

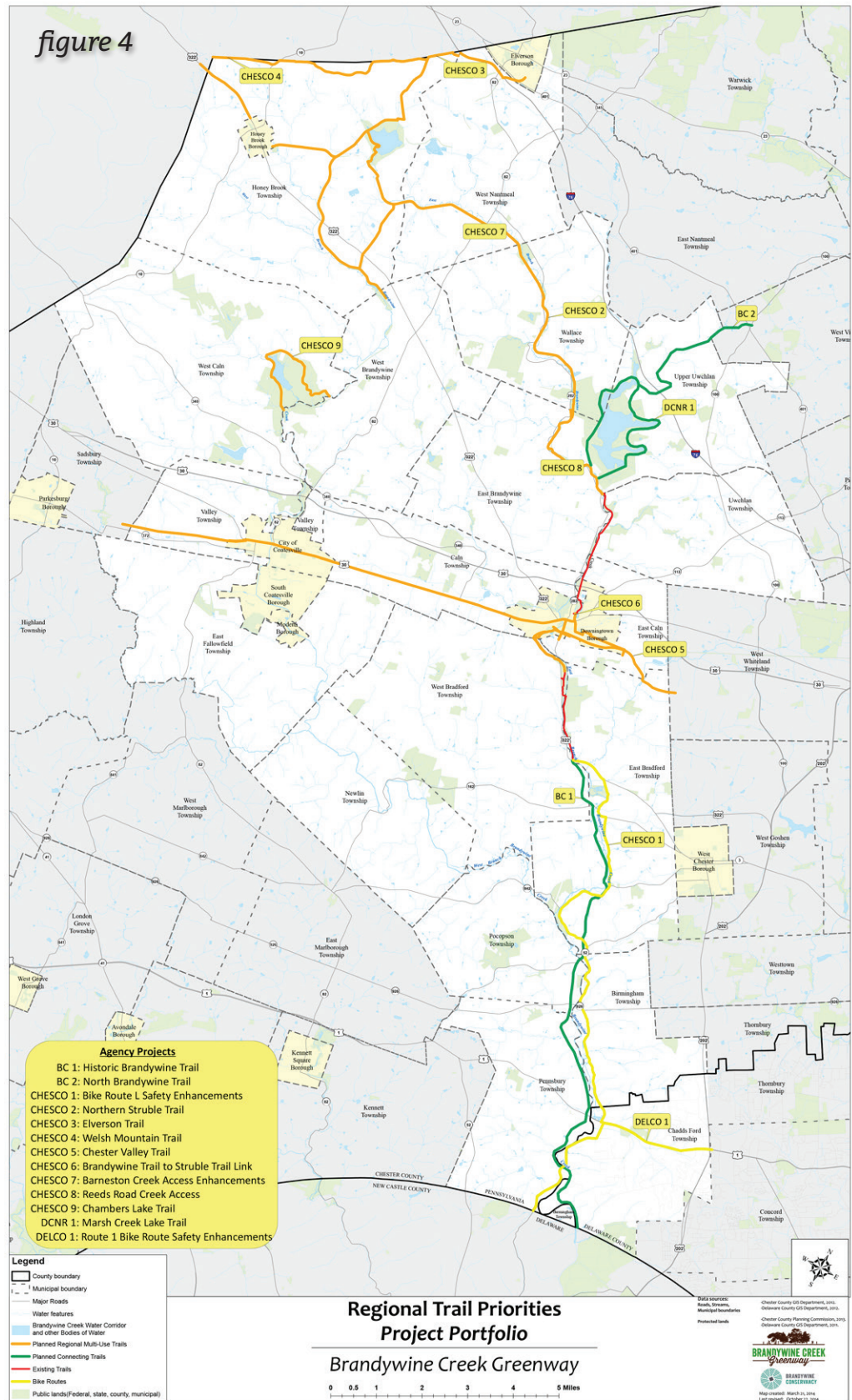
PROJECT PORTFOLIO

The focus of the Project Portfolio section of the Strategic Action Plan is on recreation, alternative transportation priorities, and conservation corridors along creeks and streams that were identified as important resources during one of four regional workshops. This Portfolio is comprised of recommended initiatives for Greenway partners and other advocates. These initiatives are organized by the leading partner agency or municipality. The individual projects are critical parts of the much larger planned regional network of open space, recreation, and transportation alternatives.

The Portfolio first presents a map of regional trail priorities and provides Portfolios for Chester County, Delaware County, PA DCNR, and the Brandywine Conservancy. Subsequently, Portfolios are presented for each of the 24 Greenway Municipalities.

Regional Trail Priorities Map

Regional trails are critical for north-south and east-west connections across the Greenway. They will form the recreational spine that smaller local municipal trails will feed into—creating an integrated network of trails throughout the Greenway. There are four agencies that will facilitate regional trails that traverse multiple municipal boundaries: Chester County; Delaware County; PA DCNR; and the Brandywine Conservancy. Each agency is assigned to facilitate specific regional trail projects. Their Portfolios, presented on the following pages, include project descriptions, key partners, project focus and location, accomplishments to date, and next steps.



CHESTER COUNTY PROJECTS

CHESCO 1

Project Name

Bike Route L Safety Enhancements

Key Partners

DCNR, PennDOT, DVRPC, East Bradford Township, Birmingham Township, Pennsbury Township, Chadds Ford Township, Delaware County Planning

Project Focus and Location

To study the feasibility of improving safety for bicycles and vehicular traffic along PA Bicycle Route L from the Delaware state line to US Route 322 in East Bradford Township.

- Share the road signage
- Re-striping
- Widened shoulders
- Bike lanes
- Off-road alternatives
- Pull-offs
- Realignment options
- Short term need

Accomplishments to Date

- Bike Route L is a well-used bicycle route and north-south travel corridor through Chester County
- Recommended improvements for portions of Bike Route L are included in the Central Chester County Bicycle and Pedestrian Circulation Plan

Next Steps

- Begin dialogue with DCNR, PennDOT, DVRPC
- Submit grant proposal to DCNR for a feasibility study
- 6 years from feasibility study to full implementation

CHESTER COUNTY PROJECTS

CHESCO 2

Project Name

Northern Struble Trail

Key Partners

DCNR, PennDOT, DVRPC, Wallace Township, Upper Uwchlan Township, Brandywine Conservancy, Marsh Creek State Park

Project Focus and Location

To extend the Struble Trail from its current terminus at Dorlans Mill Road in Upper Uwchlan Township to Honey Brook Borough.

- Portions to follow the abandoned rail bed
- Explore alternative routes near private property
- Multi-use trail for walkers, cyclists, equestrians
- Short term need

Accomplishments to Date

- Grant awarded by DCNR/C2P2 for a feasibility study to be completed in 2014.
- Dialogue underway among key partners
- Trail identified in Linking Landscapes
- High priority

Next Steps

- 6 years from feasibility study to full implementation

CHESTER COUNTY PROJECTS

CHESCO 3

Project Name

Elverson Trail

Key Partners

Chester County Planning Commission, West Nantmeal Township, Honey Brook Township, DCNR, PennDOT, DVRPC

Project Focus and Location

To create pedestrian, equestrian, and bicycle connections from Struble Lake to the Boar's Back Trail at Elverson Borough.

- Natural surface footpath
- Portions follow roads
- Portions along private property lines
- Portions along abandoned rail bed
- Long term need once the Northern Struble Trail is implemented

Accomplishments to Date

- Portions of abandoned rail line owned by Chester County
- Shown as a land link on the Concept Map for the Brandywine Creek Greenway

Next Steps

- Begin a dialogue among key partners
- Feasibility study
- 9 years from feasibility study to full implementation
- Long term priority

CHESTER COUNTY PROJECTS

CHESCO 4

Project Name

Welsh Mountain Trail

Key Partners

Chester County Planning Commission, Honey Brook Township, DCNR, PennDOT, DVRPC

Project Focus and Location

To create pedestrian, equestrian, and bicycle connections from Elverson Borough to Caernarvon along the Welsh Mountain.

- Natural surface footpath
- Portions follow roads
- Long term need once the Northern Struble Trail is implemented

Accomplishments to Date

– Shown as a land link on the Concept Map for the Brandywine Creek Greenway

Next Steps

- Begin a dialogue among key partners
- feasibility study
- 9 years from feasibility study to full implementation
- Long term priority

CHESTER COUNTY PROJECTS

CHESCO 5

Project Name

Chester Valley Trail

Key Partners

Chester County Planning Commission, DCNR, DVRPC, Valley Township, City of Coatesville, Caln Township, Downingtown Borough, East Caln Township, landowners, Rails to Trails Conservancy

Project Focus and Location

To implement the Chester Valley Trail alongside the active AMTRAK/SEPTA and Morrisville Line from Parkesburg to the City of Coatesville, Downingtown Borough, and east to the existing Chester Valley Trail.

- A multi-use trail for walking and cycling
- Feasibility Study
- Design and engineering
- Construction
- Long term need

Accomplishments to Date

- Included in Linking Landscapes
- The County has obtained rights-of-way from Downingtown to Marshallton Thorndale Road (Route 340)

Next Steps

- Begin talks with Townships and other key partners
- Pursue funding for a feasibility study
- 10 years from securing funding for a feasibility study to project completion

CHESTER COUNTY PROJECTS

CHESCO 6

Project Name

Brandywine Trail to Struble Trail Link

Key Partners

Chester County Planning Commission, DCNR, DVRPC, PennDOT, business owners, landowners

Project Focus and Location

To provide a connection for hikers, pedestrians and cyclists from the end of the Struble Trail at Kardon Park to the Brandywine Trail trailhead in West Bradford Township.

- Portions sidewalks
- Portions multi-use trail
- Portions shared roadway
- Portions bicycle boulevard
- Short term need

Accomplishments to Date

- Recommended in the Central Chester County Bicycle & Pedestrian Circulation Plan, 2013
- Funding secured for a feasibility study

Next Steps

- Assemble partners and funding
- 3 years to prepare a feasibility study, design and engineering
- 3 years to implement

CHESTER COUNTY PROJECTS

CHESCO 7

Project Name

Barneston Creek Access Enhancements

Key Partners

Wallace Township, DCNR, DVRPC

Project Focus and Location

To enhance water access and recreational opportunities at the Barneston Dam property owned by Chester County.

- Viewing areas
- Picnic facilities
- Water access for fishing, boating, wading
- Parking lot improvements
- Trails
- Signage
- Reforestation
- Short term need

Accomplishments to Date

- Lands owned by Chester County
- Limited parking in place

Next Steps

- Assemble partners and funding
- 3 years to prepare a master plan, design and engineering
- 3 years to implement

CHESTER COUNTY PROJECTS

CHESCO 8

Project Name

Reeds Road Creek Access

Key Partners

Upper Uwchlan Township, DCNR, PennDOT, landowners

Project Focus and Location

To provide access to the Brandywine Creek at Reeds Road for anglers and boaters.

- Minimal parking
- Informal boat launch site
- Directional signage to the Struble Trail
- Interpretive signage for water quality
- Seating
- Long term need after completion of the Struble Trail

Accomplishments to Date

- Lands owned by Chester County
- Northern Struble Trail Feasibility Study underway

Next Steps

- Assemble partners and funding
- Prepare a concept plan and cost estimates—1 year
- Design, engineering—2 years
- Permits, implementation—2 years

CHESTER COUNTY PROJECTS

CHESCO 9

Project Name

Chambers Lake Trail

Key Partners

West Caln Township, West Brandywine Township, DCNR, PennDOT, landowners

Project Focus and Location

To provide a footpath around Chambers Lake in Hibernia County Park for hikers and anglers.

- Natural surface, minimal disturbance
- Gateway kiosk
- Directional signage to the West Branch Brandywine Trail
- Interpretive signage
- Seating, scenic lookouts
- Long term need after completion of the West Branch Brandywine Trail

Accomplishments to Date

- Lands owned by Chester County
- Northern Struble Trail Feasibility Study underway

Next Steps

- Assemble partners and funding
- Prepare a concept plan and cost estimates—1 year
- Design, engineering—2 years
- Permits, implementation—2 years

DELAWARE COUNTY PROJECTS

DELCO 1

Project Name

Route 1 Bike Route Safety Enhancements

Key Partners

DCNR, PennDOT, DVRPC, Pennsbury Township, Chester County Planning Commission, Chadds Ford Township

Project Focus and Location

To design and implement safety enhancements for bicycles travelling along Route 1 from Ring Road to the Brandywine River Museum in Chadds Ford.

Connects to BicyclePA Route L

- Bike lanes both directions
- Signage
- Traffic calming
- Short term initiative

Accomplishments to Date

- Route 1 is part of the On-Road Bicycle Network Improvements Network in Delaware County
- Route 1 is part of the Chester County Bicycle Network
- Chadds Ford Village Master Plan is funded, to be completed in 2015

Next Steps

- Begin dialogue with Chadds Ford Township, DCNR, PennDOT, DVRPC, Chester County
- Prepare design and engineering plans and obtain PennDOT permits
- Submit grant proposal to fund implementation
- 5 years from feasibility study to full implementation

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DCNR PROJECTS

DCNR 1

Project Name

Marsh Creek Lake Trail

Key Partners

Upper Uwchlan Township, Wallace Township, Chester County

Project Focus and Location

To complete a hiking trail around the perimeter of Marsh Creek Lake within the boundaries of Marsh Creek State Park.

- Natural surface path
- Minimal disturbance, rustic
- Hiking
- Equestrian trail
- Long term need once the North Brandywine Trail is secured

Accomplishments to Date

- Portions of the trail already exist within the park
- Portions owned by turnpike authority
- Portions owned by Upper Uwchlan Township
- Portions owned by Chester County
- Discussions underway between UUT representatives and DCNR staff

Next Steps

- Expand dialogue with DCNR
- Submit grant proposal to DCNR for a feasibility study
- 5 years from feasibility study to full implementation

BRANDYWINE CONSERVANCY PROJECTS

BC 1

Project Name

Historic Brandywine Trail

Key Partners

Chester County Planning Commission, Delaware County Planning, DCNR, DVRPC, PennDOT, Chester County Trail Club, Wilmington Trail Club, business owners, landowners

Project Focus and Location

To permanently protect the existing Brandywine Trail as a public footpath along the banks of the Brandywine from the end of the paved Brandywine Trail in East Bradford Township to the Mason Dixon Trail in Pennsbury Township.

- Natural surface footpath for hikers and walkers
- Cultivate trail easements with landowners from the Delaware State line to Creek Road at Twin Bridges
- Implement improvements such as fencing, bridges, and signage
- Expand access to the public
- Retain connectivity of the historic footpath
- Short term need

Accomplishments to Date

- The trail is already in existence on private property and along public and private roads
- The trail is maintained by the Chester County Trail Club and the Wilmington Trail Club
- Brandywine Conservancy has begun to approach select landowners

Next Steps

- Map the location of the existing trail and identify landowners
- Meet with landowners to discuss issues and options
- Easements to be dedicated to the municipality or the Brandywine Conservancy

BRANDYWINE CONSERVANCY PROJECTS

BC 2

Project Name

North Brandywine Trail

Key Partners

Chester County Planning Commission, Delaware County Planning, DCNR, DVRPC, PennDOT, Chester County Trail Club, Wilmington Trail Club, business owners, landowners

Project Focus and Location

To permanently protect the existing Brandywine Trail as a public footpath from Marsh Creek State Park in Upper Uwchlan Township to Ludwigs Corner and the Horse Shoe Trail in West Vincent Township.

