a fee.

Table 5-10

Municipal General Fund Operating Budget Spending Comparison for Parks and Recreation – 2018

Chester County Municipality	2010 Census Pop	General Fund Expenses	Parks & Rec Expenses	Parks & Rec Revenue	Net Parks & Rec Expenses	Per Capita Parks & Rec Spending	Parks & Rec % of Total Expenses
Caln	13,817	$7,051,060	$611,094	$0	$611,094	$44.23	8.7
Downingtown*	7,891	$7,432,341	$226,461	$12,516	$213,945	$27.11	2.9
East Bradford	9,942	$4,440,813	$164,769	$0	$164,769	$16.57	3.7
East Brandywine*	6,742	$6,565,262	$263,979	$140,875	$123,104	$18.26	1.9
East Caln*	4,838	$2,656,634	$123,725	$6,310	$117,415	$24.27	4.4
East Goshen	18,026	$9,660,531	$828,864	$97,428	$731,436	$40.58	7.6
East Whiteland	10,650	$12,315,748	$253,132	$41,703	$211,429	$19.85	1.7
Easttown	10,477	$6,861,354	$160,081	$53,835	$106,246	$10.14	1.5
New Garden	11,984	$6,056,680	$170,888	$1,400	$169,488	$14.14	2.8
Upper Uwchlan*	11,227	$6,097,154	$335,017	$154,107	$180,910	$16.11	2.9
Uwchlan*	18,088	$10,329,532	$443,453	$0	$443,453	$24.52	4.3
Wallace*	3,458	$1,288,661	$50,102	$0	$50,102	$14.49	3.9
West Bradford*	12,376	$5,248,385	$294,678	$21,664	$273,014	$22.06	5.2
West Caln	9,014	$2,358,703	$16,965	$10,685	$6,280	$.70	0.3
West Pikeland*	4,024	$2,389,610	$104,086	$0	$104,086	$25.87	4.4
West Whiteland	18,274	$11,728,073	$383,237	$20,915	$362,322	$19.83	3.1
Westtown	10,827	$8,710,618	$69,822	$2,377	$67,445	$6.23	0.8
Willistown	10,497	$8,185,723	$237,688	$12,256	$225,432	$21.48	2.8

**Downingtown Area School District Municipalities*

Source: Pennsylvania Department of Community and Economic Development Municipal Financial Reports 2018

Table 5-11

West Bradford Township Capital Spending Parks and Recreation

2018 Actual	2019 Budget	2020 Budget*
$227,142	$129,351	$2,827,851

** 2020 budget is inflated due to expenditures to acquire Embreeville property*

Plan for Parks and Recreation

The Plan for Parks and Recreation identifies the needs of West Bradford Township for park facilities and recreation programs, as well as the management and financing structure to support them. The Township's parks and recreation needs have been determined by analyzing the inventory of existing conditions, parks and recreation standards, and key person interviews and community survey results. Strengths and challenges have been identified for parks and recreation facilities, programming, organization and management, and financing.

Park Classification and Location Analysis

West Bradford Township owns and operates two community parks, Broad Run Park and Shadyside Park, each with an array of recreation facilities. The service areas of Broad Run Park and Shadyside Park cover a large portion of the Township. A portion of the Embreeville property is projected to become the Township's third community park. The future community park at the Embreeville property will help to cover some of the eastern portion of the Township that is currently outside of the service areas of the two existing community parks. As the Embreeville property is located close to the Township boundary, its service radius extends into Newlin Township. The eastern portion of the Township that borders Pocopson Township to the south and East Bradford Township to the east and includes the village of Marshallton is out of the two-mile service areas of the existing and future community parks.

The Township contains only one neighborhood park, Campus Park. While it is sized as a neighborhood park, Beacon Hill Park is a special use facility, with its amenities entirely focused on baseball and softball. The paved section of the Brandywine Trail extends 2.5 miles from West Bradford Township into East Bradford Township. Using streets in Downingtown Borough, trail users can connect to Chester County's Struble Trail.

The Township owns eight preserve areas (nine if Montvale Park is included) with over 300 acres protected and available for passive recreation. While it is sized as a mini park, the amenities at Montvale Park fit into the natural resource area/preserve category. Mini parks are typically well developed and include playground areas. In addition, approximately 145 acres of the Embreeville property will become a natural resource area/preserve.

Recreation Facilities Analysis

The existing conditions of the West Bradford Township park and trail areas are outlined on the following pages, including suggested improvements for recreation opportunities, accessibility, and sustainability.

Special Use Facility

Beacon Hill Park

EXISTING CONDITIONS

- 12.5 acres.
- Gated 25-car paved parking lot.
- Paved walkways lead down to the park and end in grass. Wooden steps lead down to the snack bar.
- Two batting cages.
- Two baseball fields and one softball field with backstops, fencing, dugouts, bleachers and scoreboards.
- One t-ball field.
- Snack bar and restroom building with picnic tables.
- Paved trail connects to West Bradford Elementary School and Broad Run Park.
- Storage shed.
- Stream.
- Wooded area.
- Steep slopes.

VISION

RECREATION:

Add a pavilion near the snack bar with a paved surface to provide stability and shade for picnic tables. Add a pavilion between fields C and D for shaded area for spectators. Fix fencing issues. Consider adding ballfield lights to extend the playing season.

ACCESSIBILITY:

Upgrade walkways from parking lot to meet ADA standards for slope and surface. Add railings for those with balance issues. Add a paved walkway loop with accessible pathways that connect to the ball fields, snack bar, picnic table area, restrooms, batting cages, dugouts, and spectator areas. Provide accessible bleachers and picnic tables. Add security lights to the parking lot and walkways.

SUSTAINABILITY:

Level ball fields to provide proper drainage to limit erosion. Take other steps to control erosion.

Add a retaining wall for the proposed snack bar pavilion. Plant trees along ball field sidelines and centerfield fences to provide shade.





Greenway and Trail

Brandywine Trail

EXISTING CONDITIONS

- Paved 2.5-mile multi-use trail.
- Connects to trail in East Bradford Township.
- Large paved parking lot.
- Information kiosk with indoor storage area.
- Two park benches.
- Dog waste station.
- Rules and regulations sign.
- Unpaved trail adjacent to creek.

VISION

RECREATION:

Add restroom facilities. Add a bike rack near the restroom facilities. Add park benches with shade for seating. Identify the trail with a sign that says Brandywine Trail.

ACCESSIBILITY:

Discourage creek entry by the trestle bridge by building a natural surface trail from the parking lot to a new boat launch area as proposed in the Brandywine Creek Water Trail Study. Provide signage to new boat launch area.

SUSTAINABILITY:

Clear overgrowth to better access creek. Remove/manage stands of invasive plants along creek access areas.





Community Park

Broad Run Park

EXISTING CONDITIONS

- 29 acres.
- Lighted, paved parking lot with gated entrance.
- No interior roadways.
- Paved .6-mile loop walkway around the perimeter of park connects activity areas.
- Walkway connects to West Bradford Elementary and Beacon Hill Park.
- Two tennis courts with painted pickleball lines.
- Lighted basketball court with player benches.
- Two sand volleyball courts.
- Wildflower areas with mown walking paths
- Four picnic pavilions with security lighting, tables, and grills.
- Two outdoor classroom areas.
- Small pond.
- Scattered picnic areas.
- Wooden shelter with bench seating near front of park.

VISION

RECREATION:

Add amphitheater/stage for community events (or at Shadyside Park). Remove the unmaintained sand volleyball court. Add .10-mile mileage markers on loop trail. Resurface tennis courts. Replace or repair damaged bird boxes and relocate to best locations.

Add a fabric backdrop along the tennis court fence end lines. Add water bottle fillers at basketball court. Add spectator seating at basketball court. Remove or replace scattered picnic table areas that are splintering, inaccessible, and lack shade. Add natural trails off of paved loop walkway. Add adult swings. Replace metal player benches at basketball court. Install lights at tennis courts. Add a covered seating area at tennis courts to provide area for socializing after play and shade. Consider adding pickleball courts.









EXISTING CONDITIONS

- Youth playground and tot lot.
- Lighted inline hockey rink.
- Restroom building near inline hockey rink.
- Bird nest boxes along loop walkway.
- Little free library.

VISION

ACCESSIBILITY:

Add additional handicapped parking spaces to parking lot. Restripe parking space lines. Change playground surfacing to allow for handicapped access. Allow user access to pavilion electric. Add signs at the playground area to indicate the ages for play. Add shaded benches along paved loop walkway. Mark the restroom doors to identify the restrooms. Replace damaged park rules and regulations sign and private drive/no admittance sign.



SUSTAINABILITY:

Plant trees in the picnic table areas, near the tennis courts, and along the loop walkway for shade. Add more natural meadows and consider more naturalized areas to reduce mowing where appropriate.



Neighborhood Park

Campus Park

EXISTING CONDITIONS

- 13 acres.
- Parking lot at Township building.
- Paved pathway from parking lot.
- One ball field with backstop and dugouts.
- Tot lot playground.
- Picnic table and benches.
- Sidewalk connects the park to neighborhood homes.

VISION

RECREATION:

Add a paved pathway loop around the park. Add a park sign and rules and regulations sign. Add a bike rack. Place protective fencing along the ball field first and third base lines.

ACCESSIBILITY:

Add a sign at tot lot to identify the age group permitted to play. Build accessible paved pathways to the ball field spectator areas and dugouts.

SUSTAINABILITY:

Plant trees along ball field sidelines.



Natural Resource Area/Preserve

Montvale Park

EXISTING CONDITIONS

- 2.8 acres.
- No parking lot or on-street parking.
- Dog waste station.
- Pond and stream.
- Wetland area.
- One park bench.
- Lawn area along one edge of pond.
- Wooded area.

VISION

RECREATION:

Add a sign to identify the site as a Preserve. Add picnic tables.

ACCESSIBILITY:

Build a boardwalk or improve trails to access the stream, wetlands, and pond. Create an accessible path from the street to the boardwalk/trails. Add a pull-off parking area along the street for a few cars. Improve access to the pond for fishing.

SUSTAINABILITY:

Clear overgrowth to better access stream and pond. Remove invasive plants.



Community Park

Shadyside Park

EXISTING CONDITIONS

- 31.7 acres
- Lighted, paved parking lot with gated entrance.
- No interior roadways.
- Paved 1-mile loop walkway around perimeter of park connects activity areas.
- Two lighted tennis courts.
- One lighted basketball court.
- Two grass volleyball courts.
- Two bocce courts and two horseshoe courts.
- One lighted inline hockey rink with spectator seating.
- Little free library.
- Circular brick paver seating area between playground and tennis courts.
- Lighted youth playground and tot lot.
- Sandbox.
- Exercise court station area.
- Bird nest boxes along loop walkway.
- Wildflower areas with mown walking paths.
- Three picnic pavilions with security lighting, tables, and grills.
- Centrally located restroom building.
- Flat open grass field near front of park.
- Scattered picnic areas.
- One fenced baseball field.

VISION

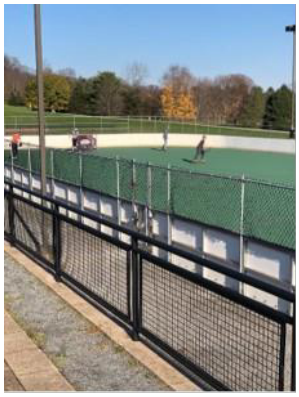
RECREATION:

Add .10-mile mileage markers on the loop trail. Add spectator/participant seating at basketball court and additional court. Remove or repair the bocce courts. Add fabric backdrop on tennis court end fences. Add additional bike racks throughout park. Improve horseshoe court area; consider moving it to one of the picnic pavilions. Add adult swings. Repurpose the grass volleyball court with new recreation facility; consider skatepark. Replace or repair damaged bird boxes. Add spur loops off the paved loop pathway to lengthen the walking path such as a loop around the baseball field. Add natural trails off of paved loop walkway. Consider adding ballfield lights to extend play. Add stage area for outdoor events. Replace playground with large, all-abilities playground.



ACCESSIBILITY:

Add signs at the playground area to indicate the ages for play. Add sitting areas at the playgrounds and provide shade through tree planting or installation of shade sails. Add shaded benches along paved loop walkway. Add paved walkway to access the exercise court. Add paved pathways to the baseball field and dugouts. Allow user access to pavilion electric. Add spectator seating at baseball field. Add a covered seating area at tennis courts to provide area for socializing after play and shade. Remove or replace scattered picnic table areas that are splintering, inaccessible, and lack shade.



SUSTAINABILITY:

Add lower maintenance landscape plantings. Add more natural meadows and consider more naturalized areas to reduce mowing where appropriate. Plant trees in scattered picnic areas. Plant trees along the loop walkway for shade. Correct drainage issues at the baseball field.

Community Survey Results for Parks and Recreation

The community survey yields some interesting insights about the Township's park areas and recreation programs from the perspective of its residents. While it was not a statistically valid survey, the survey was completed by 632 people, a strong number of respondents.

Park Visitation and Awareness

Broad Run and Shadyside Parks are the most frequently visited Township parks. Approximately 25 percent of survey respondents visit both community parks weekly; approximately 60 percent of respondents visit these parks monthly or seasonally. The Stroud Preserve and ChesLen Preserve are equally visited by Township residents, with over 75 percent of survey respondents using the preserves at least seasonally.

A high percentage of survey respondents (from 50 up to 65 percent, depending on the site) are unaware of the Township preserves. From 25 to 35 percent of Township residents have never visited them. Two Township parks, Campus Park and Montvale Park, are also not known or never visited by high percentages of survey respondents.

Top Five Desired Experiences

When visiting Township parks, survey respondents are looking for these experiences: walk/run/jog on trails/pathways (88 percent); experience nature/spend time outdoors (86 percent); enjoy time with friends/family (75 percent); relax (63 percent); and fitness/wellness (57 percent). Over 50 percent of survey respondents want to ride bikes and walk their dogs at the parks.

Priorities Over the Next 10 Years

The highest priorities of survey respondents for parks and recreation are conserving open space and natural resources, developing walking/biking connections between schools/parks/neighborhoods, acquiring land for future parks, developing longer distance walking/biking trails, and accessibility of parks and recreation facilities for persons with disabilities. When high and medium priority responses are combined, adding recreation facilities to existing parks and improving promotion of parks and recreation opportunities are priorities. Building indoor recreation facilities and outdoor athletic fields are the lowest priorities for parks and recreation over the next 10 years.

Important Recreation Facilities to Add

Survey respondents feel that walking/jogging trails, restrooms, nature trails, and bike trails are the most important recreation facilities to add to Township parks. Other facilities seen as important are an all-abilities fully accessible playground, community vegetable gardens, demonstration gardens, fishing access areas, food truck/farmers market areas, informal picnic areas, mountain bike trails, open lawn spaces, picnic pavilions, playgrounds and tot lots, sledding areas, and soccer/multi-purpose fields. Many respondents indicate interest in an area for scouting groups to camp and have ceremonies and meetings. Disc golf courses, larger playgrounds, access to fishing, mountain biking trails, and off-leash dog parks are also recreation facilities of interest. Recreation facilities with the lowest level of importance to add are artificial turf fields, bocce courts, indoor fieldhouse/gymnasiums, ninja warrior courses, and pickleball courts.

Satisfaction with Park Features

A high percentage of survey respondents are very satisfied or satisfied with availability of parking, feeling safe and secure while spending time in the parks, the cleanliness of grounds/environment, the overall maintenance of park areas and recreation facilities, and the availability of trails/walkways. Survey respondents are most dissatisfied with availability of restrooms, variety of recreation facilities, and cleanliness of restrooms. Over 33 percent of respondents don't know if parks and recreation facilities are accessible for persons with disabilities.

Participation in Township Activities

A little over one half of the survey respondents have participated in a Township special event or recreation program in the past two years. Respondents indicate interest in having more community events, especially in the larger Township parks, such as

food truck events, summer concert series, weekly farmers market, community clean-up days, movies in the park, and festivals. There is also interest in adult sports leagues, non-sports related programs for children, activities for teens, yoga, nature programs, historic and cultural resource programs, and activities for older adults.

Perception of Benefit

Sixty-three percent of survey respondents feel they or members of their household benefit a great deal from local parks and recreation opportunities. Only three percent of survey respondents feel they do not benefit at all.

Seventy-eight percent of survey respondents feel the Township as a whole benefits a great deal from local parks and recreation opportunities. Only 1.5 percent of survey respondents feel the Township does not benefit at all.

When 'a great deal' and 'somewhat' responses are combined, 97 percent indicate they personally benefit and 98.6 percent indicate West Bradford Township as a whole benefits from local parks and recreation opportunities. This compares to national survey statistics of 83 percent of Americans saying they personally benefit from local parks with 17 percent saying not at all; and 92 percent saying their communities benefit from local parks with eight percent saying not at all.

Willingness to Pay

In order to maintain and enhance parks, trails, recreation facilities, and programs in the Township, 83 percent of respondents are willing to pay at least $10 more per year. 27 percent are willing to pay $30 or more per year. 17 percent of survey respondents indicate they are not willing to pay more.

Other Results

Nine percent of survey respondents have a person with a disability in their household. 60 percent of survey respondents own a dog. The top way respondents hear about parks and recreation opportunities are the Township newsletter, social media, word of mouth, the Township website, and the DARC program guide. 25 percent of survey respondents walk and seven percent of survey respondents bike to park areas. 84 percent drive their personal vehicle to the parks.