- Natural surface footpath for hikers and walkers
- Cultivate trail easements with landowners
- Portions share the road
- Implement improvements such as pavement markings and signage
- Expand access to the public
- Retain connectivity of the historic footpath
- Long term need after completion of the Historic Brandywine Trail

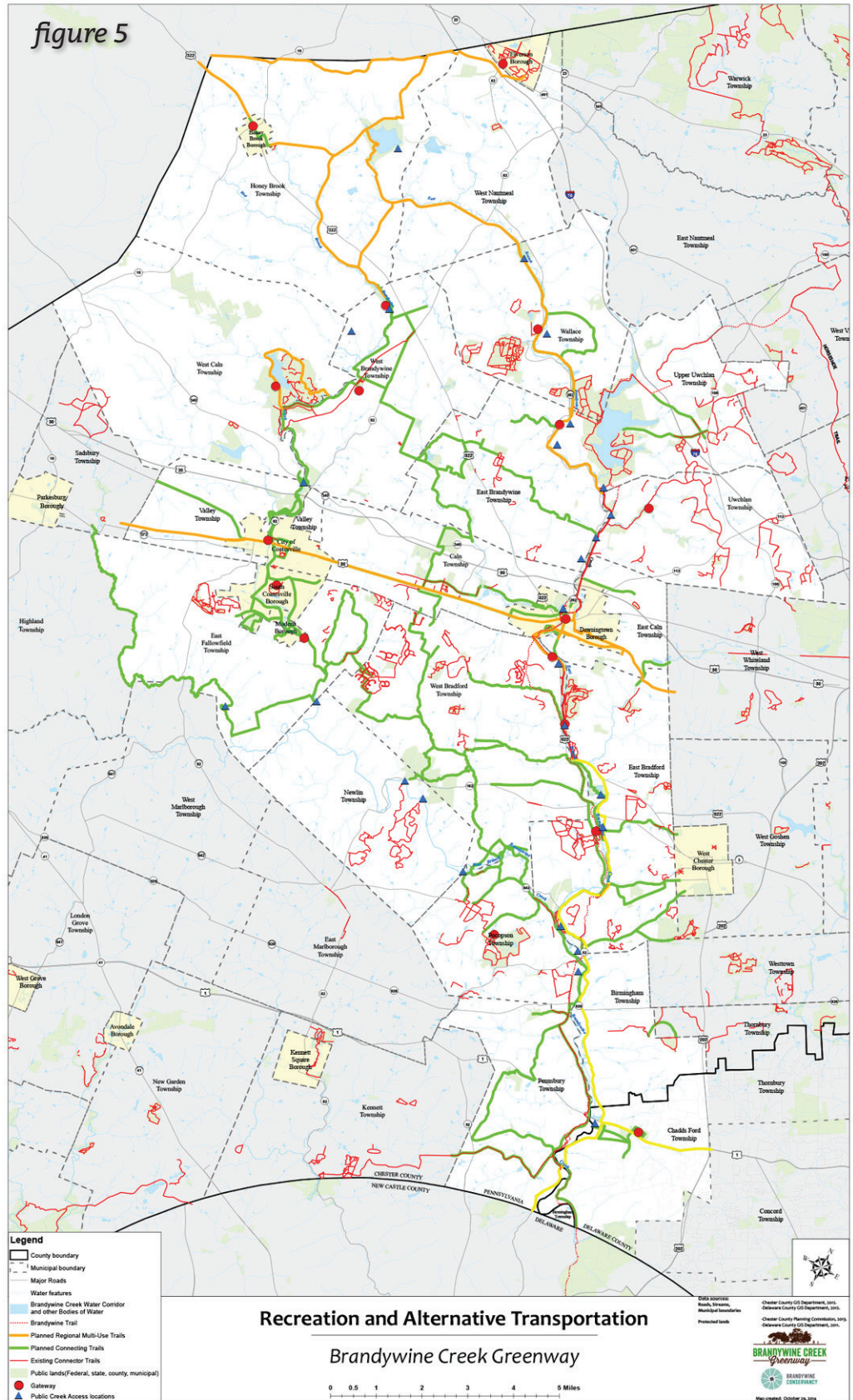
Accomplishments to Date

- The trail is already in existence on private property and along public and private roads
- The trail is maintained by the Chester County Trail Club
- Trail featured on the Upper Uwchlan Township Trails Map

Next Steps

- Map the location of the existing trail and identify landowners
- Meet with landowners to discuss issues and options
- Easements to be dedicated to Upper Uwchlan Township or the Brandywine Conservancy

Each of the agencies and municipalities involved in the Greenway is provided with a suggested Project Portfolio. The Recreation and Alternative Transportation Priorities Map (See figure 5 at right) is used as the basis for the recommended municipal projects. It reflects the planned trails illustrated on the Concept Map (Figure 1) but provides a greater level of mapping accuracy. The Recreation and Alternative Transportation Map provides municipalities with a regional context as they begin to identify neighbors and partners along existing and new trails and green corridors. Note that planned trails shown on this Map are conceptual only and further study will be necessary to determine the exact location and alignment of each trail.



Each municipality's Project Portfolio is unique from the others. Each Portfolio is derived from the Concept Map (See figure 1 on page 9) and the Recreation and Alternative Transportation Map (See figure 5 on page 37). The following informational resources are provided in each Portfolio:

Greenway Functions Checklist: This checklist was completed by a representative of each municipality during a public workshop. The checklist identifies those Greenway functions that are perceived as the most important functions of the Greenway in each municipality. A Greenway can mean different things to different municipalities, and the purpose of the checklist is to remind each municipality of how it views the Greenway as it functions in their municipality.

Natural Resource Protection Ordinance Review: During 2013, the Chester County Planning Commission provided a review of each municipality's current resource protection standards as contained in its municipal ordinances. The Brandywine Conservancy provided a review of Chadds Ford Township ordinances (Delaware County). Each review covers provisions for steep slopes, woodlands, wetlands, riparian buffers, and floodplains. Depending upon the current level of resource protection, the review provides recommendations for updating each municipality's resource protection standards.

Project Portfolio Map: Each feature shown on the Recreation and Alternative Transportation Priorities map is illustrated in greater detail on the Project Portfolio maps.

Project Descriptions: Trail and conservation projects are further described in project description sheets that highlight the project name, key partners, project focus and location, accomplishments to date, and next steps. In almost all planned trail projects, the recommended first step is to prepare a feasibility study that would explore existing and alternative routes. The map and project descriptions are the first step in project development. They are also intended to be utilized as supporting/background information for grant applications. Refer to the Implementation Tool Kit for information on sources of funding.

Brandywine Creek Greenway Functions Checklist

BIRMINGHAM TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	
	Improve air quality in developed areas	✓
	Control and/or mitigate flooding in flood-prone areas	✓
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	
	Foster outdoor education and school access to open space	
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	✓
	Preserve nationally and municipally-designated historic structures and districts	✓

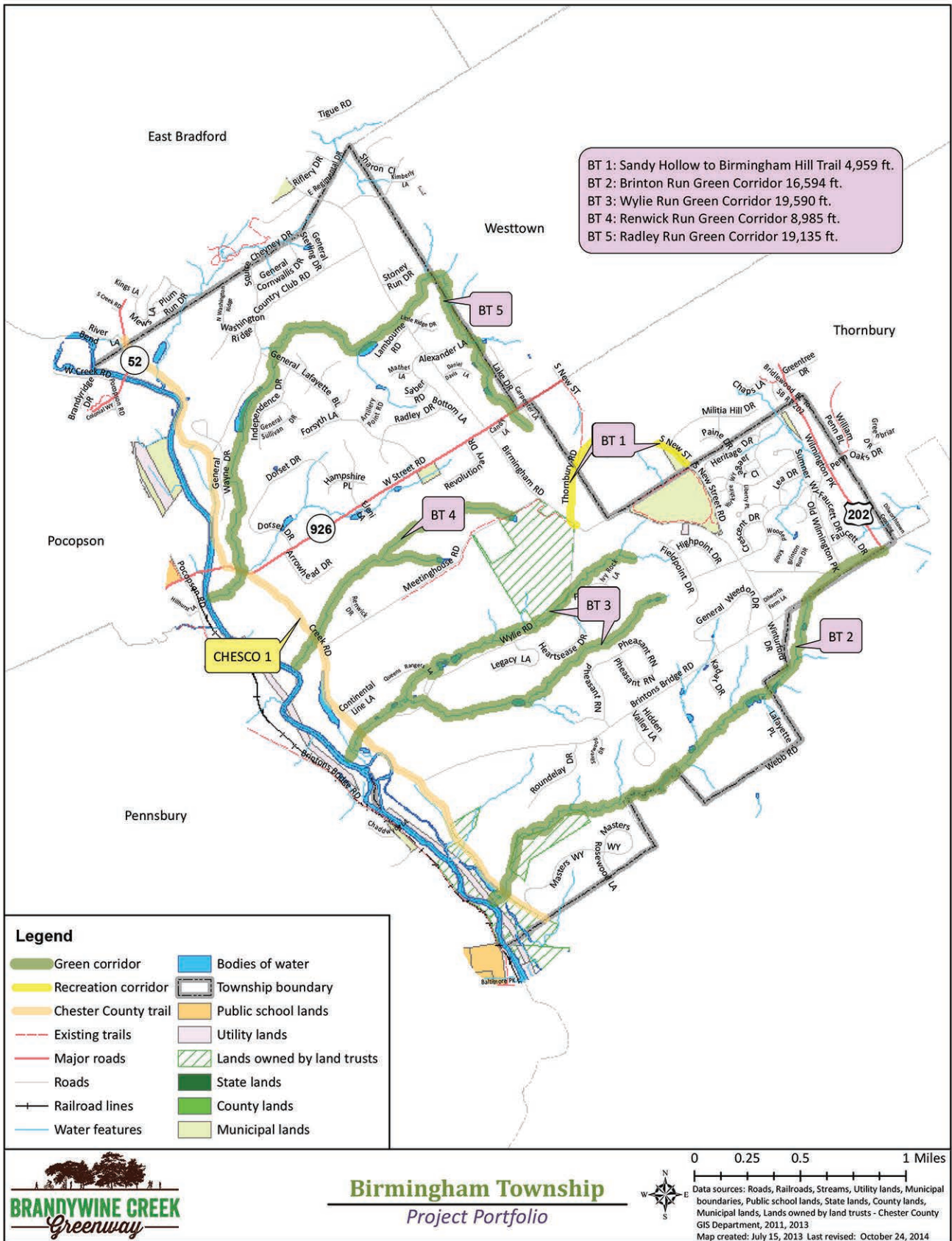
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

BIRMINGHAM TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 7/17/13

Zoning Adopted: 4/03 Zoning Last Amended: 2/16/2011	SLDO Adopted: 2/24/04 SLDO Last Amended: None
CURRENT RESOURCE PROTECTION STANDARDS	
<p>1. Steep Slopes (15-25%, 25%+): Somewhat Protected</p> <ul style="list-style-type: none"> ZO 122-97.A: For slopes 25% +, uses are limited to parks, outdoor recreation, forestry, and single-family dwellings that are approved by the Zoning Hearing Board after they review specified plans. 	
<p>2. Woodlands Protection: Rigorously Protected</p> <ul style="list-style-type: none"> SLDO 103-41.C: Within a wood lot, no more than 25% of 6 in. DBH trees shall be disturbed. 	
<p>3. Wetlands: Somewhat Protected</p> <ul style="list-style-type: none"> SLDO 103-41.B: Disturbance of delineated wetlands should be minimized. State and federal permits are required prior to disturbance. State and Federal permits required. 	
<p>4. Riparian Buffers: Somewhat Protected</p> <ul style="list-style-type: none"> ZO 122.6: Definition for “riparian buffer” is 35 feet or 10 feet beyond four types of environmentally sensitive areas. ZO 122-97: Riparian buffer shall not be disturbed, with specific exceptions. 	
<p>5. Floodplain: Rigorously Protected</p> <ul style="list-style-type: none"> ZO 122-60.A: For the Flood Hazard Area, development is limited to agriculture, recreation, yards, and permeable parking, with specific exceptions. For floodplain, no fill is permitted, except through special exception by the Zoning Hearing Board. 7/17/13. ZO 122-.60.B: Existing structures in the floodway shall not be expanded or enlarged, with specific exceptions. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> Steep Slopes: Include maximum disturbance limitations of 30% for areas with slopes of 15 to 25%. Include maximum disturbance limitations of 15% for areas with slopes greater than 25%. Also consider adding steep slope regulations that include: 1.) a description of the slope measuring method; 2.) a listing of specific activities or uses prohibited on steep slopes; and 3.) standards that provide additional guidance for minimizing the disturbance, grading, and erosion of steep slopes. Wetlands: Include regulations which establish specific wetlands identification and delineation criteria. Add regulations which prohibit the disturbance of a wetland except with state and federal permits. Lastly, consider adding regulations that establish a 50-foot wide margin around all wetlands. Within this 50-foot margin, land disturbance would be limited or prohibited. Riparian Buffers: Include regulations that establish a riparian buffer which extends 75 to 100 feet from both sides of the stream bank. Also, consider adding requirements that 1.) call for the re-vegetation of un-forested riparian buffers, and 2.) establish a two-tiered riparian buffer with stricter standards applied adjacent to streams. This two-tiered buffer would include a 25-35 foot-wide inner buffer in which disturbance is prohibited, and a 50 to 65 foot-wide outer buffer in which a maximum disturbance limit of 20% is allowed. 	



BIRMINGHAM TOWNSHIP

BT 1

Project Name

Sandy Hollow to Birmingham Hill Trail

Key Partners

Brandywine Conservancy, Chester County, private landowners

Project Focus and Location

To provide a pedestrian footpath that connects the trail at Sandy Hollow Park to the trail a Birmingham Hill.

- 4,959 linear feet
- Portions on private lands
- At least one road crossing
- Trail easements with private landowners, voluntary
- Pedestrians only
- Natural surface trail
- Short term need

Accomplishments to Date

- Discussions underway with key landowners
- Recreation, Parks and Open Space Committee has worked on this project together with the Brandywine Conservancy

Next Steps

- Continue negotiations with landowners to reach an agreement on trail location
- Submit trail crossing details to PennDOT for approval
- Survey trail routes and mark trail location
- Enter into a lease agreement or trail easement agreement
- 2 years to implement

BIRMINGHAM TOWNSHIP

BT 2

Project Name

Brinton Run Green Corridor

Key Partners

Brandywine Conservancy, Natural Lands Trust, Brandywine Valley Association, DCNR, Chester County WRA, DEP, WCU, landowners, volunteers

Project Focus and Location

To conserve natural areas and enhance water quality along Brinton Run.

- 16,594 linear feet
- Reforestation
- Riparian Buffer restoration
- Restoration of erosion-prone areas
- Promote best land management practices
- Stormwater BMPs
- Ongoing need

Accomplishments to Date

- Portions owned or eased by land trust
- Portions owned by HOAs

Next Steps

- Identify priority projects
- Engage partners
- Pursue funding
- 3-15 years and ongoing

BIRMINGHAM TOWNSHIP

BT 3

Project Name

Wylie Run Green Corridor

Key Partners

Brandywine Conservancy, Natural Lands Trust, Brandywine Valley Association, DCNR, Chester County WRA, DEP, WCU, landowners, volunteers

Project Focus and Location

To conserve natural areas and enhance water quality along Wylie Run.

- 19,590 linear feet
- Reforestation
- Riparian Buffer restoration
- Restoration of erosion-prone areas
- Promote best land management practices
- Stormwater BMPs
- Ongoing need

Accomplishments to Date

- Portions owned or eased by land trust
- Headwaters owned by the municipality at Sandy Hollow

Next Steps

- Identify priority projects
- Engage partners
- Pursue funding
- 3-15 years and ongoing

BIRMINGHAM TOWNSHIP

BT 4

Project Name

Renwick Run Green Corridor

Key Partners

Brandywine Conservancy, Natural Lands Trust, Brandywine Valley Association, DCNR, Chester County WRA, DEP, WCU, landowners, volunteers

Project Focus and Location

To conserve natural areas and enhance water quality along Renwick Run.

- 8,895 linear feet
- Reforestation
- Riparian Buffer restoration
- Restoration of erosion-prone areas
- Promote best land management practices
- Stormwater BMPs
- Ongoing need

Accomplishments to Date

- Headwaters pond owned or eased by land trust

Next Steps

- Identify priority projects
- Engage partners
- Pursue funding
- 3-15 years and ongoing

BIRMINGHAM TOWNSHIP

BT 5

Project Name

Radley Run Green Corridor

Key Partners

Brandywine Conservancy, Natural Lands Trust, Brandywine Valley Association, DCNR, Chester County WRA, DEP, WCU, landowners, volunteers

Project Focus and Location

To conserve natural areas and enhance water quality along the Brinton Run Minor Corridor.

- 19,135 linear feet
- Reforestation
- Riparian Buffer restoration
- Restoration of erosion-prone areas
- Promote best land management practices
- Stormwater BMPs
- Ongoing need

Accomplishments to Date

- Reforestation implemented at Knolls of Birmingham HOA open space in partnership with the Brandywine Conservancy
- Portions owned by HOA's
- Portions owned by Radley Run Country Club

Next Steps

- Identify priority projects
- Engage partners
- Pursue funding
- 3-15 years and ongoing

Brandywine Creek Greenway Functions Checklist

CITY OF COATSVILLE

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	✓
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	✓
	Provide transportation alternatives for walking, bicycle, and equestrian	
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	
	Preserve nationally and municipally-designated historic structures and districts	✓

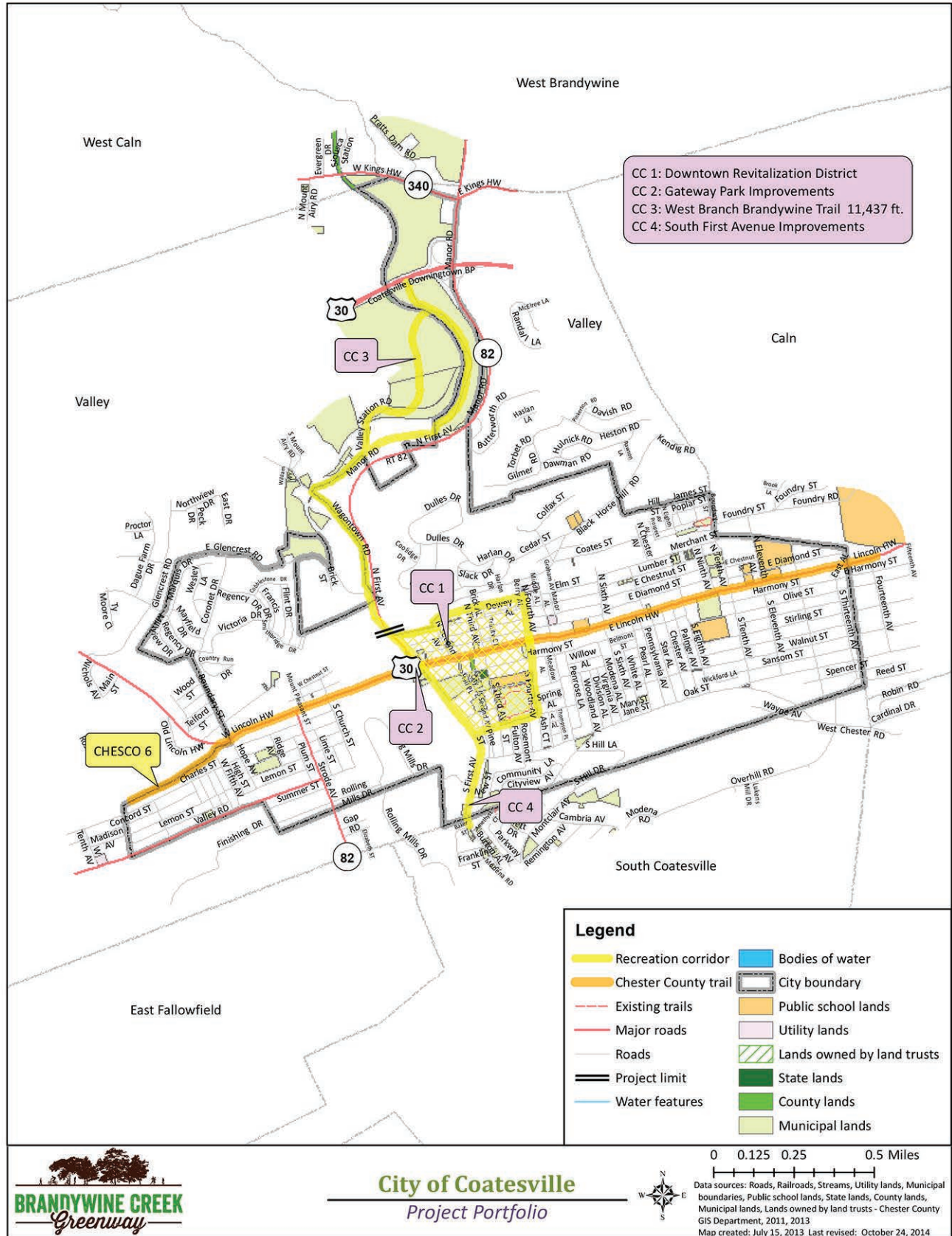
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