Parks and Recreation Strengths and Challenges

Plan Element	Strengths	Challenges
Recreation Facilities	▪ Maintenance The parks are generally clean and well-maintained. WBYA and WBLL help to maintain fields at the Township parks, including mowing and fertilizing areas. ▪ Self-Directed Opportunities The Township focuses on creating opportunities for self-directed recreation, through the provision of facilities to enjoy nature, safely walk and bicycle, and socialize with family and friends. ▪ Private Indoor/Outdoor Sports Facility The United Sports Training Center, with a 127,000-square-foot indoor center and a 60-acre outdoor sports complex with a full slate of sports activities, is located in the Township. ▪ School District Properties Two Downingtown Area School District properties are located in the Township, West Bradford and Bradford Heights Elementary Schools. The properties contain a variety of outdoor recreation facilities including playground areas, basketball courts, informal fields, and paved areas for bike riding and informal games and are able to be used by the public. Indoor facilities are able to be accessed for DARC programs. ▪ Certified Playground Safety Inspector The Township has a Certified Playground Safety Inspector who is well qualified to ensure the safety and operability of playground equipment. ▪ Seasonal Staff for Park Maintenance The Township adds part-time seasonal staff to coincide with the growing season, during which more staff are needed. ▪ Highland Orchards Highland Orchards provides the community with fresh local produce and family-oriented experiences outdoors. In addition to pick-your-own fruits and vegetables, visitors enjoy hayrides, farm and growing season tours, and special family events. ▪ Broad Run Golfer's Club Broad Run Golfer's Club, a 372-acre, par 72 18-hole golf course with practice area and clubhouse, is located in the Township. ▪ Online Pavilion Rental Park pavilion rental is available online through West Bradford Township and DARC.	▪ Lack of Accessibility ADA accessibility is a major issue, particularly at Beacon Hill Park. All of the parks have some missing accessible connections to recreation facilities. Playground areas cannot be accessed by wheelchair due to the mulch surfacing. Spectator areas for recreation facilities cannot be accessed by wheelchair. Many of the facilities themselves such as the tennis courts, picnic pavilions, and inline hockey rinks are difficult to access by wheelchair. ▪ Lack of Staffing for Park Maintenance The Township lacks the workforce to keep up with the maintenance needs of the parks, especially as the parks and recreation system grows. Park facilities are maintained but the staff is stretched too thin and does not have sufficient time to spend at each area. Park facilities at times have overflowing trash receptacles and litter on the ground. Landscaped areas are overgrown with weeds and could use fresh mulch. The bathrooms are dirty at times. Some recreation facilities appear to no longer be used (such as the bocce courts at Shadyside Park and the sand volleyball court at Broad Run Park) and are in disrepair. ▪ Lack of Maintenance Management System There is not a system in place that captures maintenance workload data. Although the Township does record some information, the data is not being summarized in a way that is helpful in determining the work that is being accomplished, the service levels that should be provided, or the areas of strength and improvement needs of the staff. Tasks are generally provided to staff in morning meetings, or are accomplished on routine cycles, and manually recorded but not summarized. Without information on costs and productivity, the Township is unable to analyze many important facets of its park maintenance operations such as the need for staff training, potential work tasks to contract out, etc. ▪ Not Enough Fields Having adequate field space is an issue, as WBYA soccer and lacrosse programs are growing and compete for field time. WBYA would like to start field hockey and flag football programs, but field space is limited. DARC needs space for additional adult sports leagues such as kickball. Keeping the fields in good playing condition is problematic due to the inability to rotate the field use. ▪ Lack of Promotion of Recreation Facilities The recreation facilities available at the parks are not promoted as well as they could be on the Township website and Facebook page. ▪ Inconsistent Park Signs Park entrance signs are inconsistent in size, lettering, colors, etc. A branded uniform park sign would help to better identify the Township's role in providing the recreational areas.

Plan Element	Strengths	Challenges
Recreation Facilities, continued	▪ Community Parks The Township owns two well-developed and frequently visited community parks.	▪ Little Variety of Facilities There is little diversity of recreation facilities at the community parks. New types of facilities such as a skatepark or adult swings would draw different residents to the parks and make them more inclusive. ▪ Invasive Species Invasive species are taking over wooded areas of the parks and if not removed can infest areas, making them unhealthy. ▪ Limited Parking The community parks do not have interior roads to drive to outlying recreation facilities. Depending on the activities happening in the park (such as baseball games and pavilion rentals), the parking lots may be filled making some areas of the parks inaccessible because of bottlenecks at the park entrances and lack of parking space. ▪ Lack of Information on Accessibility The Township website does not give information on the disability accessibility for recreation facilities in the parks. This makes it difficult for disabled persons to feel comfortable visiting a park. ▪ Little Information on Preserves The preserves are not well marked and have no parking areas. There is no Information on how to access the preserves, including what their boundaries are, if there are hiking trails, and where to park. It is unclear as to whether the preserves are open space areas for the public to use. ▪ Underserved Area of the Township The eastern portion of the Township that borders Pocopson Township to the south and East Bradford Township to the east and includes the Village of Marshallton is out of the two-mile service area of the existing and future community parks. ▪ Brandywine Creek Access Boat users are accessing the Brandywine Creek at the Brandywine Trail just below the trestle bridge down a steep bank into swift water, which is causing erosion and is a potential safety issue.

Plan Element	Strengths	Challenges
Recreation Programs	▪ Township Recreation Commission The Township Recreation Commission provides family-oriented community events at Township parks. ▪ Intergovernmental Cooperation The Township is a partner in a progressive approach to community recreation programming, the Downingtown Area Recreation Consortium (DARC). Sharing the costs of providing this service with the other Downingtown Area School District municipalities allows Township residents to have a full slate of recreation programs available to them, close to home. ▪ Youth Sports Organizations The West Bradford Youth Association (WBYA) and West Bradford Little League (WBLL) offer a variety of youth sports programs for Township children. ▪ Township Support of Recreation Partners DARC, WBYA, WBLL, and Downingtown and Coatesville Libraries have strong relationships with the Township. Having financial support from the Township and use of the recreation facilities at the parks is critical to offer program opportunities for Township families. ▪ Variety of Programs and Community Events DARC offers a wide variety of recreation programs for all ages. Many community events are sponsored in the Township by different organizations. The village of Marshallton hosts many activities. ▪ Library Activities The Downingtown and Coatesville Libraries are full-service public libraries that offer numerous recreation programs and educational activities for Township residents. ▪ Brandywine Valley Active Aging The Downingtown campus of Brandywine Valley Active Aging offers educational opportunities, fitness classes, art classes, special events, and healthy meals for Township residents ages 50 and over.	▪ Private Youth Sports Competition Competition for facility use from private youth sports leagues who can afford to pay more for use, due to charging higher program fees, is a huge issue. Travel programs use School District gymnasiums making them unavailable to WBYA. ▪ High Indoor Rental Fees WBYA has to pay to rent School District gymnasium space for its basketball program and pays fees for custodians as well. This pushes up the program cost for families. ▪ Inadequate Promotion Getting the word out about programs is difficult. DARC stopped mailing its program guide due to the cost during the COVID pandemic. The School District does not allow distribution of program flyers in the schools or allow access to its email system to send information to families. It does allow flyers to be placed in the school offices. The Township helps by putting program information in its newsletter. Marketing of programs by Township recreation partners needs to be improved, especially enhanced use of social media. ▪ Inadequate Use of Schools/Lack of Indoor Program Space DARC is not permitted use of the school buildings because of the COVID pandemic. Not having gymnasium access is a big issue. Once the pandemic is over, DARC will have about 75 percent of the indoor space it needs if the School District allows access again. Access for daytime programs is especially needed. Unlike the library, DARC has no dedicated indoor space to hold programs. Using other's facilities leaves DARC with no control of cancellations and use in general. ▪ Large Program Service Area The DARC service area is very large. DARC cannot offer programs in all of the municipalities. People from one end of the service area will not drive more than 15-20 minutes for programs; they see that as too far away. West Bradford Township is at the southern end of the service area. ▪ Limited Virtual Programming Due to the loss of staff positions during the pandemic, DARC is unable to sponsor sufficient virtual programming opportunities for residents. ▪ Diversity of Township Special Events Special events at the parks sponsored by the Township are focused on families with children. Since not all Township households contain children, to be more inclusive some events should be adult-focused.

Plan Element	Strengths	Challenges
Organization and Management	▪ Township Commitment to Parks and Recreation The Township Supervisors are strongly committed to a high quality parks and recreation system through the provision of parks, preserves, and trails, participation in public recreation programming through DARC, WBYA, WBLL, and Downingtown and Coatesville Libraries and a forward-looking approach to parkland acquisition and development. ▪ Township Advisory Boards Two Township advisory boards serve important roles in parks and recreation, the Recreation Commission and Land Preservation and Sustainability Committee. ▪ Parks and Recreation Staff The Township has a full-time staff position (Buildings and Parks Supervisor) dedicated to parks and recreation, which supports park operation and maintenance and the community recreation programs and special events provided by the Township and its recreation partners. Seasonal part-time staff help to maintain the parks. ▪ Township Newsletter The Township publishes a quarterly newsletter which includes information on parks and recreation.	▪ Misnamed Advisory Board Recreation commissions in Pennsylvania are intergovernmental agencies formed to provide recreation programming across a regional area (similar to DARC operations). They have full-time staff and governing boards. The Township Recreation Commission is an advisory parks and recreation board, not a recreation commission. ▪ Mission Statement The mission statement on the Township website for the Recreation Commission is actually a description of the purpose and duties of the Recreation Commission, not a mission statement.
Financing	▪ Support of Township Partners The Township financially supports the Township Recreation Commission, DARC, WBYA, WBLL, and the Downingtown Library. ▪ Pursuit of Grant Funding The Township is creative in pursuing outside sources of funding for parks and recreation including grants from Chester County and the Pennsylvania Department of Conservation and Natural Resources. ▪ Financial Support from Businesses The Township seeks business sponsorship for its community events. ▪ Commitment to Funding Parks and Recreation In 2020, the Township budgeted to spend $26.28 per capita on parks and recreation. Of the 18 Chester County municipalities whose operating budget spending was compared for 2018, the Township was among the seven whose spending was over $20 per capita, showing a strong commitment to funding parks and recreation. ▪ Capital Spending The Township invests funds into its park system for development and acquisition, through mandatory dedication and capital budget funds.	▪ Program Revenue Shortfalls The spin-off of WBLL from WBYA to a separate organization has left its budget and finances up in the air, as the baseball and softball programs contributed a good amount of net revenue to WBYA. The COVID pandemic has shut down many DARC programs, meaning a significant amount of revenue has been lost leading to staff being let go. Summer day camp is the largest revenue producing program for DARC and was not able to be held in 2020. ▪ Recreation Partners Have Little Money for Capital Improvements Registration fees generally cover WBYA program expenses, but don't allow for sufficient funds for needed capital improvements. The ballfields have major drainage problems and need to be leveled. ▪ Lower than Average Per Capita Spending The Township per capita spending on parks and recreation is lower than the Pennsylvania average of $36 per capita and national average of $83 per capita.