CITY OF COATSVILLE

Natural Resource Protection Ordinance Review

Date Reviewed: 8/8/13

Zoning Adopted: 4/01 Zoning Last Amended: 6/27/11	SLDO Adopted: 8/8/13 SLDO Last Amended: None
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> ZO 224-30.F: No more than 30% of 15-25% slope areas shall be disturbed. No more than 15% of 25% + slope areas shall be disturbed. SLDO 197-51.F: Reiterates ZO 244-30.F. 	
2. Woodlands Protection: Rigorously Protected	
<ul style="list-style-type: none"> ZO 224-30.J: No more than 20% of woodlands which overlap other natural resource areas may be disturbed. No more than 50% of woodlands which do not overlap other natural resource areas may be disturbed. SLDO 197-51.H.: Reiterates ZO 224-30.J. 	
3. Wetlands: Rigorously Protected	
<ul style="list-style-type: none"> ZO 224-30.H: Wetlands shall not be disturbed, except as permitted through state and federal permits. ZO 224-30.I: Establishes a “Wetland Margin” extending 100 feet from wetlands or the limits of hydric soils, whichever is less. Up to 20% of a wetland margin may be disturbed. 	
4. Riparian Buffers: Rigorously Protected	
<ul style="list-style-type: none"> ZO 224-30.G: No structure or land use may be located within 50 feet of a waterway. ZO 224-30.D: Defines “Lake and Pond Shoreline” as extending 100 feet from a lake or pond. Up to 20% of a lake or pond shoreline may be disturbed. 	
5. Floodplain: Rigorously Protected	
<ul style="list-style-type: none"> ZO 224-24: Defines “Floodplain Districts” as areas subject to 100-year flooding, namely the “flood district,” “flood-fringe district,” and “general floodplain district.” ZO 224-25: Permits limited land uses within floodplain districts. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> None: All evaluated standard provide rigorous resource protection. 	



CITY OF COATESVILLE

CC 1

Project Name

Downtown Revitalization District

Key Partners

Chester County, DCED, DCNR, business community

Project Focus and Location

To promote a vibrant, safe atmosphere in the downtown area that will attract visitors to the greenway and foster business growth.

- Upgrade pedestrian crosswalks
- Directional signage
- Provide bus shelters
- Street furniture such as benches, trash receptacles, theme lighting
- Historic plaques on historic buildings and places
- Promote pedestrian connections among urban parks and the downtown areas to the Riverwalk Trail
- Restrooms at city clock apartments in center of town to be privately-owned and City managed
- Short term need

Accomplishments to Date

- Plans for the new SEPTA rail station and Third Avenue streetscape enhancements underway
- Riverwalk Trail Park complete
- Downtown Revitalization District newly established by Council
- Consistent with comprehensive plan

Next Steps

- Assemble partners and funding
- Prepare a master plan
- 3 years to complete master plan
- 6 years to implement

CITY OF COATESVILLE

CC 2

Project Name

Gateway Park Improvements

Key Partners

Chester County, DCED, DCNR, business community, Iron and Steel Heritage Museum

Project Focus and Location

To provide additional recreational facilities for visitors to Gateway Park and the greenway.

- Gateway kiosk
- Flexible community event space
- Park entrance sign
- Re-locate veterans memorial to S. First Avenue and Harmony Street
- Pedestrian crosswalk to veterans memorial site
- Safe pedestrian connection to Riverwalk Trail and park
- Lighting
- Landscaping
- Intermediate need

Accomplishments to Date

- Lands owned and maintained by the City
- Consistent with comprehensive plan

Next Steps

- Assemble partners and funding
- Prepare a park master plan
- 3 years to design and engineer
- 2 years to construct

CITY OF COATESVILLE

CC 3

Project Name

West Branch Brandywine Trail

Key Partners

Chester County, Chester County Trail Club, DCNR, DVRPC, DCED, local businesses, Valley Township, landowners, railways, PECO, PennDOT, pipelines, Iron and Steel Heritage Museum, Arcelor-Mittal

Project Focus and Location

To provide additional greenway and trail opportunities for visitors by extending the River Walk Trail along the West Branch of the Brandywine to the Route 30 bypass.

- # Linear feet
- Multi-use trail
- Rails with trails
- Portions natural surface
- Pedestrian/bicycle bridge across the Brandywine at the Marriott Hotel will create a loop trail through Valley Township open space
- Intermediate need

Accomplishments to Date

- Right-of-way for the bridge over the Brandywine was recorded with the Marriott Hotel land development plan
- Trail feasibility study completed
- Consistent with the comprehensive plan

Next Steps

- Meet with Valley Township to discuss mutual goals
- Update and adopt the Feasibility Study
- Assemble partners and funding
- 2 years to update feasibility study
- 6 years to complete acquisitions and complete the trail

CITY OF COATESVILLE

CC 4

Project Name

South First Avenue Improvements

Key Partners

Chester County, Borough of South Coatesville, Iron and Steel Heritage Museum, Arcelor-Mittal, local businesses, PennDOT, DCED, landowners, PECO

Project Focus and Location

- To implement recommendations in the South First Avenue Master Plan.
- Streetscape enhancements
- Pedestrian connections
- Bicycle connections
- Business district revitalization
- Short term need

Accomplishments to Date

- Master Plan adopted
- Consistent with comprehensive plan
- Portions implemented by South Coatesville Borough

Next Steps

- Assemble partners and funding
- Prioritize improvements
- 6 years to implement

Brandywine Creek Greenway Functions Checklist

CHADDS FORD TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	✓
	Provide transportation alternatives for walking, bicycle, and equestrian	
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	✓
	Preserve nationally and municipally-designated historic structures and districts	✓

NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

CHADDS FORD TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 1/9/2014

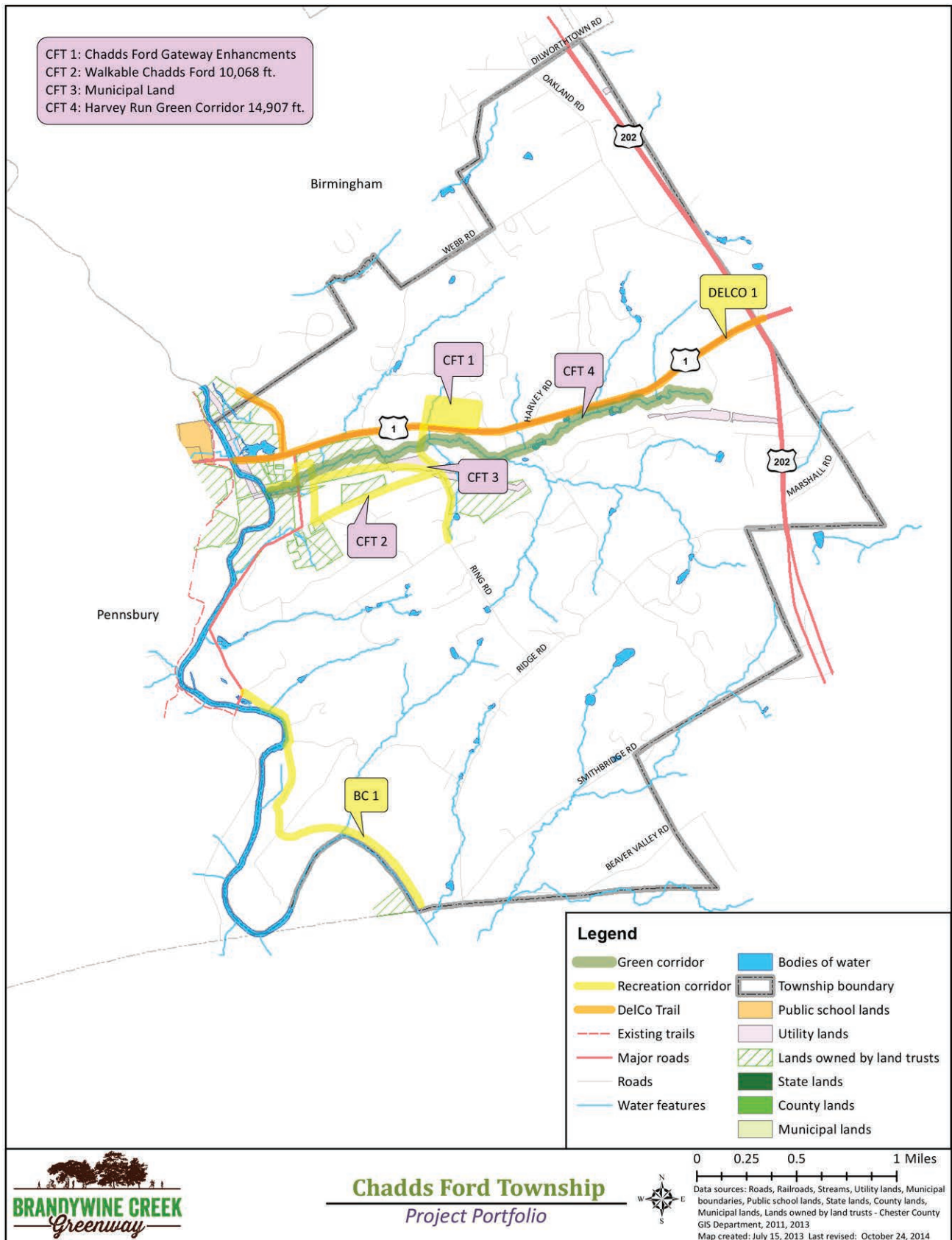
Zoning Adopted: 1951 Zoning Last Amended: 2009	SLDO Adopted: 1985 SLDO Last Amended: 2009	SWM Adopted: 2005 SWM Last Amended: 2009
CURRENT RESOURCE PROTECTION STANDARDS		
1. Steep Slopes (15-25%, 25%+): Not Well Protected		
<ul style="list-style-type: none"> • SLDO §110-7: Steep slopes defined as those with slope between 15-25% • SLDO §110-7 & ZO §135-4: Very steep slopes defined as those with slope 25% and greater • ZO §135-4: 70% of very steep slopes to be excluded from lot area calculation 		
2. Woodlands Protection: Not Well Protected		
<ul style="list-style-type: none"> • ZO §135-64.A(21): Conditional use standards require the preservation of woodlands and other trees “to the maximum extent possible.” • SWM §105-22.C(12): Trees of 12” or greater caliper to be preserved to maximum extent possible. 		
3. Wetlands: Somewhat Protected		
<ul style="list-style-type: none"> • SWM §105-11.C(6): Wetlands to be reserved for permanent open space. • ZO §135-4: 85% of area within wetlands, and 50% of area within wetland margins, to be excluded from lot area calculation. • ZO §135-4: Wetland margin extends 25’ from edge of wetland. • ZO §135-36.C(3): 50% of area covered by wetlands not permitted to be counted in required open space. 		
4. Riparian Buffers: Somewhat Protected		
<ul style="list-style-type: none"> • SWM §105-7: Riparian buffer to contain appropriate native vegetation. • SWM §105-19.A(2): Riparian buffer to extend 50’ from centerline of stream and maintained with appropriate native vegetation. Can be reduced to a minimum of 10’ when overlapping a rear or sideyard setback. • SWM §105-21.K: Riparian buffers to be provided in new developments. Alteration of stream prohibited in most cases. 		
5. Floodplain: Not Well Protected		
<ul style="list-style-type: none"> • ZO §135-4: 85% of area of floodplain to be excluded from lot area calculation. • ZO §§135-92--: Very few restrictions on development within the floodplain. 		
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS		
<ul style="list-style-type: none"> • Steep Slopes: Include maximum disturbance limitations of 30% for areas with slopes of 15 to 25%. Include maximum disturbance limitations of 15% for areas with slopes greater than 25%. Also consider adding steep slope regulations that include: 1.) a description of the slope measuring method; 2.) a listing of specific activities or uses prohibited on steep slopes; and 3.) standards that provide additional guidance for minimizing the disturbance, grading, and erosion of steep slopes. 		

continued on page 56

CHADDS FORD TOWNSHIP, CONT.

Natural Resource Protection Ordinance Review

- **Woodlands:** Include regulations that limit disturbance of a woodlands to a maximum of 50%. Such regulations would establish a definition for “woodland” that is defined in a measurable way, such as a definition that is based on the number of trees within a wooded area that have grown to a specific diameter at breast height (dbh). Also, consider adding forestry regulations that: 1.) include exceptions for forestry or timber harvesting, as set forth in the MPC, and 2.) require a timber harvesting plan. Lastly, consider adding tree protection regulations that: 1.) include measures that protect the trees remaining on a construction site from construction activities that could be damaging to trees; 2.) prohibit disturbing specimen trees and PNDI sites unless there is no feasible alternative; and 3.) call for tree replacement if more than a specified area or number of trees are removed.
- **Wetlands:** Include regulations which establish specific wetlands identification and delineation criteria. Lastly, consider adding regulations that establish a 50’-wide margin around all wetlands. Within this 50-foot margin, land disturbance would be limited or prohibited.
- **Riparian Buffers:** Include regulations that establish a riparian buffer which extends 100’ from both sides of the stream bank (or 150’ feet if the stream is impaired). Also, consider adding requirements that 1.) call for the re-vegetation of un-forested riparian buffers, and 2.) establish a two-tiered riparian buffer with stricter standards applied adjacent to streams. This two-tiered buffer would include a 50’-wide inner buffer in which disturbance is prohibited, and a 50’ to 100’-wide outer buffer in which a maximum disturbance limit of 20% is allowed, and no new impervious surface.
- **Floodplain:** Include regulations that prohibit both land disturbance and the construction of new structures within a floodplain (which includes both the floodway and the flood fringe.)



CHADDS FORD TOWNSHIP

CFT 1

Project Name

Chadds Ford Gateway Enhancements

Key Partners

Chester County Planning Commission, Delaware County Planning, Brandywine Conservancy, Friends of the Brandywine Battlefield, local businesses, DVRPC, PennDOT

Project Focus and Location

To enhance the visitor experience at the Brandywine Battlefield Park Gateway and promote safe pedestrian access to the Chadds Ford Township Building.

- Directional signage
- Historic/interpretive signage for the Pyle Studio/Municipal Building, Harvey Run Trail
- Trailhead kiosk
- Orientation maps to the battlefield and the greenway
- Short term need

Accomplishments to Date

- Park actively supported by a volunteer group
- Brandywine Battlefield Task Force actively working on a strategic plan update
- Grant application submitted to C2P2 2013 round re. a feasibility study for a safe pedestrian crossing at Route 1 at Ring Road

Next Steps

- 1 year to design/install kiosk and signage
- 1 year for construction

CHADDS FORD TOWNSHIP

CFT 2

Project Name

Walkable Chadds Ford

Key Partners

DVRPC, PennDOT, Delaware County Planning, local businesses

Project Focus and Location

To provide a network of trails and sidewalks that would connect people to destinations within the Chadds Ford HARB district.

- 10,068 linear feet of trails
- Traffic calming along Route 1
- Reduced speeds along Route 1
- Design guide
- Historic Resource Walking Tour Guide
- Create a sense of community center at the township building
- To benefit Chadds Ford residents, businesses, and visitors
- Intermediate need

Accomplishments to Date

- Funding secured for transportation study/design guide
- LTAP project underway

Next Steps

- Feasibility Study for safe road crossings
- 3 years to complete feasibility study
- 3 years to implement safe crossings

CHADDS FORD TOWNSHIP

CFT 3

Project Name

Municipal Lands

Key Partners

PennDOT, Delaware County Planning, local businesses

Project Focus and Location

To create a community center/village green for community events in the heart of Chadds Ford Village.

- Community green south of Harvey Run off Ring Road
- Connect people
- Parking, trails along Harvey Run
- Trails connect to Township Building
- Picnic area
- Intermediate need

Accomplishments to Date

- Land owned by Chadds Ford Township
- Harvey Run Trail feasibility study complete
- Funding acquired to implement the Harvey Run Trail
- Village Master Plan funded, to be completed in 2015
- Invasive plant management/clearing

Next Steps

- Engineering for road crossings, RFP preparation, implementation
- 2 years to design and engineer
- 3 years to construct

CHADDS FORD TOWNSHIP

CFT 4

Project Name

Municipal Lands

Key Partners

PennDOT, Delaware County Planning, local businesses

Project Focus and Location

To create a community center/village green for community events in the heart of Chadds Ford Village.

- Community green south of Harvey Run off Ring Road
- Connect people
- Parking, trails along Harvey Run
- Trails connect to Township Building
- Picnic area
- Intermediate need

Accomplishments to Date

- Land owned by Chadds Ford Township
- Harvey Run Trail feasibility study complete
- Grant proposals in process for the Harvey Run Trail
- Invasive plant management/clearing

Next Steps

- Secure funding for a master plan
- Design, engineering, cost estimates
- Secure funding for construction
- 2 years to design and engineer
- 3 years to construct

Brandywine Creek Greenway Functions Checklist

CALN TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	✓
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	✓
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	
	Preserve nationally and municipally-designated historic structures and districts	✓

NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

CALN TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 8/6/13

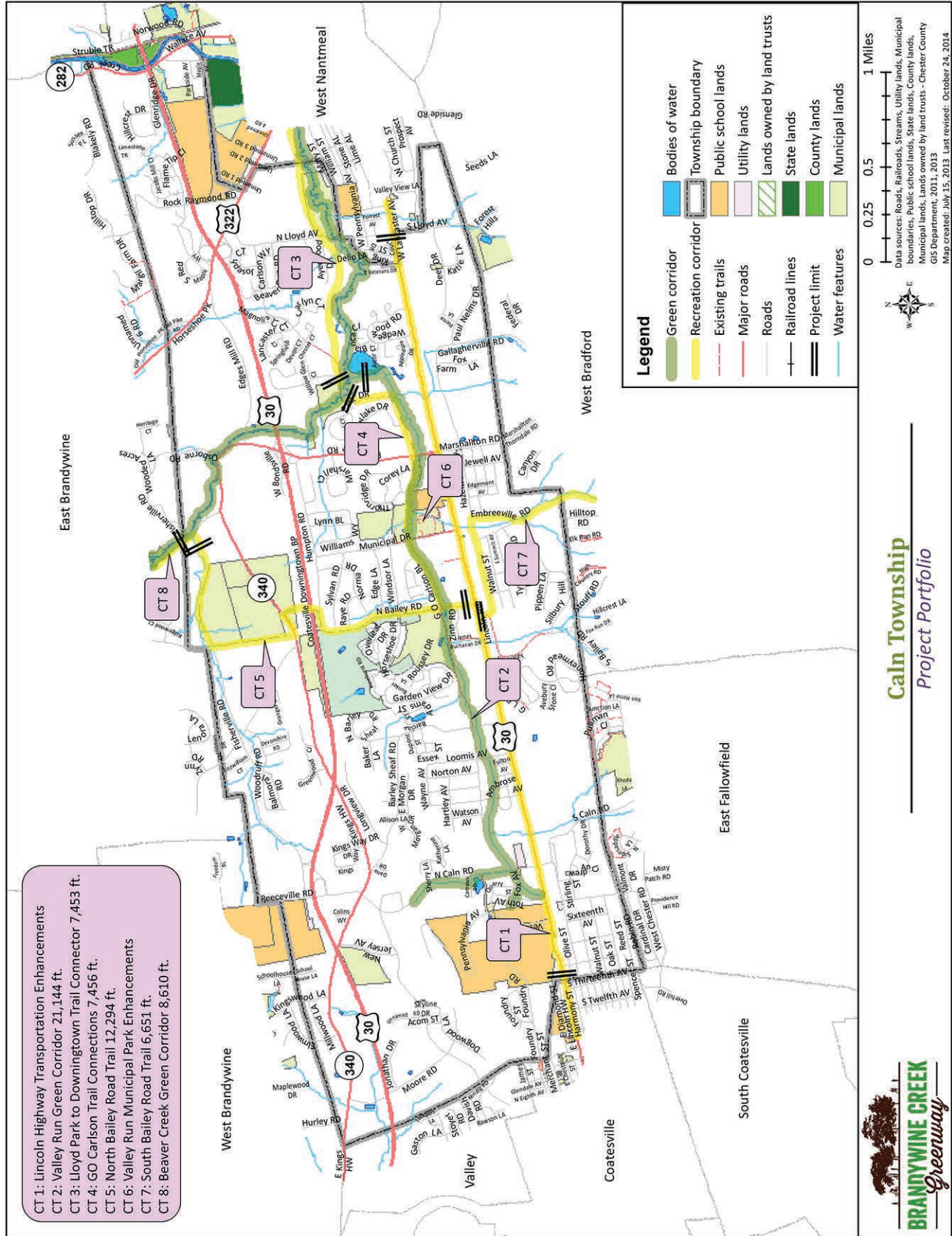
Zoning Adopted: 11/11 Zoning Last Amended: None	SLDO Adopted: 11/11 SLDO Last Amended: None
CURRENT RESOURCE PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Somewhat Protected	
<ul style="list-style-type: none"> • ZO 155-36.B: Defines 15-20% slopes as “steep,” and 20%+ as “very steep.” • ZO 155-36.E: No more than 75% of steep slopes may be disturbed. • ZO 155-36.G: No more than 50% of very steep slopes may be disturbed, with specific exceptions. 	
2. Woodlands: Somewhat Protected	
<ul style="list-style-type: none"> • ZO 155-37.A: Establishes a “Woodland Protection and Management Overlay District.” • ZO 155-137.1B: For projects that disturb from 20-40% of woodlands, mitigation with replacement of 2 trees per lot is required. • ZO 155-37.1C: For projects that disturb from 40-60% of woodlands, mitigation with replacement of 10 trees per acre is required. Up to 60% of a woodland may be disturbed. 	
3. Wetlands: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 155-35.A: Establishes a “Wetlands and Hydric Soils Overlay District.” • ZO 155-35.D: No areas within 25 feet of a wetland may be disturbed if a jurisdictional determination has been approved by the ACOE. No area within 50 feet of a wetland may be disturbed if no jurisdictional determination has been approved by the ACOE. 	
4. Riparian Buffers: Rigorously Protected	
<ul style="list-style-type: none"> • SLDO 137-44.1B: Defines a “Riparian Buffer Zone” as all areas that are adjacent to wetlands or water bodies and that are also located within a drainage area that exceeds 75 acres. Establishes 3 zones. Zone 1 extends 15 feet and no disturbance is permitted. Zone 2 extends out from Zone 1 to the 10-year floodplain, whichever is larger, and disturbance is restricted to that which “minimally disrupts” vegetation.” Zone 3 extends out 50 feet from Zone 2 and permits disturbance as long as the channelization and point source discharges are avoided. 	
5. Floodplain: Somewhat Protected	
<ul style="list-style-type: none"> • ZO 155-34A and B: Establishes a “Floodplain Overlay District,” that includes floodway, floodway fringe, the 100-year floodplain and other FEMA mapped features. • ZO 155-34.L: Limits land uses to agriculture, recreation, yards, parking, and other uses. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • Steep Slopes: Include maximum disturbance limitations of 30% for areas with slopes of 15 to 25%. Include maximum disturbance limitations of 15% for areas with slopes greater than 25%. Also consider adding steep slope regulations that include: 1.) a description of the slope measuring method; 2.) a listing of specific activities or uses prohibited on steep slopes; and 3.) standards that provide additional guidance for minimizing the disturbance, grading, and erosion of steep slopes. 	

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CALN TOWNSHIP, CONT.

Natural Resource Protection Ordinance Review

- **Woodlands:** Include regulations that limit disturbance of a woodlands to a maximum of 50%. Such regulations would establish a definition for “woodland” that is defined in a measurable way, such as a definition that is based on the number of trees within a wooded area that have grown to a specific diameter at breast height (dbh). Also, consider adding forestry regulations that: 1.) include exceptions for forestry or timber harvesting, as set forth in the MPC, and 2.) require a timber harvesting plan. Lastly, consider adding tree protection regulations that: 1.) include measures that protect the trees remaining on a construction site from construction activities that could be damaging to trees; 2.) prohibit disturbing specimen trees and PNDI sites unless there is no feasible alternative; and 3.) call for tree replacement if more than a specified area or number of trees are removed.
- **Floodplains:** Include regulations that prohibit both land disturbance and the construction of new structures within a floodplain (which includes both the floodway and the flood fringe.)



CALN TOWNSHIP

CT 1

Project Name

Lincoln Highway Business District Enhancements

Key Partners

Chester County Transportation, DCNR, PennDOT, DVRPC, Chester County Cycling Coalition, business community, DCED

Project Focus and Location

To provide facilities for cyclists and pedestrians along Lincoln Highway from Coatesville to Downingtown and to enhance the Thorndale Village District to make it a more viable business district.

- Streetscape improvements
- Sidewalks and crosswalks
- Bicycle lanes or share the road signage
- Re-striping to accommodate bicycles
- Lighting
- Signage
- Short term need

Accomplishments to Date

- LERTA designation
- Thorndale has an active business community
- Train Station planned
- Supported by Board of Commissioners and Planning Commission

Next Steps

- Ordinance review and update
- Public workshop and conceptual design study
- Master Plan, Design and engineering
- Apply for grants
- 3 years to complete design and engineering
- 6 years to implement

CALN TOWNSHIP

CT 2

Project Name

Valley Run Green Corridor

Key Partners

Chester County WRA, DEP, DCNR, Chester County Parks and Recreation, community volunteers, scouts

Project Focus and Location

To protect and enhance the riparian areas along Valley Run

- 21,144 linear feet
- Reforestation
- Landscaping with native plants
- Reduce maintenance
- Enhance stormwater management performance
- Enhance the Lincoln Highway business district
- Short term need

Accomplishments to Date

- Much of the land along G.O. Carlson Blvd is owned by Caln Township

Next Steps

- Identify areas for reforestation or native plantings
- Secure funding for plantings
- Organize community volunteer planting events
- 3 years to implement

CALN TOWNSHIP

CT 3

Project Name

Lloyd Park to Downingtown Trail Connector

Key Partners

Chester County, DCNR, Chester County Parks and Recreation, Downingtown Borough

Project Focus and Location

To provide a pedestrian connection between Kerr Park in Downingtown Borough and Lloyd Park in Caln Township.

- 7,453 linear feet
- 6 foot paved multi-use trail
- Follows Beaver Creek to the Brandywine
- Intermediate need

Accomplishments to Date

- Supported by Board of Commissioners and Planning Commission

Next Steps

- Coordinate with Downingtown Borough Parks and Recreation
- Secure funding for a feasibility study
- Complete feasibility study, design and engineering
- Apply for grants to purchase land or easements
- 3 years to complete design and engineering
- 3 years to implement

CALN TOWNSHIP

CT 4

Project Name

GO Carlson Trail Connections

Key Partners

Chester County Parks and Recreation, DCNR, local businesses,

Project Focus and Location

To complete missing sections of the GO Carlson Trail from Lloyd Park to Barley Sheaf Road.

- 7,456 linear feet
- Trail along G.O. Carlson Blvd
- 6 foot paved multi-use trail
- Follows Beaver Creek and Valley Run Minor Corridor
- Future pedestrian bridge over Valley Run – short term
- Future pedestrian bridge over Beaver Creek – short term
- Future vehicular bridge over Beaver Creek – long term
- Short term need

Accomplishments to Date

- Much of the trail along G.O. Carlson Blvd already exists
- Bridges would connect existing trail sections
- Supported by Board of Commissioners and Planning Commission

Next Steps

- Trail gap analysis
- Design and engineering of missing sections of trail
- Bridge design and engineering of pedestrian bridges
- Apply for grants
- 3 years to complete design and engineering
- 3 years to implement

CALN TOWNSHIP

CT 5

Project Name

North Bailey Road Trail

Key Partners

Chester County Parks and Recreation, DCNR, local businesses, East Brandywine Township

Project Focus and Location

To provide a path for pedestrians and cyclists along North Bailey Road and Fisherville Road (Beaver Creek Minor Corridor) that would connect Kings Highway Park in Caln Township to Bondsville Mill Park in East Brandywine Township.

- 12,294 linear feet
- Portions off-road
- Portions share-the-road
- Crosses Route 30
- Crosses Route 340
- Long term need

Accomplishments to Date

- Ingleside Golf Course owned by Caln Township
- Future connection shown in East Brandywine Comprehensive Plan
- Supported by Board of Commissioners and Planning Commission

Next Steps

- Feasibility Study
- Design and engineering
- Bridge design and engineering where major road crossings
- Apply for grants
- 3 years to complete design and engineering
- 6 years to implement

CALN TOWNSHIP

CT 6

Project Name

Valley Run Municipal Park Enhancements

Key Partners

Chester County Parks and Recreation, DCNR, local businesses, volunteers

Project Focus and Location

To provide new park amenities at the Valley Run Municipal Park and adjacent Del Toyota open space.

- Picnic tables
- Seating
- Naturalized landscaping
- Short term need

Accomplishments to Date

- Ingleside Golf Course owned by Caln Township
- Future connection shown in East Brandywine Comprehensive Plan
- Supported by Board of Commissioners and Planning Commission

Next Steps

- Feasibility Study
- Design and engineering
- Bridge design and engineering where major road crossings
- Apply for grants
- 3 years to complete design and engineering
- 6 years to implement

CALN TOWNSHIP

CT 7

Project Name

South Bailey Road Trail

Key Partners

Chester County Parks and Recreation, DCNR, local businesses, West Bradford Township, landowners, volunteers

Project Focus and Location

To provide a path for pedestrians and cyclists from Thorndale along South Bailey Road, Price Street, Embreeville Road and Broad Run Road to Broad Run Park and Beacon Hill Park in West Bradford Township.

- 6,651 linear feet
- Portions off-road
- Portions share-the-road
- Crosses Route 30
- Crosses Route 340
- Long term need

Accomplishments to Date

- Destinations in Thorndale and West Bradford Parks
- Future connection shown in West Bradford Township Comprehensive Plan
- Supported by Board of Commissioners and Planning Commission

Next Steps

- Feasibility Study
- Design and engineering
- Apply for grants
- 3 years to complete design and engineering
- 6 years to implement

CALN TOWNSHIP

CT 8

Project Name

Beaver Creek Green Corridor

Key Partners

DEP, DCNR, East Brandywine Township, land trusts, landowners, volunteers, scouts

Project Focus and Location

To protect and enhance water quality along Beaver Creek.

- 8,610 linear feet
- Reforestation
- Stormwater BMPs
- Land stewardship
- Natural resource protection
- Ongoing need

Accomplishments to Date

– Future land use shown as Conservation in the Comprehensive Plan

Next Steps

- Natural resource protection ordinance review and update
- Education and outreach to landowners
- Identify opportunities for reforestation
- Recruit volunteers for plantings and stream cleanup

Brandywine Creek Greenway Functions Checklist

DOWNTOWNTOWN BOROUGH

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	
	Enhance water quality in the Brandywine and its tributaries	
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	✓
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	✓
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	✓
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	
	Preserve nationally and municipally-designated historic structures and districts	✓

NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

DOWNTOWN BOROUGH

Natural Resource Protection Ordinance Review

Date Reviewed: 8/6/13

Zoning Adopted: 6/08 Zoning Last Amended: 7/18/12	SLDO Adopted: 12/17/91 SLDO Last Amended: 12/1/1999
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Somewhat Protected	
<ul style="list-style-type: none"> • ZO 287-12.C: Establishes a “Steep Slope Conservation District,” defined as 20%+ slopes. • ZO 287-13.E.: Limits disturbance to parks, roads and other limited uses, with specific exceptions that may permit single-family detached dwellings. 	
2. Woodlands Protection: Somewhat Protected	
<ul style="list-style-type: none"> • ZO 278-15: Requires disturbance to be minimized at any site with an approved plan. 	
3. Wetlands: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 287-14: Requires wetlands be delineated. Allows disturbance only as set forth through state and federal permits. 	
4. Riparian Buffers: Not Protected	
<ul style="list-style-type: none"> • None. 	
5. Floodplain: Somewhat Protected	
<ul style="list-style-type: none"> • ZO 287-12.C.: Defines floodplain as the 100-Year floodplain, floodway, flood fringe, and approximate floodplain. • ZO 287-12.E, F and G: Limits land uses to agriculture, selective cutting of trees, recreation, wildlife sanctuaries, temporary festival grounds, and other limited uses, with specific exceptions. • ZO 287-12.H: Includes standards that limit structures built on floodplains to those that minimize obstruction of flood water flow. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • Steep Slopes: Include maximum disturbance limitations of 30% for areas with slopes of 15 to 25%. Include maximum disturbance limitations of 15% for areas with slopes greater than 25%. Also consider adding steep slope regulations that include: 1.) a description of the slope measuring method; 2.) a listing of specific activities or uses prohibited on steep slopes; and 3.) standards that provide additional guidance for minimizing the disturbance, grading, and erosion of steep slopes. • Woodlands: Include regulations that limit disturbance of a woodlands to a maximum of 50%. Such regulations would establish a definition for “woodland” that is defined in a measurable way, such as a definition that is based on the number of trees within a wooded area that have grown to a specific diameter at breast height (dbh). Also, consider adding forestry regulations that: 1.) include exceptions for forestry or timber harvesting, as set forth in the MPC, and 2.) require a timber harvesting plan. Lastly, consider adding tree protection regulations that: 1.) include measures that protect the trees remaining on a construction site from construction activities that could be damaging to trees; 2.) prohibit disturbing specimen trees and PNDI sites unless there is no feasible alternative; and 3.) call for tree replacement if more than a specified area or number of trees are removed. 	