Recommendations for Parks and Recreation

Recreation Facilities

5.1- Make upgrades to the existing Township parks by prioritizing and completing improvements as recommended in the recreation facilities analysis for each park site, placing an emphasis on accessibility improvements. Consider eliminating or repurposing lesser used facilities.

5.2 - Implement th Embreeville Park Master Plan (see Appendix F).

5.3 - Develop hiking trails on Township preserves to allow and encourage passive use of the areas by residents and institute a volunteer program to help maintain the trails.

5.4 - Improve access to Township preserves by installing signs and providing information on how to access the preserves, including what their boundaries are, where trails are located, and where to park.

5.5 - Promote and facilitate access for Township residents to quasi-public recreation facilities such as the Stroud Preserve, ChesLen Preserve, and Downingtown Area School District outdoor recreation areas.

5.6 - Consider technology improvements as park facilities are updated, such as solar powered park benches with cell phone charging stations.

Recreation Programs

5.7 - Focus programming efforts by the Township Recreation Commission on special event programs designed to get residents out to the parks. Potential events to consider include: special events with food trucks and music; weekly summer concert series; pumpkin hunt/carving/costume contest; candy cane hunt; fall family hayride and bonfire night; all ages yoga night; bark in the park day; weekly farmers market; community park and preserve clean-up day.

5.8 - Continue Township financial support to DARC, WBYA, WBLL, and the Downingtown and Coatesville Libraries for the provision of public recreation programs.

5.9 - Continue to allow DARC, WBYA, WBLL, and other Township organizations to use Township park facilities for recreation programs and special events.

5.10 - Help DARC to access indoor facilities in the Township such as fire halls, private schools, churches, and community businesses to allow for expansion of programs for ages 5 and under, parent-child programs, fitness programs, day camps, teen activities, and older adult programs.

5.11 - Encourage cross promotion among Township recreation providers via social media, e-mail blasts, website links, and DARC program guides to improve residents' awareness of available recreation program opportunities.

Organization and Management

5.12 - Categorize the park areas by the level of maintenance expected. Required staffing levels can be benchmarked based on the type of park acreage and what service levels are applied to that park acreage. For example, fully developed parks with high service levels will require the greatest staff resources. Conversely, parkland with no facilities can receive minimal services. Broad industry guidelines relate the ratio of park maintenance workers to acres under maintenance for various service levels ranging from "A" to "D". The table that follows provides the basic definition for each of these maintenance service levels and is provided as a general guideline for the municipality. Ultimately, staffing levels at municipal parks would be at the discretion of the Township and the Board of Supervisors.

Service Level	Service Level Definition and Required Maintenance Staffing
"A"	State-of-the-art maintenance applied to a high quality, diverse landscape such as destination parks with high levels of visitation, championship golf courses, and the like. Turf is lush, free from weeds and cut to a precise level and groomed weekly on a consistent schedule. Trimming along all lawn edges is performed concurrent with mowing. Planter beds are well raked and cultivated weekly and are free of any weeds, grass, or any foreign matter. Significant color planting (flower beds) are noted throughout the park. Reseeding and sodding are done rapidly whenever bare spots are present. Plants and trees in parks are pruned for safety, tree health and ornamental beauty. Hardscapes are regularly swept and litter and trash is collected 5-7x per week. Restrooms are cleaned multiple times each day. Requires one park maintenance worker per 4 to 6 developed park acres.
"B"	A reasonably high level of maintenance associated with well-developed park areas with higher visitation rates. Major difference with Service Level "A" is turf is not cut to a precise level and plants and trees in parks are not pruned and trimmed at the same frequency. The turf has a lush green appearance and is relatively free from weeds and foreign grasses (less than 5%). Planter beds are generally free from major weeds, debris, or grasses, but flowerbeds are not as extensive throughout the park. Litter and trash are collected 3x per week. Hardscapes are regularly swept. Restrooms are cleaned daily. Requires one park maintenance worker per 6 to 10 developed park acres.
"C"	The lowest expected service level for fully developed parks or a moderate level of maintenance associated with park locations of average development and/or visitation. Maintenance is accomplished, usually with longer service intervals, to keep the park safe and minimally serviceable to the community. Turf management such as mowing, reseeding, sodding, weed control, and fertilization are practiced to maintain generally healthy grass. Turf areas are generally not useful for a variety of high-traffic organized sports activities. Litter and/or other debris are removed weekly. Trash receptacle maintenance can be problematic in certain instances of high activity as refuse is not removed on a more frequent basis. Plants and trees are trimmed and pruned annually to ensure proper growth, risk reduction (falling limbs), and to maintain a reasonably healthy appearance. Planter bed areas are weeded and cultivated at four-month intervals. This level requires one park maintenance worker per approximately 12 to 18 park acres.
"D"	A minimal service level to parklands or open space with no facilities with the intent to maintain safe grounds and a natural environment. Maintenance is reduced to a minimum. These areas are maintained only to the extent necessary to control growth to reduce fire hazards and keep native vegetation alive and healthy during the growing season and to eliminate unsafe facilities. Inspection services and litter control are conducted, but on an infrequent basis. Usually such services are conducted as "fill-in" work by staff but otherwise one park maintenance work can cover several hundred acres of undeveloped parkland or open space.

5.13 - As the park system grows with the development of Embreeville, re-evaluate park staff needs to adequately maintain park areas to a "B" level of service and the standards expected by Township residents.

5.14 - Institute a system to capture and report park maintenance work (including ongoing safety inspections), analyze costs, schedule the work of staff, and compile data to report maintenance activities and the amounts of time spent on them by park location. As the park system and the number of maintenance staff grows, consider procuring a computerized maintenance management system.

5.15 - Identify the feasibility of outsourcing specific park maintenance tasks. Costs are not necessarily minimized by performing all work activities with Township staff. Contractors can play a vital role in supplementing the staff by performing work in a more efficient manner due to a greater level of expertise and experience, or by providing specialized tools and equipment.

5.16 - Identify trends in the performance of work in specific areas of the parks that consume excessive amounts of time. This may reflect a need for changing work methods, but also may reflect the need for capital improvements in the parks to reduce unnecessary and repetitive work.

5.17 - Develop a preventive program for recreation facility maintenance to generate maintenance work orders on a routine cycle, with different activities scheduled on a monthly, quarterly, bi-annual, or annual basis.

5.18 - Create a "Friends of" park program and seek dedicated partners to match with the two community parks to fundraise for park improvements and provide volunteers for park activities.

5.19 - Establish and/or update use and maintenance agreements between the Township and its recreation partners using Township facilities for recreation programs.

5.20 - Change the name of the Township Recreation Commission to Township Parks and Recreation Board to better reflect its advisory status and strengthen its ongoing role in monitoring community needs, reviewing subdivision and land development proposals, and monitoring the collection of fees-in-lieu of open space dedication for parks and recreation.

5.21 - Improve the use of the Township's Facebook page to promote the self-directed use of the parks and preserves and the benefits to residents of being outdoors and active as well as the programs sponsored by recreation partners. Ideas include promotion of pavilion rentals, photos of children enjoying the Kid's Nights, features on recreation facilities, top five reasons to visit the parks, sign-up dates for WBYA activities, availability of the current DARC program guide, etc.

5.22 - Develop a Township park and preserve system logo to use on new standard park and preserve entrance and interior signs.

5.23 - Improve the Township website to include a downloadable Township map that shows all park and preserve locations, digital maps of each of the parks showing the location of recreation facilities, photos of recreation facilities, accessibility information for each of the parks, and information on how to reserve recreation facilities. Consider a design and format that ensures the information is easily updated or remains applicable for an extended period of time.

Financing

5.24 - Continue to apply for county and state funds to provide a match to Township funds set aside for parkland acquisition and park and trail improvement projects.

5.25 - Earmark a set portion of Township open space funds for park improvements.

5.26 - Increase the Township per capita operating budget spending on parks and recreation to $10 per capita more than the present funding amount, phasing the increase over the next five years.

5.27 - Consider increasing the Township contribution to DARC to a contribution level equal to WBYA and the Downingtown and Caotesville Libraries to allow DARC to expand its program services in the Township.

5.28 - Develop a signature fundraiser for trail creation and improvements in Township parks and preserves.

Capital Improvement Program

The recommended improvements to West Bradford Township park and trail areas will require capital expenditures. Determining capital costs can be somewhat nebulous. Many municipalities use their own work forces and can save considerable costs. Others are able to secure alternative sources of funding through business contributions, grants, individual donations, or other means. The following pages provide cost estimates for the proposed capital improvements identified in this Plan. These are generalized opinions based on the best available information and are subject to change when each project is further evaluated based on accurate survey information and design and engineering documents.

Projected costs are based on 2021 construction costs and do not consider the source of revenue. Design, survey, engineering, contractor bonds, insurance, and contingency costs have been included based on the typical percentage of the projected development costs. These costs should be redefined after an approach and scope are determined for each project.

Recreation and Parks Solutions is not a construction contractor; probable construction cost opinions are based solely upon experience with construction. This requires making a number of assumptions as to actual conditions which will be encountered on the site, the specific decisions of the design professionals engaged, the means and methods of construction the contractor will employ, the contractor's techniques in determining prices and market conditions at the time, and other factors. Given these assumptions, the probable construction cost opinion for each site is a fair and reasonable estimate.

The Township should determine what projects to complete at each park and what year those projects will take place over a 10-year timeframe in the Township's capital budget process.

In addition to the suggested improvements to Township park and trail areas, the implementation of the Embreeville Park Master Plan is recommended (see Appendix F).

Owner: West Bradford Township
Project Title: Beacon Hill Park

Date Prepared 10/28/21
DCNR Project No.

Item No.	Work Item	No. of Units	Unit Cost	Total Cost
1	**Recreation Improvements**			**$550,000**
	A. Picnic Pavilion near Snack Bar with Concrete Pad	1 LS	$50,000	$50,000
	B. Picnic Pavilion near Fields C&D with Concrete Pad	1 LS	$50,000	$50,000
	C. Baseball Field Lights	3 Field	$150,000	$450,000
2	**Accessibility Improvements**			**$245,100**
	A. Clear and Grub	0.2 AC	$8,000	$1,600
	B. Accessible Route Improvements from Parking to Fields	250 LF	$65	$16,250
	C. 6' Wide Bituminous Accessible Trail	1,850 LF	$45	$83,250
	D. Bleachers with Concrete Pad	6 EA	$9,000	$54,000
	E. Picnic tables with Concrete Pad	4 EA	$5,000	$20,000
	F. Security Lighting - Parking	1 LS	$50,000	$50,000
	G. Security Lighting - Trail	1 LS	$20,000	$20,000
3	**Sustainability**			**$54,450**
	A. Fine Grade and Topdress Ballfield for Proper Drainage	3 Field	$5,000	$15,000
	B. Modular Block Retaining Wall for Snack Bar Pavilion	450 SF	$75	$33,750
	C. Shade Trees	12 EA	$475	$5,700
4	**Earthwork**			**$135,928**
	A. Strip and replace topsoil (6%)	1 LS	$50,973	$50,973
	B. Earthmoving (10%)	1 LS	$84,955	$84,955
5	**Stormwater Mgt and Erosion Control**			**$157,676**
	A. Stormwater Management (8%)	1 LS	$78,838	$78,838
	B. Erosion Control Measures (8%)	1 LS	$78,838	$78,838
6	**Bond Mobilization and Layout**			**$137,179**
	A. Bond Mobilization and Layout (12%)	1 LS	$137,179	$137,179
7	**Contingency**			**$192,050**
	A. 15% Contingency	1 LS	$192,050	$192,050
8	**Professional Fees**			**$220,857**
	A. Professional Fees (15%)	1 LS	$220,857	$220,857
	Total			**$1,693,240**

Cost estimate does not include improvements associated with Beacon Hill Road, any utility connection fees, utility location and/or relocation, improvements, off site trail extensions, sink hole remediation, rock removal, soil amendments or remediation, and construction inspection fees. Power to the site and distribution varies widely and cannot be estimated at this time.

Owner: West Bradford Township
Project Title: Broad Run Park

Date Prepared 10/28/21
DCNR Project No.

Item No.	Work Item	No. of Units	Unit Cost	Total Cost
1	**Recreation Improvements**			**$722,002**
	A. Amphitheater/Stage (30x40)	1,200 SF	$400	$480,000
	B. Remove Existing Sand Volleyball Court	1 LS	$1,600	$1,600
	C. Mile markers (1/8 mile)	5 EA	$300	$1,500
	D. Resurface Existing Tennis Court	1 LS	$24,000	$24,000
	E. Repair/Replace Bird Box Allowance	1 LS	$600	$600
	F. Install Privacy Screening at Tennis Court End Lines	256 LF	$5	$1,152
	G. Water Bottle Fillers at Basketball Court	1 LS	$4,000	$4,000
	H. Bleacher Seating at Basketball Court w/Conc Pad	1 EA	$9,000	$9,000
	I. Repair / Replace Picnic tables	12 LS	$2,500	$30,000
	J. Clear and Grub Nature Trails (1/8 Mile trail)	700 LF	$3	$1,750
	K. Adult Swings	2 LS	$5,000	$10,000
	L. Replace Players Benches at Basketball Court	2 EA	$1,200	$2,400
	M. Tennis Court Lighting	1 Ct	$60,000	$60,000
	N. Shade Sail Canopy at Tennis Court	1 LS	$50,000	$50,000
	O. Pickleball Courts	2 Ct	$23,000	$46,000
2	**Accessibility Improvements**			**$49,000**
	A. Designate Accessible Parking Spaces	2 EA	$300	$600
	B. Install Accessible Playground Safety Surfacing	6,800 SF	$5	$34,000
	C. Age appropriate Signage for Playground Equipment	1 LS	$800	$800
	D. Benches along Trail	6 EA	$2,000	$12,000
	E. Upgrade park and restroom signage	1 LS	$1,600	$1,600
3	**Sustainability**			**$34,150**
	A. Convert Lawn Areas to Meadow (1.5 Acres)	65,000 SF	$0.35	$22,750
	B. Shade Trees	24 EA	$475	$11,400
4	**Earthwork**			**$112,721**
	A. Strip and replace topsoil (6%)	1 LS	$48,309	$48,309
	B. Earthmoving (8%)	1 LS	$64,412	$64,412
5	**Stormwater Mgt and Erosion Control**			**$146,860**
	A. Stormwater Management (8%)	1 LS	$73,430	$73,430
	B. Erosion Control Measures (8%)	1 LS	$73,430	$73,430
6	**Bond Mobilization and Layout**			**$127,768**
	A. Bond Mobilization and Layout (12%)	1 LS	$127,768	$127,768
7	**Contingency**			**$178,875**
	A. 15% Contingency	1 LS	$178,875	$178,875
8	**Professional Fees**			**$205,706**
	A. Professional Fees (15%)	1 LS	$205,706	$205,706
	Total			**$1,577,083**

Cost estimate does not include improvements associated with Broad Run Road, any utility connection fees, utility location and/or relocation, improvements, off site trail extensions, sink hole remediation, rock removal, soil amendments or remediation, and construction inspection fees. Power to the site and distribution varies widely and cannot be estimated at this time.

Owner: West Bradford Township
Project Title: Campus Park

Date Prepared 10/28/21
DCNR Project No.

Item No.	Work Item	No. of Units	Unit Cost	Total Cost
1	**Recreation Improvements**			**$104,500**
	A. 8' Wide Bituminous Loop Trail (Accessible)	600 LF	$65	$39,000
	B. Park Sign	1 LS	$4,000	$4,000
	C. Rules and Regulations Sign	1 LS	$300	$300
	D. Bike Rack	1 EA	$1,200	$1,200
	E. Protective Netting on First and Third Base Line	1 LS	$60,000	$60,000
2	**Accessibility Improvements**			**$4,700**
	A. ADA Improvements to Spectator Areas & Dugouts	60 LF	$65	$3,900
	B. Age Appropriate Signage for Playground Equipment	1 LS	$800	$800
3	**Sustainability**			**$5,700**
	A. Shade Trees	12 EA	$475	$5,700
4	**Earthwork**			**$16,086**
	A. Strip and replace topsoil (6%)	1 LS	$6,894	$6,894
	B. Earthmoving (8%)	1 LS	$9,192	$9,192
5	**Stormwater Mgt and Erosion Control**			**$20,958**
	A. Stormwater Management (8%)	1 LS	$10,479	$10,479
	B. Erosion Control Measures (8%)	1 LS	$10,479	$10,479
6	**Bond Mobilization and Layout**			**$18,233**
	A. Bond Mobilization and Layout (12%)	1 LS	$18,233	$18,233
7	**Contingency**			**$25,527**
	A. 15% Contingency	1 LS	$25,527	$25,527
8	**Professional Fees**			**$29,356**
	A. Professional Fees (15%)	1 LS	$29,356	$29,356
	Total			**$225,059**

Cost estimate does not include improvements associated with Marshallton Thorndale Road, any utility connection fees, utility location and/or relocation, improvements, off site trail extensions, sink hole remediation, rock removal, soil amendments or remediation, and construction inspection fees. Power to the site and distribution varies widely and cannot be estimated at this time.

Owner: West Bradford Township
Project Title: Montvale Park

Date Prepared
DCNR Project No.