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DOWNINGTOWN BOROUGH, CONT.

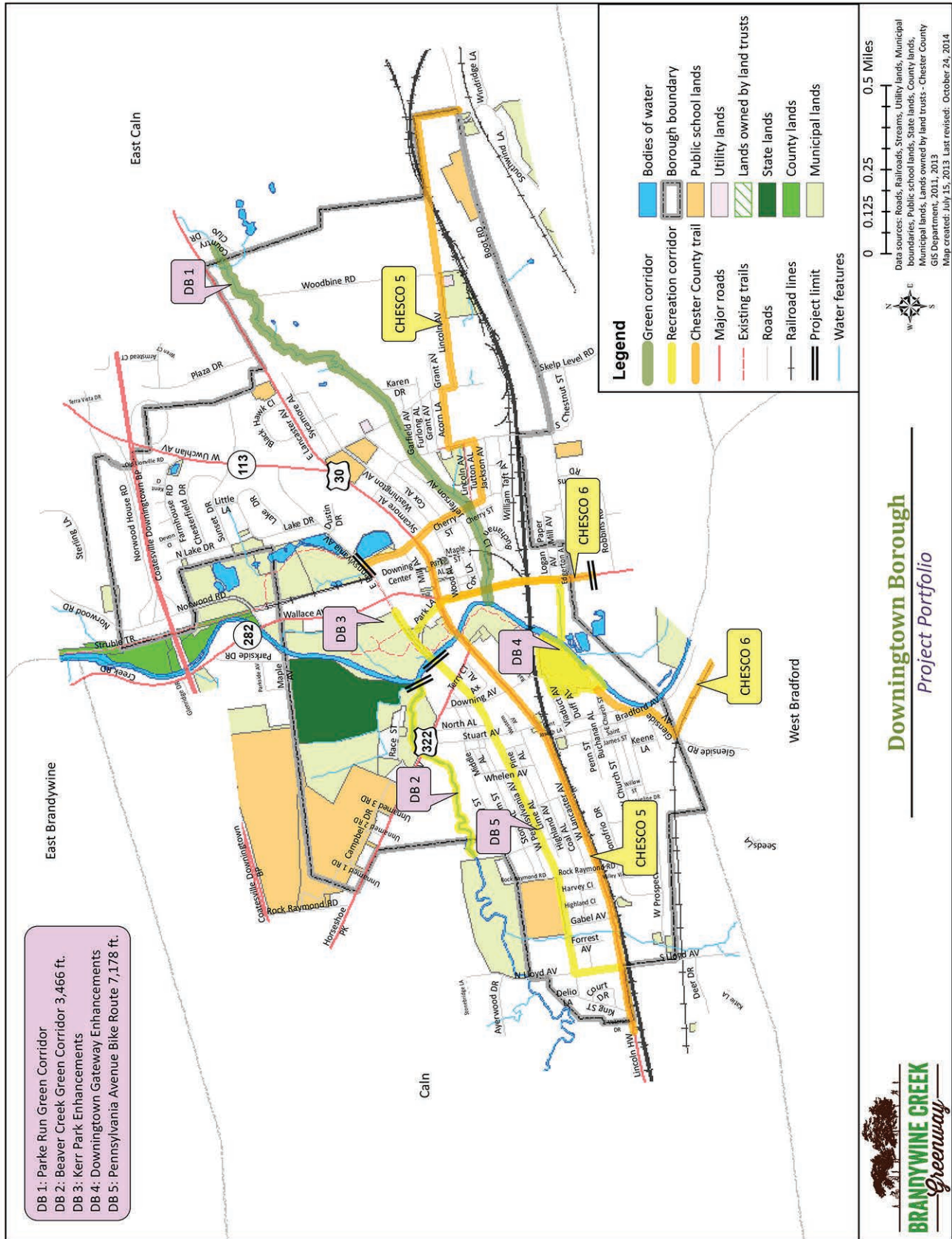
Natural Resource Protection Ordinance Review

Editor's note: in urbanized areas, the focus on Woodlands could include new tree plantings rather than trying to protect existing woodlands which are rare. This is consistent with the municipal Comprehensive Plan Update 2013, page 6.6.

- **Riparian Buffers:** Include regulations that establish a riparian buffer which extends 35 to 50 feet from both sides of the stream bank. Also, consider adding requirements that call for the re-vegetation of un-forested riparian buffers.

Editor's note: The Planning Commission does not think it appropriate to require existing property owners in the borough to re-vegetate. It thinks riparian buffer restoration should be addressed with education and voluntary plantings. This approach is consistent with the municipal Comprehensive Plan Update 2013, page 6.6.

- **Floodplains:** Include regulations that either prohibit the construction of new structures within a floodplain (which includes both the floodway and the flood fringe), or allow only those structures or additions to structures that meet specific flood-proofing standards consistent with regulations.



DOWNINGTOWN BOROUGH

DB 1

Project Name

Parke Run Green Corridor

Key Partners

East Caln Township, Chester County, DEP, DCNR, HOAs, land trusts, landowners

Project Focus and Location

To promote the restoration of riparian buffers and water quality along Parke Run from the Brandywine Creek to the boundary with East Caln Township.

- Conservation easements
- Riparian buffer restoration
- Invasive vegetation management
- Land and water stewardship BMPs
- Fish habitat restoration
- Stream bank stabilization
- Interpretive signage
- Ongoing need

Accomplishments to Date

- Portions floodplain
- Portions wetlands (n/f)
- Portions owned by HOAs

Next Steps

- Landowner education and outreach regarding Brandywine watershed
- Explore opportunities for reforestation
- Explore opportunities for stream bank and habitat enhancement

DOWNINGTOWN BOROUGH

DB 2

Project Name

Beaver Creek Green Corridor

Key Partners

Caln Township, Chester County, DEP, DCNR, land trusts, landowners

Project Focus and Location

To provide pedestrian and cycling connections from Kerr Park in Downingtown to Lloyd Park in Caln Township by way of Beaver Creek.

- 3,466 linear feet
- Multi-use trail
- Pedestrian bridge at Race Street
- Crossing at Manor Avenue
- Connects Caln Township to the Struble Trail
- Short term need

Accomplishments to Date

- Connections recommended in the Central Chester County Bicycle & Pedestrian Circulation Plan, 2013
- Portions public land
- Portions in floodplain

Next Steps

- Assemble partners and funding
- Feasibility study, design, engineering
- 3 years feasibility study and design
- 3 years to implement

DOWNINGTOWN BOROUGH

DB 3

Project Name

Kerr Park Enhancements

Key Partners

Chester County, DCNR, DCED, PECO Green Region, local businesses

Project Focus and Location

To attract visitors and to enhance the visitor experience at the Kerr Park Gateway.

- Lighted pedestrian walkways and sidewalks
- Bicycle racks
- Trash cans
- Seating
- Landscaping
- Signage
- Kayak launch/water access
- Gateway kiosk and other improvements
- Short term need

Accomplishments to Date

- Park currently offers many public facilities
- Construction road serves as kayak launch/creek access point
- Consistent with comprehensive plan

Next Steps

- Identify details and locations of new facilities
- Assemble partners and funding
- 3 years to implement enhancements

DOWNINGTOWN BOROUGH

DB 4

Project Name

Downingtown Gateway Enhancements

Key Partners

Chester County, DCNR, DCED, PECO Green Region, local businesses, Downingtown Historical Society

Project Focus and Location

To institute improvements to the downtown area that will attract Struble Trail and Chester Valley Trail users to visit Downingtown.

- Lighted trails and walkways from Kerr Park to Johnsontown Park
- Signage directing visitors to the BCG
- Bicycle racks on Lancaster Avenue from Downingtown Train Station to Green Street.
- Signage directing visitors to greenway attractions and facilities
- Historic plaques for buildings and historic places
- Short term need

Accomplishments to Date

- Trail from Kerr Park to Johnsontown Park in place
- Consistent with comprehensive plan

Next Steps

- Assemble partners and funding
- Prepare design prototypes for lighting, signage, bike racks, historic plaques
- 3 years to implement

DOWNINGTOWN BOROUGH

DB 5

Project Name

Pennsylvania Avenue Bike Route

Key Partners

Chester County, DCNR, PennDOT, local businesses

Project Focus and Location

To provide an alternative bike route along Pennsylvania Avenue from Lloyd Avenue and the Beaver Creek Elementary School to the Kerr Park Gazebo

- 7,178 linear feet
- Alternative route for bicycles and pedestrians
- Share the road for bikes
- Line striping and signage
- Sidewalks for pedestrians
- Short term need

Accomplishments to Date

- \$14,000 local match in hand
- Sidewalks in place
- Recommendation in the Central Chester County Bicycle & Pedestrian Circulation Plan, 2013
- Consistent with comprehensive plan

Next Steps

- Assemble partners and funding
- Prepare design and engineering
- Conference with PennDOT
- 3 years to design and construct

Brandywine Creek Greenway Functions Checklist

EAST BRADFORD TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	
	Foster outdoor education and school access to open space	✓
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	✓
	Preserve productive agricultural lands	✓
	Protect state- and municipally-designated scenic resources	
	Preserve nationally and municipally-designated historic structures and districts	

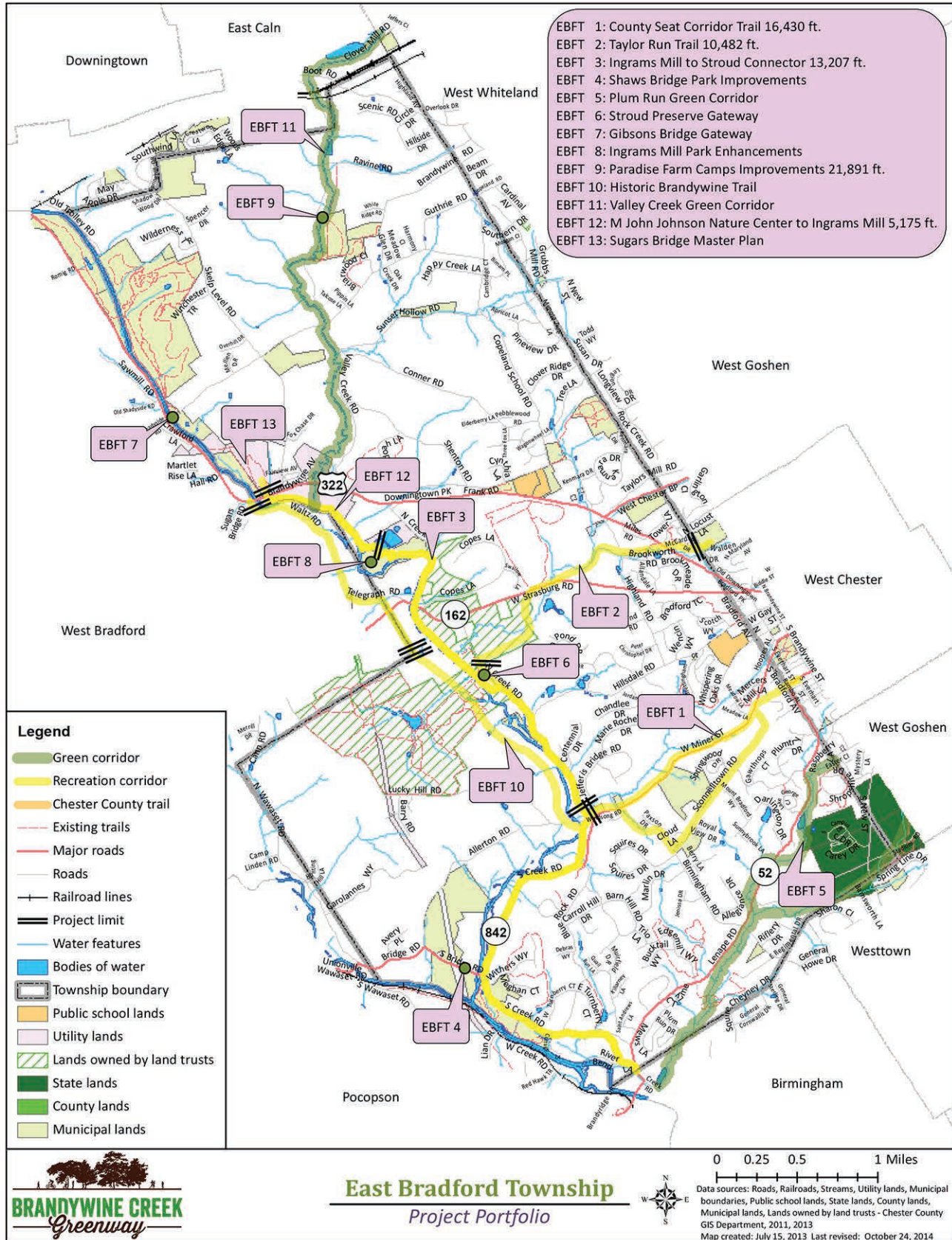
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

EAST BRADFORD TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 7/18/13

Zoning Adopted: 6/19/07 Zoning Last Amended: 3/12/13	SLDO Adopted: 6/07 SLDO Last Amended: 9/19/11
RESOURCES AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Somewhat Protected	
<ul style="list-style-type: none"> • ZO 115-6: Defines 20%+ slopes as “Steep,” and 30%+ slopes as “prohibitive.” 7/18/13 • ZO 115-43.C: Establishes a Steep Slope Conservation District” of 20%+, within which disturbance must be minimized. 7/18/13 	
2. Woodlands Protection: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 115-45.B: Limits disturbance to no more than 20% of any existing tree mass, tree line, or hedgerow. Individual trees of 6 in. DBH+ cannot be disturbed without compensatory planting. 7/18/13 	
3. Wetlands: Somewhat Protected	
<ul style="list-style-type: none"> • ZO 115-45.3.C: See Riparian Buffers. 	
4. Riparian Buffers: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 115-45.3.C: Establishes a Riparian Buffer Area Conservation District that includes: 100 feet beyond the edge of most water bodies; all floodplain along with 50 feet of adjacent land; and wetlands of 20,000 square feet plus an additional 50 feet of adjacent land, with specific exceptions. The district is divided into two areas. “Area 1” is 25 feet beyond water bodies or wetlands, and includes any contiguous slopes of 15%+.” “Area 2” is the remainder of the district. • ZO 115-45.3.D: Area 1 limits uses to low impact and public infrastructure. Area 2 limits disturbance to agriculture, low impact uses and public infrastructure. 	
5. Floodplain: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 115.42.D: Establishes a Floodplain District including the floodway, floodway fringe, and 100-year floodplain. Permitted uses are limited to agriculture, recreation and infrastructure. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • Steep Slopes: Include maximum disturbance limitations of 30% for areas with slopes of 15 to 25%. Include maximum disturbance limitations of 15% for areas with slopes greater than 25%. Also consider adding steep slope regulations that include: 1.) a description of the slope measuring method; 2.) a listing of specific activities or uses prohibited on steep slopes; and 3.) standards that provide additional guidance for minimizing the disturbance, grading, and erosion of steep slopes. • Wetlands: Include regulations which establish specific wetlands identification and delineation criteria. Add regulations which prohibit the disturbance of a wetland except with state and federal permits. Lastly, consider adding regulations that establish a 50-foot wide margin around all wetlands. Within this 50-foot margin, land disturbance would be limited or prohibited. 	



EAST BRADFORD TOWNSHIP

EBFT 1

Project Name

County Seat Corridor Trail

Key Partners

Chester County, West Chester Borough, HOAs, landowners, PennDOT, DVRPC, DCED, YMCA, NALT, DCNR, health care community, businesses, volunteers

Project Focus and Location

To design and construct pedestrian and bicycle facilities that would link from Price Street in West Chester Borough to the Brandywine Trail via Route 842 and/or Sconelltown Road.

- 16,430 linear feet
- Portions share the road for bicycles
- Most direct link from West Chester Borough to the greenway system
- Long term need to be implemented once the Brandywine Trail is complete (see EBFT-10).

Accomplishments to Date

- Feasibility Study completed for portions along Sconelltown Road
- Acquired Mount Bradford Preserve
- Widened Price Street to create wider shoulders for walking/cycling
- Installed share the road signs on Price Street

Next Steps

- Feasibility Study
- Design and engineering
- Secure funding and grants
- 3 years for design/engineering
- 3-6 years implementation

EAST BRADFORD TOWNSHIP

EBFT 2

Project Name

Taylor Run Trail

Key Partners

Chester County, West Chester Borough, HOAs, landowners, Natural Lands Trust, YMCA, health care community, businesses, volunteers

Project Focus and Location

To design and construct a hiking trail that follows Taylor Run from Hoopes Park in West Chester Borough to trails in the Stroud Preserve.

- 10,482 linear feet
- PennDOT road crossings
- Easement/fee acquisitions
- Off road trail for hikers
- Natural surface trail
- Scenic trail that follows a small stream
- Requires several stream crossings
- Long term need

Accomplishments to Date

- Portions owned by Natural Lands Trust
- Portions owned by landowners of Singer Farm
- Portions owned by HOAs
- Shown as future trail routes in the Comprehensive Plan

Next Steps

- Discuss opportunities with landowners and HOAs
- Feasibility Study
- Design and engineering
- Secure funding and grants
- S3 years for design/engineering
- S3-6 years implementation

EAST BRADFORD TOWNSHIP

EBFT 3

Project Name

Ingrams Mill to Stroud Connector

Key Partners

Chester County, West Chester Borough, HOAs, landowners, Natural Lands Trust, PennDOT, DVRPC, YMCA, NLT, AquaPA, health care community, businesses, volunteers

Project Focus and Location

To design and install a hiking trail that would connect trails at Ingrams Mill to the Brandywine Trail at Route 842.

- 13,207 linear feet
- Natural surface trail
- Route 162 road crossing
- Taylor Run creek crossing
- Improvements in stream for fish habitat and erosion control
- Short term need

Accomplishments to Date

- Sections of trail are in place
- Negotiations with HOA underway
- Discussions with Natural Lands Trust underway
- Shown as future trail route in the Comprehensive Plan

Next Steps

- Discuss opportunities with landowners and HOAs
- Feasibility Study for trail and improvements at Taylor Run
- Design and engineering
- Secure funding and grants
- 1 year for design/engineering
- 2 years implementation

EAST BRADFORD TOWNSHIP

EBFT 4

Project Name

Shaws Bridge Park Improvements

Key Partners

Chester County, NALT, LWCF, DCNR, volunteers, businesses

Project Focus and Location

To provide additional facilities for visitors to Shaws Bridge Park and the park expansion on the west side of the Brandywine.

- Parking lot on west side of the Brandywine
- Creek access
- Dog park with fenced in area adjacent to the creek
- Signage
- Seating
- Picnic tables
- Waste receptacles
- Landscaping
- Short term need

Accomplishments to Date

- Township owns the land
- Shaw's Park Dog Group of supporters and users
- Support from Park and Recreation
- Support from Board of Supervisors

Next Steps

- Design and engineering
- Secure funding and grants
- 1 year for design/engineering
- 1 year implementation

EAST BRADFORD TOWNSHIP

EBFT 5

Project Name

Plum Run Green Corridor

Key Partners

Brandywine Conservancy, Natural Lands Trust, Brandywine Valley Association, DCNR, Chester County WRA, DEP, NLT, WCU, landowners

Project Focus and Location

To conserve natural areas and enhance water quality along the Plum Run Minor Corridor.

- Reforestation
- Riparian Buffer restoration
- Restoration of erosion-prone areas
- Stormwater BMPs
- Interpretive signage
- Promote best land management practices
- Footpath from the Brandywine Creek to the WCU campus parking area and Gordon Natural Area (GNA)
- Ongoing need

Accomplishments to Date

- Reforestation projects by Brandywine Valley Association
- Stream bank stabilization projects underway
- Available parking adjoins the Gordon Natural Area at the head of the trail
- On the west side of South New Street and south of Tigue Road near Plum Run, a recreational trail has been created by West Chester University on the western section of the GNA. This could be considered the beginning of the Plum Run Trail.

Next Steps

- Plum Run Trail Feasibility Study
- Explore opportunities for reforestation
- Engage partners
- Pursue funding
- 3-15 years and ongoing

EAST BRADFORD TOWNSHIP

EBFT 6

Project Name

Stroud Preserve Gateway

Key Partners

Natural Lands Trust, Brandywine Conservancy

Project Focus and Location

To provide additional amenities for those who access the greenway through the Stroud Preserve gateway.

- Water access
- Interpretive signage
- Seating
- Information kiosk and orientation maps
- Gateway interpretive kiosk
- Intermediate need

Accomplishments to Date

– Public parking facilities and trails are in place

Next Steps

- Begin a dialogue with NLT and BC regarding opportunities for new facilities
- 2 years to obtain approvals
- 2 years to implement

EAST BRADFORD TOWNSHIP

EBFT 7

Project Name

Gibsons Bridge Gateway

Key Partners

NALT, Chester County, PECO Green Region, volunteers, local businesses, scouts

Project Focus and Location

To provide additional facilities for those who access the greenway via the Gibsons Bridge Gateway.

- Portable toilets
- Directional signage
- Historic plaque for bridge and historic trolley line
- Seating near kiosk looking away from the trail
- Gateway interpretive kiosk
- Intermediate need

Accomplishments to Date

- Parking area exists and functions as a gateway to the greenway
- Supported in concept by Parks and Recreation and the Board of Supervisors

Next Steps

- Signage design
- Historic plaque design
- Secure funding
- Recruit volunteers
- 1 year to design
- 1 year to implement

EAST BRADFORD TOWNSHIP

EBFT 8

Project Name

Ingrams Mill Park Enhancements

Key Partners

DCNR, PA Fish and Boat, DEP, NLT, AquaPA, Chester County Parks and Recreation, volunteers, businesses, scouts

Project Focus and Location

To enhance the park visitor experience by providing better creek access and facilities for recreational fishing.

- Future trail head
- Interpretive signage at fish habitat improvement areas
- Fishing pier, handicap accessible
- Fish cleaning station
- Directional signage from parking area
- Picnic tables and seating
- Short term need

Accomplishments to Date

- Fish habitat improvements completed with assistance from PA Fish and Boat Commission
- Parking area in place

Next Steps

- Signage design
- Design of cleaning station and fishing pier
- Secure funding
- Recruit eagle scouts for picnic tables
- Design and engineer and permitting for fishing pier
- 2 years to design and engineer
- 3 years to implement fishing pier

EAST BRADFORD TOWNSHIP

EBFT 9

Project Name

Paradise Farm Camps Improvements

Key Partners

Children's Country Week Association, DCED, Natural Lands Trust, Chester County, DCNR

Project Focus and Location

To enhance the greenway visitor experience at Paradise Farm Camps.

- 21,891 linear feet
- Expanded trail network
- Interpretive signage and/or trailhead kiosk
- Reforestation of open areas
- Stream bank restoration
- Seating and bicycle racks
- Picnic areas
- Outdoor amphitheater
- Public parking
- Drinking water
- Creek access
- Orientation maps and greenway guides
- Long term need

Accomplishments to Date

- Negotiations underway to connect trails at Harmony Hill Nature Area at Skelp Level Road
- Future trails shown in Comprehensive Plan Trails Map 7-1

Next Steps

- Continue dialogue and coordination with CCW representative
- Ongoing timeline

EAST BRADFORD TOWNSHIP

EBFT 10

Project Name

Historic Brandywine Trail

Key Partners

Chester County Planning Commission, Brandywine Conservancy, DCNR, CCTC, private landowners

Project Focus and Location

To permanently protect the Brandywine Trail as a historic footpath.

- Cultivate trail easements with landowners from Stroud Preserve to Delacey Fields
- Re-route the existing trail that follows roadways to the banks of the Brandywine
- Short term need

Accomplishments to Date

- The trail currently exists although in most places follows roadways
- Shown as a planned trail in Comprehensive Plan Trails Map 7-1.

Next Steps

- Work with landowners to cultivate and dedicate trail easements to East Bradford Township
- Feasibility Study
- Secure funding to purchase easements and implement the trail
- Apply for grants to match local funding
- 3 years to complete the feasibility study

EAST BRADFORD TOWNSHIP

EBFT 11

Project Name

Valley Creek Green Corridor

Key Partners

Brandywine Conservancy, Natural Lands Trust, Brandywine Valley Association, DCNR, Chester County WRA, DEP, NALT, landowners, Children's Country Week Association

Project Focus and Location

To conserve natural areas and enhance water quality along the Valley Creek Minor Corridor.

- Reforestation
- Riparian Buffer restoration
- Restoration of erosion-prone areas
- Interpretive signage
- Promote best land management practices
- Ongoing need

Accomplishments to Date

- Significant areas in protected open space including:
- Portions owned by East Bradford Township
- Portions owned by Children's Country Week Association

Next Steps

- Identify priority projects
- Engage partners
- Pursue funding
- 3-15 years and ongoing

EAST BRADFORD TOWNSHIP

EBFT 12

Project Name

M. John Johnson Nature Center to Ingrams Mill Connector

Key Partners

Chester County, landowners, PennDOT, PECO, DVRPC, YMCA, NLT, AquaPA, health care community, businesses, volunteers

Project Focus and Location

To design and implement a hiking trail connection between West Valley Nature Area and Ingrams Mill along the banks of the Brandywine.

- 5,175 linear feet
- Natural surface footpath
- Beginning at the West Valley Nature Area parking lot
- Ending at the Ingrams Mill Nature Area parking lot
- Footbridge over Valley Creek south of Route 322
- Short term need

Accomplishments to Date

- Portions with an existing trail easement, not formally open
- Negotiations underway with PECO
- Shown as a planned trail in Comprehensive Plan Trails Map 7-1

Next Steps

- Feasibility study
- Design and engineering
- Engage partners
- Pursue funding
- 2 years feasibility study
- 3 years to implement

EAST BRADFORD TOWNSHIP

EBFT 13

Project Name

Sugars Bridge Master Plan

Key Partners

Chester County, DCNR, NALT, business community, scouts, volunteers

Project Focus and Location

To prepare a Master Plan for improvements to the Sugar's Bridge Nature Area.

- Restoration of the stream to its natural course
- seating
- trails
- additional parking
- stream crossings
- signage
- information kiosks
- connections to the Brandywine Trail
- Long term need

Accomplishments to Date

- Park owned by East Bradford Township
- Shown with planned trails on Comprehensive Plan Trails Map 7-1

Next Steps

- Master plan and cost estimate
- Secure funding and grants
- 3 years to complete master plan
- 3-6 years to implement recommendations

Brandywine Creek Greenway Functions Checklist

EAST BRANDYWINE TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	✓
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	✓
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	✓
	Preserve nationally and municipally-designated historic structures and districts	✓

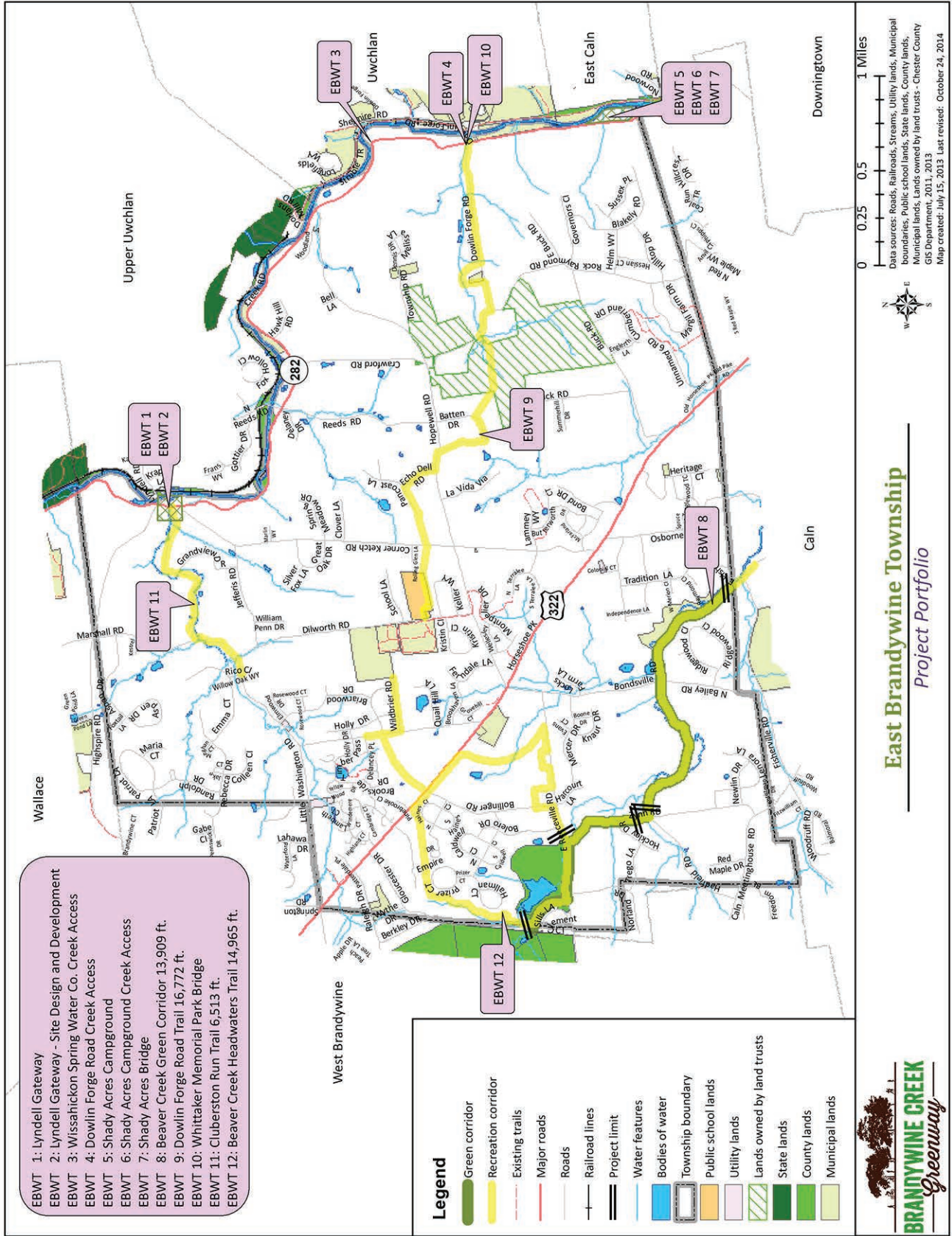
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

EAST BRANDYWINE TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 8/8/13

Zoning Adopted: 6/03 Zoning Last Amended: 4/20/11	SLDO Adopted: 6/1/03 SLDO Last Amended: 1/3/11
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> • ZO 399-14.C: Establishes a “Steep Slope Conservation District” of 20%+ slopes. • ZO 399-14.D: Restricts land uses to parks, forestry, driveways, access roads, and accessory uses (but not swimming pools). 25%+ slopes shall not be disturbed. 	
2. Woodlands Protection: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 399-17.A: Up to 25% of woodland may be disturbed, with specific exceptions. • SLDO 350-53.C: Reiterates ZO 399-17.A. 	
3. Wetlands: Rigorously Protected*	
<ul style="list-style-type: none"> • ZO 399-15.B: Wetlands shall only be disturbed as permitted by state and federal permits, 	
4. Riparian Buffers: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 399-13.1.B: Establishes a “Riparian Corridor Conservation District,” (RCCP) extending out 75 feet from a water course, or to the 100-year floodplain, whichever is greater; and 25 feet from a wetland of 10,000 square feet=, or a pond of 5,000 square feet • ZO 399-3.1.C: Limits land use within the RCCD. 	
5. Floodplain: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 399-13.C: Defines the “Floodplain District” as “Floodway,” “Floodway,” “Flood Fringe” and “Approximate Floodplain.” • ZO 399.3.1.E: Limits land use to agriculture, forestry, recreation, preserves, wells, and dams. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • None: All evaluated standard provide rigorous resource protection. • Notes:* Regarding wetlands, consider adding regulations that establish a 50-foot wide margin around all wetlands. Within this 50-foot margin, land disturbance would be limited or prohibited. 	



EAST BRANDYWINE TOWNSHIP

EBWT 1

Project Name

Lyndell Gateway—fee interest

Key Partners

Chester County Parks and Recreation, Brandywine Conservancy, DCNR

Project Focus and Location

To acquire fee interest in property at Highspire Rd. and Creek Rd. in Lyndell.

- The property will be made available for public use
- Tasks include: discussions with land owner(s); obtaining an appraisal; dedicating municipal funds; applying for county and state grants; closing costs
- A place to park and enter Marsh Creek State Park and Struble Trail systems for cyclists, walkers, handicap accessible. Facilities will include trailhead kiosk, public parking, interpretive signage, orientation maps, bicycle parking, picnic facilities, drinking water, seating
- Long term need that corresponds with the extension of the North Struble Trail

Accomplishments to Date

– Informal discussions within the Township Open Space Committee and Planning Commission

Next Steps

- Lobby for political support
- Pursue funding
- 1 year project after funding is secured

EAST BRANDYWINE TOWNSHIP

EBWT 2

Project Name

Lyndell Gateway—site design and development

Key Partners

Chester County Parks and Recreation, DCNR

Project Focus and Location

To design and construct the Lyndell Gateway.

- Master plan; design; implementation
- Facilities will include trailhead kiosk; public parking; interpretive signage; orientation maps; drinking water, bicycle parking, horse hitching; picnic facilities, seating, creek access at Culbertson Run
- A place to park and enter the greenway for cyclists, walkers, handicap accessible.
A place to rest and to hitch and water your horse
- Gateway kiosk
- Long term need that corresponds with the extension of the North Struble Trail

Accomplishments to Date

– Informal discussions within the Township Open Space Committee and Planning Commission

Next Steps

- Conceptual Master Plan
- Site Design and Construction
- 3 years from acquisition to design and implement

EAST BRANDYWINE TOWNSHIP

EBWT 3

Project Name

Wissahickon Spring Water Co. Creek Access

Key Partners

Chester County Parks and Recreation, Brandywine Conservancy, DCNR

Project Focus and Location

To design and implement creek access for recreational boating at the former Wissahickon Spring Water Company property near Reeds Road.