Item No.	Work Item	No. of Units	Unit Cost
1	**Recreation Improvements**		
	A. Park Preserve Signage	1 LS	$4,000
	B. Picnic Tables with Concrete Pad	1 EA	$5,000
2	**Accessibility Improvements**		
	A. Boardwalk	1 LS	$15,000
	B. Trail Improvements (aggregate)	700 LF	$20
	C. Stabilized Fishing Access Areas (aggregate)	2 EA	$2,000
	D. On-Street Parking Improvements (Widen and Stripe)	4 Sp	$2,000
3	**Sustainability**		
	A. Clear and Grub Overgrown Areas	1 Acre	$8,000
	B. Remove Invasive Species	1 Acre	$8,000
4	**Earthwork**		
	A. Strip and replace topsoil (6%)	1 LS	$3,960
	B. Earthmoving (8%)	1 LS	$5,280
5	**Stormwater Mgt and Erosion Control**		
	A. Stormwater Management (8%)	1 LS	$6,019
	B. Erosion Control Measures (8%)	1 LS	$6,019
6	**Bond Mobilization and Layout**		
	A. Bond Mobilization and Layout (12%)	1 LS	$10,473
7	**Contingency**		
	A. 15% Contingency	1 LS	$14,663
8	**Professional Fees**		
	A. Professional Fees (15%)	1 LS	$16,862
	Total		

Cost estimate does not include improvements associated with Montvale Circle, any utility connection fees, ut and/or relocation, improvements, off site trail extensions, sink hole remediation, rock removal, soil amendm remediation, and construction inspection fees. Power to the site and distribution varies widely and cannot b this time.

Owner: West Bradford Township
Project Title: Shadyside Park

Date Prepared 10/28/2021
DCNR Project No.

Item No.	Work Item	No. of Units	Unit Cost	Total Cost
1	**Recreation Improvements**			**$1,160,502**
	A. Amphitheater/Stage (30x40)	1,200 SF	$400	$480,000
	B. Seating at Basketball Court	2 EA	$1,200	$2,400
	C. Mile markers (1/8 mile)	8 EA	$300	$2,400
	D. Repurpose Existing Bocce Courts	1 LS	$15,000	$15,000
	E. Install Privacy Screening at Tennis Court End Lines	256 LF	$5	$1,152
	F. Bike Rack	3 EA	$1,200	$3,600
	G. Horseshoe Pits	2 EA	$1,200	$2,400
	H. Adult Swings	2 LS	$5,000	$10,000
	I. Replace/Repair Bird Boxes Allowance	1 LS	$800	$800
	J. Skate Park	1 LS	$150,000	$150,000
	K. Clear and Grub Trail Spurs	700 LF	$3	$1,750
	L. Baseball Field Lighting	1 Field	$225,000	$225,000
	M. Remove and Replace Existing Playground	1 LS	$220,000	$220,000
	N. Pickleball Courts	2 Ct	$23,000	$46,000
2	**Accessibility Improvements**			**$151,925**
	A. Age appropriate Signage for Playground Equipment	1 LS	$800	$800
	B. Seating at playground	4 EA	$2,000	$8,000
	C. Shade Sails at Playground	1 LS	$50,000	$50,000
	D. Benches along Trail	6 EA	$2,000	$12,000
	E. Accessible Walkway to Exercise Court	25 LF	$65	$1,625
	F. Accessible Improvements to Baseball Field Dugouts	1 LS	$2,000	$2,000
	G. Bleacher Seating and walk at Baseball Field	2 EA	$10,000	$20,000
	H. Shade Shelter at Tennis Courts	1 LS	$50,000	$50,000
	I. Remove/Replace Existing Picnic Tables	3 EA	$2,500	$7,500
3	**Sustainability**			**$23,850**
	A. Convert Lawn areas to Meadow	7,000 SF	$0.35	$2,450
	B. Shade Trees	24 EA	$475	$11,400
	C. Address Baseball Field Drainage Issues	1 LS	$10,000	$10,000
4	**Earthwork**			**$187,079**
	A. Strip and replace topsoil (6%)	1 LS	$80,177	$80,177
	B. Earthmoving (8%)	1 LS	$106,902	$106,902
5	**Stormwater Mgt and Erosion Control**			**$243,737**
	A. Stormwater Management (8%)	1 LS	$121,868	$121,868
	B. Erosion Control Measures (8%)	1 LS	$121,868	$121,868
6	**Bond Mobilization and Layout**			**$212,051**
	A. Bond Mobilization and Layout (12%)	1 LS	$212,051	$212,051
7	**Contingency**			**$296,872**
	A. 15% Contingency	1 LS	$296,872	$296,872
8	**Professional Fees**			**$341,402**
	A. Professional Fees (15%)	1 LS	$341,402	$341,402
	Total			**$2,617,418**

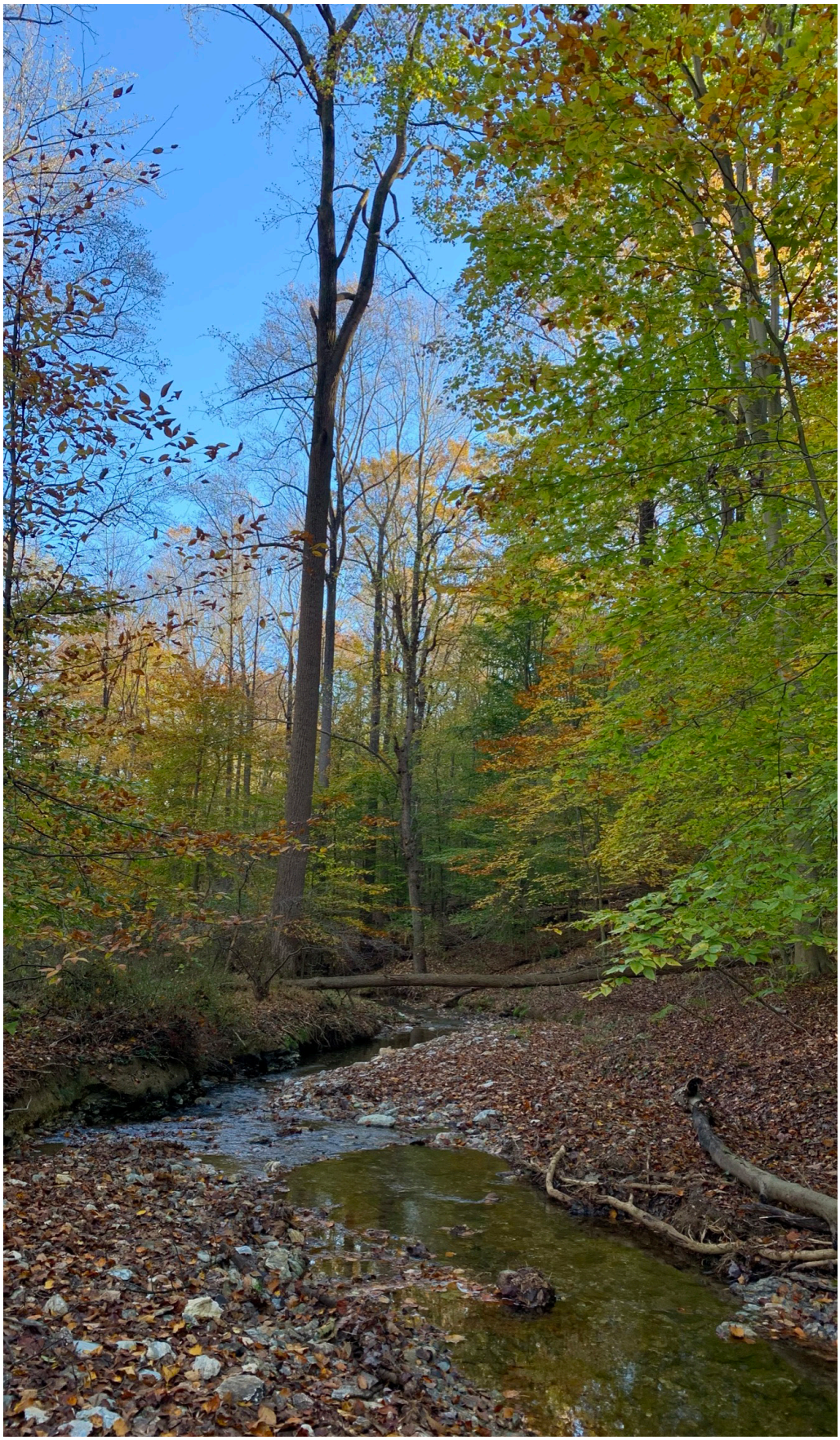
Cost estimate does not include improvements associated with Shadyside or Glenside Road, any utility connection fees, utility location and/or relocation, improvements, off site trail extensions, sink hole remediation, rock removal, soil amendments or remediation, and construction inspection fees. Power to the site and distribution varies widely and cannot be estimated at this time.

Owner: West Bradford Township
Project Title: Brandywine Trail

Date Prepared 10/28/21
DCNR Project No.

Item No.	Work Item	No. of Units	Unit Cost	Total Cost
1	**Recreation Improvements**			**$167,200**
	A. Restroom Building	1 LS	$150,000	$150,000
	B. Bike Rack	1 EA	$1,200	$1,200
	C. Benches	6 EA	$2,000	$12,000
	D. Entrance Sign	1 LS	$4,000	$4,000
2	**Accessibility Improvements**			**$13,500**
	A. 5' Wide Aggregate Trail	400 LF	$25	$10,000
	B. Boat Launch (Stabilized Landing)	1 LS	$2,000	$2,000
	C. Boat Launch Signage	1 LS	$1,500	$1,500
3	**Sustainability**			**$16,000**
	A. Clear and Grub Overgrown Areas	1 Acre	$8,000	$8,000
	B. Remove Invasive Species	1 Acre	$8,000	$8,000
4	**Earthwork**			**$27,538**
	A. Strip and replace topsoil (6%)	1 LS	$11,802	$11,802
	B. Earthmoving (8%)	1 LS	$15,736	$15,736
5	**Stormwater Mgt and Erosion Control**			**$35,878**
	A. Stormwater Management (8%)	1 LS	$17,939	$17,939
	B. Erosion Control Measures (8%)	1 LS	$17,939	$17,939
6	**Bond Mobilization and Layout**			**$31,214**
	A. Bond Mobilization and Layout (12%)	1 LS	$31,214	$31,214
7	**Contingency**			**$43,700**
	A. 15% Contingency	1 LS	$43,700	$43,700
8	**Professional Fees**			**$50,254**
	A. Professional Fees (15%)	1 LS	$50,254	$50,254
	Total			**$385,284**

Cost estimate does not include improvements associated with US Route 322 construction including sidewalk and shoulder improvements, floodplain restoration, any utility connection fees, utility location and/or relocation, improvements, off site trail extensions, sink hole remediation, rock removal, soil amendments or remediation, and construction inspection fees. Power to the site and distribution varies widely and cannot be estimated at this time.