- The property will be made available for boaters and fishing, picnicking
- Facilities will include: public parking; interpretive signage; orientation maps; drinking water, bicycle parking, horse hitching; picnic facilities, seating, canoe/kayak access to the Brandywine
- Tasks include: concept plan; site design; engineering; construction
- A place to park and enter Marsh Creek State Park and Struble Trail systems for cyclists, walkers, handicap accessible
- Short term need that corresponds with the township acquiring fee interest in the property

Accomplishments to Date

- Informal discussions among the Township Boards and Commissions

Next Steps

- Pursue funding
- 5 year project after funding is secured

EAST BRANDYWINE TOWNSHIP

EBWT 4

Project Name

Dowlin Forge Road Creek Access

Key Partners

Chester County Parks and Recreation, Brandywine Conservancy, DCNR

Project Focus and Location

To design and implement creek access for recreational boating

- The property will be made available for boaters and fishing, picnicking, walking
- Facilities will include: public parking; interpretive signage; orientation maps; bicycle parking; horse hitching; picnic facilities, seating, canoe/kayak access to the Brandywine.
- Tasks include: concept plan; site design; engineering; construction
- See also EBWT-10 Whittaker Memorial Park Bridge over the Brandywine which will provide access to the Struble Trail for walkers, cyclists, handicap accessible
- Short term need that corresponds with the township acquiring funds

Accomplishments to Date

- Township has acquired property at this location
- Reforestation and trail alignment completed

Next Steps

- Conceptual Design
- Pursue funding
- 3 year project after funding is secured

EAST BRANDYWINE TOWNSHIP

EBWT 5

Project Name

Shady Acres Campground Fee Interest

Key Partners

Chester County Parks and Recreation, Brandywine Conservancy, DCNR

Project Focus and Location

To acquire fee interest in Shady Acres Campground on Route 282 south of Dowling Forge Road

- The property will be made available for public use
- Tasks include: working with the land owner(s); obtaining an appraisal; dedicating municipal funds; applying for county and state grants; closing costs
- Addresses Recreation Goal 3/3 and 3/4
- A place to park and access the Brandywine for boating, fishing, picnicking, handicap accessible
- Short term need

Accomplishments to Date

– Informal discussions within the landowner and municipal representatives

Next Steps

- Continue negotiations
- Commitment with municipal funding
- 1 year project after negotiated agreement

EAST BRANDYWINE TOWNSHIP

EBWT 6

Project Name

Shady Acres Campground Creek Access

Key Partners

Chester County Parks and Recreation, Brandywine Conservancy, DCNR

Project Focus and Location

To make improvements to Shady Acres Campground

- The property will be made available for boaters, walkers, picnicking, fishing, and potential access to the Struble Trail
- Facilities to include parking, interpretive signage, canoe/kayak launch, fishing area, fish cleaning station, parking for cars and trailers, seating, picnic areas, creek-side viewing areas
- Tasks include: conceptual master plan; design; engineering; construction of improvements
- Addresses Recreation Goal 3/3 and 3/4, Culture Goal 5/1 and 5/2, Education Goal 7/2, and Economic Goal 8/1
- A resting place to park a car or bicycle, drinking water, handicap accessible
- Short term need

Accomplishments to Date

– Informal discussions among municipal Boards and Commissions

Next Steps

- Acquire fee interest
- Pursue funding for conceptual master plan
- 5 year project after funding is secured

EAST BRANDYWINE TOWNSHIP

EBWT 7

Project Name

Shady Acres Bridge

Key Partners

Chester County Parks and Recreation, Brandywine Conservancy, DCNR

Project Focus and Location

To construct a pedestrian bridge across the Brandywine at Shady Acres

- The bridge would connect the Shady Acres Campground parking and other recreational facilities to the Struble Trail on the eastern side of the Brandywine
- Tasks include: design; engineering; construction
- Addresses Transportation Goal 1 objective 1, Recreation Goal 3 objectives 3 and 4, Culture Goal 5 objective 2, and Economic Goal 8 objective 1
- Long term need after establishment of Shady Acres

Accomplishments to Date

– Municipal representatives have engaged in informal discussions with potential funders

Next Steps

- Acquire fee interest of Shady Acres
- Pursue funding
- 2 year project after funding is secured

EAST BRANDYWINE TOWNSHIP

EBWT 8

Project Name

Beaver Creek Green Corridor

Key Partners

Chester County Parks and Recreation, Brandywine Conservancy, DCNR

Project Focus and Location

To establish a conservation corridor along Beaver Creek as it follows Hadfield Road and Bondsville Road.

- Natural surface footpath to be explored
- Conservation easements
- Riparian buffer restoration
- Invasive vegetation management
- Land and water stewardship BMPs
- Stormwater BMPs
- Agricultural BMPs
- Fish habitat restoration
- Stream bank stabilization
- Ongoing need

Accomplishments to Date

- Portions in Coatesville Country Club
- Portions privately owned or eased by land trusts
- Portions owned or eased by land trust

Next Steps

- Inventory existing resources
- Identify opportunities for conservation and preservation

EAST BRANDYWINE TOWNSHIP

EBWT 9

Project Name

Dowlin Forge Road Trail

Key Partners

Chester County Parks and Recreation, Brandywine Conservancy, Morrison property, DCNR, PennDOT

Project Focus and Location

To establish an off-road multi-use trail from East Brandywine Community Park to the Whittaker Memorial Park and Dowling Forge Road Creek Access

- The trail will connect to a pedestrian bridge across the Brandywine and the Struble Trail in Uwchlan Township
- Part of an east-west trail link between Marsh Creek State Park and Hibernia County Park
- Tasks include: feasibility study; design; engineering; construction
- Addresses Transportation Goal 1 objective 1, Recreation Goal 3 objectives 3 and 4, Culture Goal 5 objective 2, Economic Goal 8 objective 1
- Short term need to connect residential areas to municipal lands on the Brandywine at Dowlin Forge Road

Accomplishments to Date

- This trail is shown on the EBWT Official Map
- Some trail easements have been acquired by the Township
- Feasibility Study started in 2014

Next Steps

- Complete Feasibility Study
- Pursue funding
- 5-20 year project

EAST BRANDYWINE TOWNSHIP

EBWT 10

Project Name

Whittaker Memorial Park Bridge

Key Partners

Chester County Parks and Recreation, Brandywine Conservancy, DCNR, PennDOT

Project Focus and Location

To construct a pedestrian bridge across the Brandywine at Whittaker Memorial Park

- The bridge would connect the Whittaker Memorial Park and the Dowlin Forge Road Trail to the Struble Trail on the eastern side of the Brandywine
- Tasks include: design; engineering; construction
- Addresses Transportation Goal 1 objective 1, Recreation Goal 3 objectives 3 and 4, Culture Goal 5 objective 2, Economic Goal 8 objective 1
- Long term need after establishment of Whittaker Memorial Park

Accomplishments to Date

– Municipal representatives and private individuals have engaged in informal discussions with potential funders

Next Steps

- Feasibility Study
- Pursue funding
- 5 year project

EAST BRANDYWINE TOWNSHIP

EBWT 11

Project Name

Culbertson Run Trail

Key Partners

Chester County Parks and Recreation, Brandywine Conservancy, DCNR, PennDOT

Project Focus and Location

To construct a multi-use trail that would connect Lyndell Road Gateway to Hideaway Farms and the Southdown Homes subdivision trails

- Tasks include: feasibility study; design; engineering; construction
- Addresses Transportation Goal 1 objective 1, Recreation Goal 3 objectives 3 and 4, Culture Goal 5 objective 2, Economic Goal 8 objective 1
- Long term need after establishment of Lyndell Road Gateway

Accomplishments to Date

– Introduced to municipal representatives in the Concept Plan for the Brandywine Creek Greenway, 2012

Next Steps

- Feasibility Study
- Pursue funding
- 5 year project

EAST BRANDYWINE TOWNSHIP

EBWT 12

Project Name

Beaver Creek Headwaters Trail

Key Partners

East Brandywine Township, Chester County Parks and Recreation, Brandywine Conservancy, DCNR

Project Focus and Location

To construct a pedestrian and bicycle loop trail that would connect the Applecross neighborhood and Guthriesville to the Beaver Creek Green Corridor.

- Tasks include: feasibility study; design; engineering; construction
- Addresses Transportation Goal 1 objective 1, Recreation Goal 3 objectives 3 and 4, Culture Goal 5 objective 2, Economic Goal 8 objective 1
- Long term need after establishment of the Beaver Creek Green Corridor trail

Accomplishments to Date

- Introduced to municipal representatives in the Concept Plan for the Brandywine Creek Greenway, 2012

Next Steps

- Feasibility Study
- Pursue funding
- 5 year project

Brandywine Creek Greenway Functions Checklist

EAST CALN TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	✓
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	
	Foster outdoor education and school access to open space	
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	✓
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	
	Preserve nationally and municipally-designated historic structures and districts	

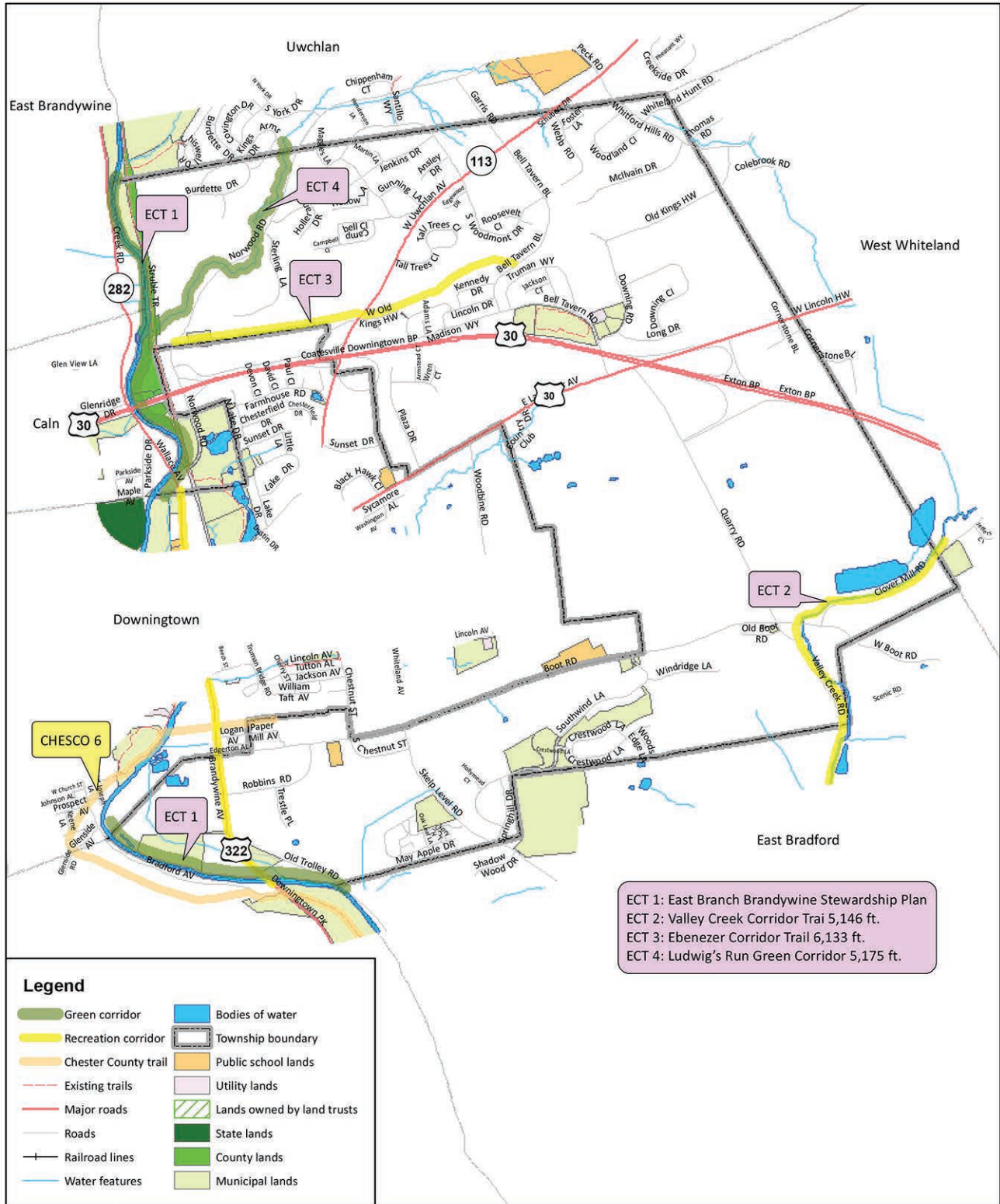
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

EAST CALN TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 8/13/13

Zoning Adopted: 1/15/06 Zoning Last Amended: 12/7/11	SLDO Adopted: 1/15/06 SLDO Last Amended: None
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> • ZO 225-23: Defines “moderately steep slopes” as 15 to 25%, and “steep slopes” as 25%+. • ZO 225-23.E: The area which is disturbed shall not exceed 50% of moderately steep slopes within a property, up to a maximum disturbance of 10 acres of moderately steep slopes. The area which is disturbed shall not exceed 25% of steep slopes within a property, up to a maximum disturbance of 5 acres of moderately steep slopes. 	
2. Woodlands Protection: Somewhat Protected	
<ul style="list-style-type: none"> • SLDO 185-40.B: Up to 75% of all trees 6 inches in caliper (measured 12 inches above the ground) may be disturbed. 	
3. Wetlands: Not Protected	
<ul style="list-style-type: none"> • None. 	
4. Riparian Buffers: Not Protected	
<ul style="list-style-type: none"> • None. 	
5. Floodplain: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 225-24B: Establishes a “Floodplain Conservation District” that consists of areas subject to 100-year flood, Floodway District, Flood Fringe District, and General Floodplain District. • ZO 225.24C: Limits land use to agriculture, preserves, forestry, recreation, and pervious parking, with specific exceptions. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • Woodlands: Include regulations that limit disturbance of a woodlands to a maximum of 50%. Such regulations would establish a definition for “woodland” that is defined in a measurable way, such as a definition that is based on the number of trees within a wooded area that have grown to a specific diameter at breast height (dbh). Also, consider adding forestry regulations that: 1.) include exceptions for forestry or timber harvesting, as set forth in the MPC, and 2.) require a timber harvesting plan. Lastly, consider adding tree protection regulations that: 1.) include measures that protect the trees remaining on a construction site from construction activities that could be damaging to trees; 2.) prohibit disturbing specimen trees and PNDI sites unless there is no feasible alternative; and 3.) call for tree replacement if more than a specified area or number of trees are removed. • Wetlands: Include regulations which establish specific wetlands identification and delineation criteria. Add regulations which prohibit the disturbance of a wetland except with state and federal permits. Lastly, consider adding regulations that establish a 50-foot wide margin around all wetlands. Within this 50-foot margin, land disturbance would be limited or prohibited. • Riparian Buffers: Include regulations that establish a riparian buffer which extends 75 to 100 feet from both sides of the stream bank. Also, consider adding requirements that 1.) call for the re-vegetation of un-forested riparian buffers, and 2.) establish a two-tiered riparian buffer with stricter standards applied adjacent to streams. This two-tiered buffer would include a 25-35 foot-wide inner buffer in which disturbance is prohibited, and a 50 to 65 foot-wide outer buffer in which a maximum disturbance limit of 20% is allowed. 	



ECT 1: East Branch Brandywine Stewardship Plan
 ECT 2: Valley Creek Corridor Trail 5,146 ft.
 ECT 3: Ebenezer Corridor Trail 6,133 ft.
 ECT 4: Ludwig's Run Green Corridor 5,175 ft.

Legend

- Green corridor
- Recreation corridor
- Chester County trail
- Existing trails
- Major roads
- Roads
- Railroad lines
- Water features
- Bodies of water
- Township boundary
- Public school lands
- Utility lands
- Lands owned by land trusts
- State lands
- County lands
- Municipal lands



East Caln Township
 Project Portfolio



0 0.125 0.25 0.5 Miles

Data sources: Roads, Railroads, Streams, Utility lands, Municipal boundaries, Public school lands, State lands, County lands, Municipal lands, Lands owned by land trusts - Chester County GIS Department, 2011, 2013
 Map created: July 15, 2013 Last revised: October 24, 2014

EAST CALN TOWNSHIP

ECT 1

Project Name

East Branch Brandywine Stewardship Plan

Key Partners

DCNR, Brandywine Conservancy, Trout Unlimited, area schools, volunteers, Brandywine Valley Association, DCNR, DEP, DCED, Water Resources Authority, PECO

Project Focus and Location

To prepare a stewardship plan for County and municipal land that front on the Brandywine Creek

- Restore native habitats
- Vegetation management
- Manage visitor usage of the Struble Trail
- Reforestation opportunities
- Wetland protection
- Interpretive signage
- Stream bank restoration
- Fish habitat construction
- Short term need and ongoing

Accomplishments to Date

- Large sections of creek frontage are owned by Chester County or East Caln Township
- Consistent with the Upper East Branch Watershed Restoration Plan

Next Steps

- Assemble partners and secure funding
- Issue an RFP to prepare a stewardship plan

EAST CALN TOWNSHIP

ECT 2

Project Name

Valley Creek Corridor Trail

Key Partners

East Bradford Township, Downingtown Quarry, Hanson Aggregates, landowners, DCNR, DEP

Project Focus and Location

To promote the conservation and connection of open space along the Valley Creek corridor at Clover Mill Road and Valley Creek Road.

- Conservation easements
- Riparian buffer restoration
- Reforestation
- Land and water stewardship BMPs
- Proposed future bike route along Valley Creek Road
- Connect into the East Bradford Township trails at Paradise Valley Nature Area
- Long term need

Accomplishments to Date

- Shown as a future bicycle route in East Bradford Township comprehensive plan
- East Caln Township comprehensive plan recommendation to explore trail linkages with adjacent municipalities

Next Steps

- Assemble partners and funding for trail feasibility study
- Explore opportunities for preservation, reforestation and BMPs
- 3 years for feasibility study and 3 years to implement
- Preservation and best management practices ongoing

EAST CALN TOWNSHIP

ECT 3

Project Name

Ebenezer Corridor Trail

Key Partners

Chester County, PennDOT, PECO, DCNR, proposed Williams Pipeline, landowners

Project Focus and Location

To establish a pedestrian and bicycle route from Bell Tavern Park to the Struble Trail.