Fall colors along an unamed tributary of the East Branch Brandywine Creek

Chapter 6 Action Plan



The newly renovated West Bradford Township Offices

Summary of Recommendations

Funding Opportunities

Many recommendations described in Chapters 3, 4, and 5 can be implemented by municipal staff and/or volunteers on the municipal boards and commissions and will require no financial support. Other recommendations will require financial resources for implementation.

Table 6-1 below lists potential sources of funding for parks, recreation, and trails and a brief description of the grant program details. Because of their regional nature and potential for alternative transportation, paved and multi-use trails are eligible for a wide variety of grants from private foundations and state agencies. Chester County and organizations such as the Brandywine Conservancy can assist with grant writing and securing matching funds for design and construction. Trails that do not offer ADA accessibility and service small residential areas are less likely to receive state funding from PennDOT or DCNR but may be eligible for private or corporate funding. Trail design and engineering costs are typically the responsibility of the grantee. Grantors cover a portion of the construction costs and require a local match that varies by grant program. The Transportation and Community Development Initiative grant is one exception where the grant can cover planning, design, engineering, and construction costs. West Bradford Township can leverage municipal funds to secure partial or complete grant funding for trail construction projects. Chester County grant programs, including the Vision Partnership Program and the Preservation Partnership Program, and State grants, such as the Pennsylvania Department of Conservation and Natural Resources (PA DCNR) Community Conservation Partnership Program (C2P2) grants, will be primary sources of funds for municipal planning projects and open space preservation. West Bradford has already been extremely successful in obtaining funds from these sources in the recent past, and should continue to seek partnerships and provide municipally leveraged funds to secure additional grants to implement recommendations contained within this Plan.

Table 6-1
Potential Funding Sources for Open Space, Parks, Recreation, and Trails

	Program	Program Details
F1	**Greenways, Trails and Recreation Program (GTRP)** Commonwealth Financing Authority (CFA) with Department of Community and Economic Development (DCED) & Department of Conservation and Natural Resources (DCNR)	• Annual competitive grant program for state funds (Act 13) • 15% match: $250,000 maximum • 2-3 year timeframe to complete the grant
F2	**Community Conservation Partnership Program (C2P2)** Department of Conservation and Natural Resources (DCNR)	• Annual competitive grant program • Various federal and state funds • 50% match
F3	**PECO Green Region Program** Natural Lands	• Annual competitive grant program for private funds • 50% match: $10,000 maximum • 18-month timeframe to complete the grant
F4	**Transportation Alternatives Set Aside (TA)** Pennsylvania Department of Transportation (PennDOT) Delaware Valley Regional Planning Commission (DVRPC)	• Federal transportation funds • Match requires funding all pre-construction activities • $50,000 minimum and $1,000,000 maximum • 2-year timeframe to complete design, right-of-way, and utility clearance
F5	**Congestion Mitigation and Air Quality (CMAQ)** Delaware Valley Regional Planning Commission (DVRPC)	• Federal transportation funds • Match requires funding all pre-construction activities
F6	**CFA/DCED – Multimodal Transportation Fund (MTF)** Commonwealth Financing Authority (CFA)	• Annual competitive grant program for state funds (Act 89) • 30% match; $100,000 minimum; $3,000,000 maximum • 2–3-year timeframe to complete the grant
F7	**PennDOT - Multimodal Transportation Fund (MTF)** Pennsylvania Department of Transportation (PennDOT)	• Annual competitive grant program for state funds (Act 89) • 30% match; $100,000 minimum; $3,000,000 maximum • 3-year timeframe to complete the grant

F8	**Transportation and Community Development Initiative (TCDI)** Delaware Valley Regional Planning Commission (DVRPC)	• Competitive grant program for federal transportation funds • 20% match; $25,000 minimum; $100,000 maximum • 2-year timeframe to complete the grant
F9	**Boating Facility Grant Program** Pennsylvania Fish and Boat Commission	• Annual competitive grant for land acquisition, project design, engineering, and construction of canoe and kayak access facilities • Recently, additional funds have been available for projects in the Delaware River Watershed • 50% match • 2-year timeframe to complete grant
F10	**Vision Partnership Program (VPP)** Chester County Planning Commission (CCPC)	• Competitive grant for municipal plans and studies • 30% match • 2-year timeframe to complete the grant
F11	**Preservation Partnership Grant Program (PPGP)** Chester County Parks and Preservatiom	• Municipal acquisition; conservation easement; park facility construction • Park and trail improvements • 50% match • 2-year timeframe to complete the grant
F12	**Chester County Agricultural Conservation Easement Purchase Program** Chester County Parks and Preservatiom	• Competitive program to provide fair market value for the purchase of Agricultural Easement • Properties are ranked against one another and offers made to highest ranked properties • Municipal match optional
F13	**Growing Greener** Pennsylvania Department of Environmental Protection (PA DEP)	• Annual competitive grant program • Watershed planning, restoration, and protection • 15% match • 2-year timeframe to complete the grant
F14	**TreeVitalize Program** Pennsylvania Horticultural Society (PHS)	• Annual competitive grant program • Provides funds for tree planting materials and some site preparation • 25% match required (can be fulfilled with volunteer labor) • 1 year timeline to complete projects

F15	Brandywine Creek Greenway Mini-Grants Brandywine Conservancy	• Annual competitive grant program for municipalities in the Brandywine Creek Greenway • Provides funds for projects that will support and advance the goals and objectives of the BCG's Strategic Action Plan • Awards generally range from $2,000-$10,000 • 50% match required

The recommendations described in Chapters 3, 4, and 5 are summarized in Tables 6-2, 6-3, and 6-4 and include a prioritization ranking of ongoing, short-, medium-, and long-term initiatives defined as: short term 1-3 years; medium term 3-5 years; and long term 5-10 years. Township staff, boards and commissions will determine when to implement the recommendations based upon a variety of future considerations including budget availability, staff resources, perceived threats to resources, and the community interest. Potential sources of funding refer to those listed in Table 6-1 above.

Plan Recommendations

Lead Party Abbreviations			
BoS	Board of Supervisors	**HC**	Historical Commission
CCAC	Chester County Agricutural Council	**LPSC**	Land Peservation and Sustainability Committee
CCCD	Chester County Conservation District	**LT**	Land Trusts
CCPC	Chester County Planning Commission	**PC**	Planning Commission
CCPP	Chester County Parks and Preservation	**RC**	Recreation Commission
CCWRA	Chester County Water Resources Authority	**WBS**	West Bradford Staff

Table 6-2

Open Space and Natural Resources Recommendations Summary

#	Description	Timeline	Potential Sources of Funding (see Figure 6.1 above)	Lead Parties
Continue to Acquire Interests in Open space				
3.1	Continue to assess opportunities to acquire interests in open space in proximity to, or potential interconnection, with existing protected open space, including open space that may be designated through development.	Ongoing	F2, F11	BoS, LPSC, WBS, PC
3.2	Continue to leverage municipal funds for the acquisition of agricultural and conservation interests with funds available from state, county, and private resources.	Ongoing	F2, F11, F12	BoS, WBS



Frost lingers on shaded plants at Broad Run Preserve during the fall

Table 6-2 Cont.

Open Space and Natural Resources Recommendations Summary

3.3	Explore land preservation opportunities in areas currently underserved or in areas of potential growth to provide for green infrastructure, parks and preserves for recreation, and trails.	Ongoing	F2, F11, F12	LPSC, LT, RC, WBS
Promote Action to Enhance Natural Resource Protection				
3.4	Continue to work with and support local water quality programs and initiatives.	Short	F13, F14	CCPC, CCWRA, LT
3.5	Continue to monitor and participate in regional planning efforts regarding land use and resource protection issues.	Short	F2, F10	CCPC, LT, WBS
3.6	Continue to consider formal partnerships aimed at enhancing natural, agricultural, and greenway resource protection.	Medium		BoS, CCPC, LPSC, WBS, LT
Support and Promote Land Use and Stewardship for Resource Protection				
3.7	Continue to guide the placement of land development activities to minimize impacts to natural and scenic resources.	Ongoing		BoS, PC, WBS
3.8	Continue to focus, during development plan review, on stormwater management, promoting infiltration and successful implementation of water quality Best Management Practices (BMPs).	Short		PC, WBS
3.9	Continue to monitor and promote agricultural practices and land management efforts which maximize soil conservation and minimize negative impacts to water quality.	Ongoing	F11, F13, F14	CCCD, WBS, LT
3.10	Promote reforestation of riparian buffers and the enhancement of forest interior and woodland edge conditions.	Medium	F2, F11, F13, F14, F15	LPSC, PC, WBS
3.11	Work with agency and non-profit partners to encourage and promote “catch the rain” and other small scale BMPs to minimize stormwater runoff and enhance native habitat.	Medium	F3, F13, F15	CCPC, CCWRA, LPSC, LT, WBS
3.12	Pursue designations/certifications/awards that enhance and incentivize habitat and resource protection and increase residents’ knowledge of and pride in the natural characteristics of the Township.	Medium		LPSC, WBS
Refine Regulatory Tools				

3.13	Periodically review the effectiveness and consistency of regulation of natural resources, in both the Zoning and Subdivision and Land Development Ordinances.	Ongoing	F10	BoS, PC, WBS
3.14	Consider incorporating an Open Space Design Option within the Zoning Ordinance to promote resource protection on tracts that do not qualify for the current Unified Development Area overlay.	Medium	F10	BoS, PC, WBS
3.15	Consider incorporating provisions within the Zoning Ordinance that would help establish and protect the Greenways identified in this Plan.	Medium	F10	BoS, PC, WBS
3.16	Consider heritage tree protection and replacement provisions within the Zoning Ordinance.	Short	F10	BoS, PC, WBS
3.17	Assess landscaping plant guidelines in the municipality's Code to ensure it only contains native, climate resilient species and that planting a diversity of species is encouraged.	Short	F10	BoS, LPSC, PC, WBS
3.18	Review and update the Township's Official Map to reflect the open space, recreation, and trail goals identified in the 2020 Comprehensive Plan Update and this Plan.	Medium	F10	BoS, PC, WBS
Promote Education and Appreciation for Resource Protection				
3.19	Consider partnering with local agricultural producers to promote and market their products, aiding in the economic viability of agricultural operations in the Township.	Medium		CCAC, WBS
3.20	Partner with local agencies, non-profits, and environmentally focused landscape contractors to promote public informational programs that feature and install natural resource focused stewardship projects.	Medium		CCCD, CCPC, LPSC, LT
3.21	Support the continued education of landowners, residents, and other stakeholders regarding natural and agricultural resources, the economic and social benefits derived from them, and their role in combating and mitigating the impacts of climate change.	Medium		CCCD, CCPC, LPSC, LT, WBS

Table 6-3

Bicycle and Pedestrian Network Recommendations Summary

#	Description	Timeline	Potential Sources of Funding (see Figure 6.1 above)	Lead Parties
Strategic Planning, Design, and Implementation				
4.1	Apply for grant funding from public and/or private entities to fund feasibility studies for West Bradford Township.	Medium	F1, F2, F3, F4, F5, F6, F7, F8, F10, F15	WBS
4.2	Update West Bradford Township's Official Map and ordinance to help facilitate the continued development of a pedestrian and bicycle network.	Medium	F10	BoS, PC, RC, WBS
4.3	The Planning Commission should ensure future land developments are designed in keeping with bicycle and pedestrian improvements identified in this Plan.	Short		PC
4.4	Develop new and improve existing sidewalks, trails, and bikeways consistent with recommendations in this plan and future feasibility studies	Long	F1, F2, F3, F4, F5, F6, F7, F8, F10	BoS, WBS
4.5	Collaborate with adjacent communities on the planning, design, and implementation of sidewalk, trail, and bikeway routes.	Short	F10	WBS
4.6	Evaluate and update, where necessary, Township trail standards to ensure the planning, design, and construction of future infrastructure is conducted in a manner that factors in climate resiliency and future projections related to extreme heat and extreme precipitation.	Medium		BoS, PC, WBS
Trail Maintenance				
4.7	Township staff and public works staff will have direct oversight over the maintenance of future trails in the community.	Long		WBS

Marketing and Public Awareness				
4.8	Engage the public in future bicycle and pedestrian planning efforts.	Short		BoS, WBS
4.9	As the multi-modal transportation network continues to grow, develop a map to promote sidewalks, trails, and bikeways in West Bradford Township and in adjacent municipalities.	Long	F2, F3, F15	LPSC, RC, WBS
4.10	Update the Township webpage to include a map of local trail routes and links to information about trail routes in neighboring communities and/or the region.	Medium		WBS
Collaboration and Partnership				
4.11	Consider supporting programs that highlight the unique aspects of West Bradford Township and its neighbors. Such programs may include 5Ks, bike rides, or walking tours to highlight the unique natural resources, open space, cultural resources, and historic resources in the community.	Short		HC, RC, WBS
4.12	Explore partnership opportunities with the Downingtown Area School District.	Short		BoS, WBS
Financing				
4.13	Develop a multi-year Township capital budget for trail projects.	Medium		BoS, WBS

Table 6-4

Parks and Recreation Recommendations Summary

#	Description	Timeline	Potential Sources of Funding (see Figure 6.1 above)	Lead Parties
Recreation Facilities				
5.1	Make upgrades to the existing Township parks by prioritizing and completing improvements as recommended in the recreation facilities analysis for each park site, placing an emphasis on accessibility improvements. Consider eliminating or repurposing lesser used facilities.	Medium	F1, F2, F3, F9, F15	WBS
5.2	Implement the Embreeville Park Master Plan (see Appendix F).	Ongoing	F1, F2, F3, F11, F14	BoS, RC, WBS
5.3	Develop hiking trails on Township preserves to allow and encourage passive use of the areas by residents and institute a volunteer program to help maintain the trails.	Medium	F1, F11, F15	RC, WBS
5.4	Improve access to Township preserves by installing signs and providing information on how to access the preserves.	Short	F3, F11, F15	RC, WBS
5.5	Promote and facilitate access for Township residents to quasi-public recreation facilities such as the Stroud Preserve, ChesLen Preserve, and Downingtown Area School District outdoor recreation areas.	Short		RC, WBS
5.6	Consider technology improvements as park facilities are updated, such as solar powered park benches with cell phone charging stations.	Long	F1, F2, F3, F11	RC, WBS
Recreation Programs				
5.7	Focus programming efforts by the Township Recreation Commission on special event programs designed to get residents out to the parks.	Medium		RC, WBS
5.8	Continue Township financial support to DARC, WBYA, WBLL, and Downingtown and Coatesville Libraries for the provision of public recreation programs.	Ongoing		BoS, WBS
5.9	Continue to allow DARC, WBYA, WBLL, and other Township organizations to use Township park facilities for recreation programs and special events.	Ongoing		BoS, WBS
5.10	Help DARC to access indoor facilities in the Township such as fire halls, private schools, churches, and community businesses to allow for expansion of programs for ages 5 and under, parent-child programs, fitness programs, day camps, teen activities, and older adult programs.	Medium		BoS, WBS
5.11	Encourage cross promotion among Township recreation providers via social media, e-mail blasts, website links, and DARC program guides.	Short		RC, WBS

Table 6-4 Cont.

Parks and Recreation Recommendations Summary

Organization and Management				
5.12	Categorize the park areas by the level of maintenance expected.	Short		WBS
5.13	As the park system grows, re-evaluate park staff needs to maintain park areas to a "B" level of service and the standards expected by Township residents.	Long		BoS, WBS
5.14	Institute a system to capture and report park maintenance work (including on-going safety inspections), analyze costs, schedule the work of staff, and compile data to report maintenance activities and the amounts of time spent on them by park location.	Medium		WBS
5.15	Identify the feasibility of outsourcing specific park maintenance tasks.	Medium		BoS, WBS
5.16	Identify trends in the performance of work in specific areas of the parks that consume excessive amounts of time.	Medium		WBS
5.17	Develop a preventive program for recreation facility maintenance to generate maintenance work orders on a routine cycle.	Short		WBS
5.18	Create an adopt-a-park program and seek dedicated partners to match with the two community parks to fundraise for park improvements and provide volunteers for park activities.	Medium		RC, WBS
5.19	Establish and/or update use and maintenance agreements between the Township and its recreation partners using Township facilities for recreation programs.	Short		BoS, RC, WBS
5.20	Change the name of the Township Recreation Commission to Township Parks and Recreation Board to better reflect its advisory status and strengthen its ongoing role	Short		BoS, WBS
5.21	Improve the use of the Township's Facebook page to promote the self-directed use of the parks and preserves and the benefits to residents of being outdoors and active as well as the programs sponsored by recreation partners.	Short		WBS
5.22	Develop a Township park and preserve system logo to use on new standard park and preserve entrance and interior signs.	Medium		RC, WBS
5.23	Improve the Township website to include a downloadable Township map that shows all park and preserve locations.	Short		RC, WBS
Financing				
5.24	Continue to apply for county and state funds to provide a match to Township funds set aside for parkland acquisition and park and trail improvement projects.	Ongoing	F1, F2, F3, F11	BoS, WBS
5.25	Earmark a set portion of Township open space funds for park improvements.	Short		BoS
5.26	Increase the Township per capita operating budget spending on parks and recreation to $10 per capita more than the present funding amount, phasing the increase over the next five years.	Medium		BoS, WBS
5.27	Consider increasing the Township contribution to DARC to a contribution level equal to WBYA and the Downingtown and Coatesville Libraries to allow DARC to expand its program services in the Township.	Medium		BoS
5.28	Develop a signature fundraiser for trail creation and improvements in Township parks and preserves.	Medium		RC, WBS



An aerial view east through the village of Marshallton