- Sidewalks and roadways exist along most of the route
- Signage and sidewalk infill
- Striping for bike lanes
- Major surface crossing at Route 113
- Explore off-road alternatives through undeveloped areas
- Serves densely populated area of the township
- Possible future connection to East Brandywine Township via Shady Acres Campground bridge over the Brandywine
- Short term need

Accomplishments to Date

– East Caln Township comprehensive plan recommendation to explore trail linkages with adjacent municipalities

Next Steps

- Assemble partners and funding for trail feasibility study
- 3 years for feasibility study and 3 years to implement

EAST CALN TOWNSHIP

ECT 4

Project Name

Ludwig's Run Green Corridor

Key Partners

Uwchlan Township, Chester County, PennDOT, DEP, DCNR, HOAs, land trusts, landowners

Project Focus and Location

To promote the conservation and preservation of water quality along Ludwig's Run from the Struble Trail to Williamsburg Road in Uwchlan Township.

- Conservation easements
- Riparian buffer restoration
- Invasive vegetation management
- Land and water stewardship BMPs
- Fish habitat restoration
- Stream bank stabilization
- Ongoing need

Accomplishments to Date

- Existing footpath
- Largely forested
- Parallels Norwood Road/highly visible
- Portions owned by HOAs
- Portions protected by conservation easement
- Portions owned by land trust

Next Steps

- Inventory existing resources
- Identify opportunities for conservation and preservation

Brandywine Creek Greenway Functions Checklist

EAST FALLOWFIELD TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	✓
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	✓
	Protect state- and municipally-designated scenic resources	✓
	Preserve nationally and municipally-designated historic structures and districts	

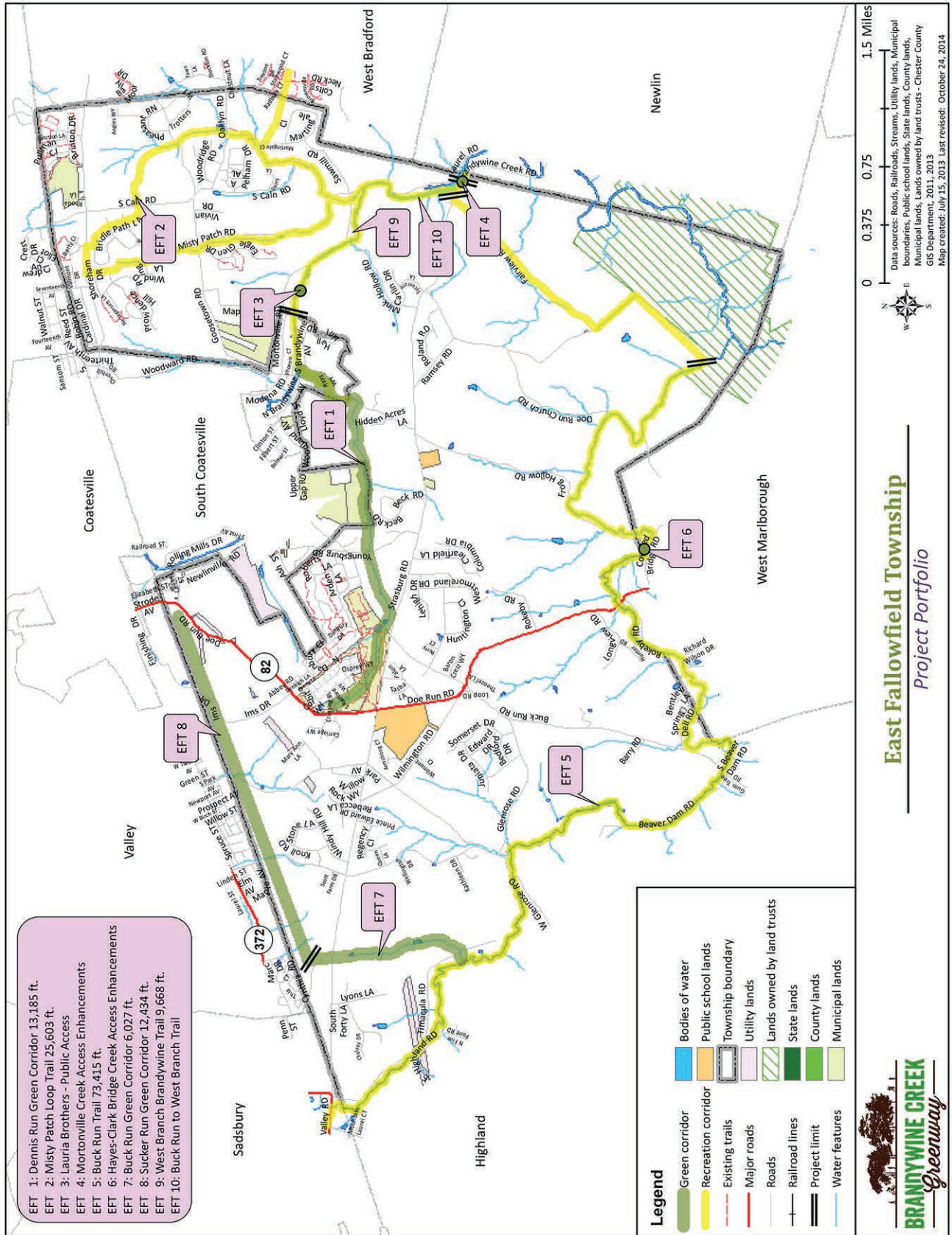
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

EAST FALLOWFIELD TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 8/13/13

Zoning Adopted: 3/23/10 Zoning Last Amended: 8/13/09	SLDO Adopted: Not Applicable SLDO Last Amended: None
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> • ZO 27-1402.3: Defines “moderately steep slopes as 15 to 25%, and “very steep slopes as 25%+. Up to 30% of moderately steep slopes may be disturbed. Up to 15% of very steep slopes may be disturbed. Limits land uses to forestry and driveways, with specific exceptions. 	
2. Woodlands Protection: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 27-1402.7: Except for timbering, up to 35% of woodlands may be disturbed for residential uses and up to 50% of woodlands for non-residential uses. 	
3. Wetlands: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 1402.4: Wetlands may be disturbed only after state and federal permits have been obtained. • ZO 1402.5: Wetland margins extend out 25 feet, or to the extent of hydric soils up to 100 feet from wetlands. Up to 20% of wetland margins can be disturbed. 	
4. Riparian Buffers: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 1402.6: Established 2 zones, in which land use is limited to regulated activities, trails, and vegetation management. Zone 1 extends out 35 feet from any watercourse, and includes all adjoining very steep slopes. Zone 2 extends out 45 feet For Zone 1, land use is heavily restricted. For Zone 2, up to 20% may be disturbed. 	
5. Floodplain: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 27-1503.1: Defines “Flood Hazard District” as areas subject to 100-Year flood, Floodway, Flood Fringe, and General Floodplain Area. • ZO 27-1504.1: No construction in the floodplain within 50 feet of a waterway, unless allowed by a DEP permit. For the Floodway, no disturbance, with specific exceptions. For Flood Fringe and General Floodplain Area land use is limited to agriculture, yards, and municipal used, with specific exceptions. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • None: All evaluated standard provide rigorous resource protection. 	



EAST FALLOWFIELD TOWNSHIP

EFT 1

Project Name

Dennis Run Conservation

Key Partners

Modena Borough, South Coatesville Borough, Chester County Conservation District, Brandywine Valley Association, Brandywine Conservancy, DCNR

Project Focus and Location

To work with landowners to conserve and protect the natural resources along Dennis Run.

- Stormwater BMPs for water quality in the municipal park
- Conservation easements with private landowners, voluntary
- Trail easements with private landowners, voluntary
- Restoration of degraded areas
- Habitat enhancement
- Explore opportunities for a natural surface or stone dust trail that would connect East Fallowfield Township Park to Mortonville Road and the Mill Trail Section 4 in Modena/South Coatesville
- BMPs for water quality
- Fencing
- Gateway and interpretive signage
- Long term need after the west branch trail is complete

Accomplishments to Date

- Headwaters of the stream begin in the municipal park at Strasburg Road and Route 82

Next Steps

- Begin landowner outreach regarding conservation easements
- Pursue partners and funding
- 5 years for trail feasibility study, design, and implementation
- 10 years to achieve permanent protection

EAST FALLOWFIELD TOWNSHIP

EFT 2

Project Name

Misty Patch Loop Trail

Key Partners

Chester County Planning Commission, Brandywine Conservancy, DCNR, Chester County Trail Club, private landowners, West Bradford Township

Project Focus and Location

To explore the feasibility of a looped trail that follows existing trails and headwater streams, begins and ends at Misty Patch Road/Sawmill Road intersection.

- Natural surface footpath for hikers and walkers, mountain bikes
- Portions share the road, portions off-road
- Cultivate trail easements with landowners and HOAs
- Connection into West Bradford Township trails and the West Branch Brandywine Trail
- Short term need

Accomplishments to Date

- Portions of trail are already constructed in HOA open space
- Portions of trail are in the design or construction phase
- Some lands preserved in open space owned by HOAs

Next Steps

- Map the location of the existing trail and identify landowners
- Meet with landowners to discuss issues and options
- Easements to be dedicated to East Fallowfield Township
- 4+ years to record trail easements and install improvements (e.g., fencing, signage) as requested by landowners

EAST FALLOWFIELD TOWNSHIP

EFT 3

Project Name

Lauria Brothers—Public Access

Key Partners

Modena Borough, Chester County, DCNR, DEP

Project Focus and Location

To obtain permission for public access to the Lauria Brothers property on the West Branch of the Brandywine.

- The property is a former superfund site that, if safe, can be used as a passive park
- Create a new gateway to the greenway at Modena Borough/East Fallowfield Township
- Provide passive open space, picnic area, footpath close to urban areas
- Passive open space
- Public access through easement or lease agreement
- Opportunity to raise awareness of water quality
- Short term need

Accomplishments to Date

- Municipality is familiar with environmental issues on the site
- Informal discussion among municipal boards and commissions

Next Steps

- Research superfund status
- Initiate discussions with area land owners
- Real estate appraisal
- Pursue funding with Chester County, DCNR, private donations
- 2 years to finalize easement or lease agreement

EAST FALLOWFIELD TOWNSHIP

EFT 4

Project Name

Mortonville Creek Access Enhancements

Key Partners

Chester County, Brandywine Conservancy, DCNR, Chester County Trail Club, private landowners

Project Focus and Location

To provide new facilities that enhance public access to the West Branch of the Brandywine Creek at Mortonville Road south of Strasburg Road.

- Additional parking for trail users and kayaks/canoes
- Information/greenway orientation kiosk
- Interpretive signage
- Directional signage
- Explore opportunities for better access to the Brandywine Creek with adjacent landowners
- Short term need

Accomplishments to Date

- Creek frontage is privately owned by Brandywine Outfitters, and public is sometimes allowed to access the creek with permission from the landowner
- Area suitable for a pull-off parking area is located within the Mortonville Road ROW near the railroad tracks

Next Steps

- Map the location of the existing creek access facilities and identify landowners
- Meet with landowners to discuss issues and options
- Easements to be dedicated to East Fallowfield Township
- 4+ years to negotiate access agreement and install improvements (e.g. parking area, fencing, signage) as requested by landowners

EAST FALLOWFIELD TOWNSHIP

EFT 5

Project Name

Buck Run Trail

Key Partners

Chester County, Brandywine Conservancy, DCNR, Chester County Trail Club, private landowners, Buck and Doe Run Watershed Organization, land trusts, Water Resources Authority

Project Focus and Location

To explore the feasibility of a natural surface footpath along Doe Run from Mortonville Road to Old Stottsville Road.

- Natural surface footpath for hikers and walkers
- Portions share the road
- Portions rails to trails
- Cultivate conservation easements and trail easements with landowners
- Implement improvements such as fencing, bridges, and signage
- Explore use of abandoned utilities, rail beds, unpaved roads
- Long term need

Accomplishments to Date

- Bert Reel Park exists as the northern destination area
- Laurels preserve and trails exist at the southern destination area
- Portions currently under conservation easement
- New public access point proposed at Covered Bridge Road

Next Steps

- Map the Buck Run and identify landowners
- Meet with landowners to discuss issues and options
- Research ownership of abandoned railway
- Easements to be dedicated to East Fallowfield Township
- 10+ years to cultivate and record trail easements

EAST FALLOWFIELD TOWNSHIP

EFT 6

Project Name

Hayes-Clark Bridge Creek Access Enhancements

Key Partners

Chester County, DCNR, private landowners, PennDOT

Project Focus and Location

To provide parking and access to Buck Run and Trail near Covered Bridge Road and Frog Hollow Road.

- Portions private property
- State set to re-build roads
- Coordinate with PennDOT to implement improvements such parking, trailhead, and signage
- Short term need

Accomplishments to Date

- PennDOT is scheduled to re-build roads in this area
- A PennDOT right-of-way exists at the Hayes-Clark Bridge with sufficient room for parking
- Brandywine Conservancy has approached select landowners

Next Steps

- Identify landowners
- Map the intersection
- Meet with PennDOT representative to discuss issues and options
- Meet with landowners for input
- 5+ years to design and install improvements

EAST FALLOWFIELD TOWNSHIP

EFT 7

Project Name

Buck Run Green Corridor

Key Partners

Brandywine Conservancy, land trusts, watershed organizations, private landowners

Project Focus and Location

To permanently protect and conserve natural, scenic, and water resources at the headwaters of Buck Run.

- Cultivate conservation easements with landowners
- Assist landowners with farm preservation easements
- Riparian buffer restoration to enhance water quality
- Reforestation of open areas to enhance interior woodland habitat
- Short term need

Accomplishments to Date

- This region is included in the Lower Brandywine PA Scenic River Corridor
- Brandywine Conservancy is actively involved with landowner outreach in the region

Next Steps

- Map the headwaters region and identify landowners
- Meet with landowners to discuss conservation options
- Easements to be conveyed to the Brandywine Conservancy or Chester County (ag.)
- 5+ years to cultivate landowners and record easements

EAST FALLOWFIELD TOWNSHIP

EFT 8

Project Name

Sucker Run Green Corridor

Key Partners

Brandywine Conservancy, land trusts, watershed organizations, private landowners, Valley Township

Project Focus and Location

To conserve and enhance the woodlands along the banks and steep slopes near Sucker Run (in adjacent Valley Township).

- Review and update woodland protection ordinance
- Review and update steep slope ordinance
- Work with landowners and HOAs to reforest riparian buffers and gaps in woodlands
- Education and outreach regarding woodlands and water quality
- Short term need

Accomplishments to Date

- Portions owned by HOAs in protected open space

Next Steps

- Map the Sucker Run corridor and identify landowners
- Identify potential reforestation projects
- Landowner education and outreach regarding forest cover and water quality, impact on real estate value
- Meet with landowners to discuss potential projects
- 5+ years to identify and implement reforestation initiatives

EAST FALLOWFIELD TOWNSHIP

EFT 9

Project Name

West Branch Brandywine Trail

Key Partners

Chester County, Brandywine Conservancy, DCNR, Chester County Trail Club, private landowners, Modena, South Coatesville

Project Focus and Location

To explore the feasibility of a share the road trail along Mortonville Road from Modena/Lauria Brothers Gateway to the Mortonville Creek Access.

- Trail for walkers and bicycles
- Portions share the road
- Portions off road
- Cultivate trail easements with landowners
- Implement improvements such as fencing, bridges, and signage
- Promote public access to adjacent Mill Trail loop and West Branch Brandywine Trail
- Long term need once the Mill Trail is completed in Modena/South Coatesville

Accomplishments to Date

- Identified in the comprehensive plan as a planned trail

Next Steps

- Map the location of the planned trail and identify landowners
- Meet with South Coatesville and Modena representatives for an update on the Mill Trail project
- Meet with landowners to discuss issues and options
- Easements to be dedicated to East Fallowfield Township
- 5+ years to cultivate and record trail easements

EAST FALLOWFIELD TOWNSHIP

EFT 10

Project Name

Buck Run to West Branch Trail

Key Partners

Chester County, Brandywine Conservancy, DCNR, Chester County Trail Club, private landowners,

Project Focus and Location

To explore the feasibility of a share the road trail along Mortonville Road from Modena/Lauria Brothers Gateway to the Mortonville Creek Access.

- Trail for walkers and bicycles
- Portions share the road
- Portions off road
- Cultivate trail easements with landowners
- Implement improvements such as fencing, bridges, and signage
- Promote public access to adjacent Buck Run Trail and West Branch Brandywine Trail
- Long term need

Accomplishments to Date

- Portions owned by land trusts

Next Steps

- Map the location of the planned trail and identify landowners
- Meet with landowners to discuss issues and options
- Easements to be dedicated to East Fallowfield Township
- 5+ years to cultivate and record trail easements

Brandywine Creek Greenway Functions Checklist

HONEY BROOK BOROUGH

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	
	Enhance water quality in the Brandywine and its tributaries	
	Improve air quality in developed areas	✓
	Control and/or mitigate flooding in flood-prone areas	
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	✓
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	✓
	Preserve nationally and municipally-designated historic structures and districts	✓

NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

HONEY BROOK BOROUGH

Natural Resource Protection Ordinance Review

Date Reviewed: 8/12/13

Zoning Adopted: 11/18/02 Zoning Last Amended: None	SLDO Adopted: 5/9/07 SLDO Last Amended: 2/17/11
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): No	
<ul style="list-style-type: none"> • None. 	
2. Woodlands Protection: Somewhat Protected	
<ul style="list-style-type: none"> • SLDO 22-202: Defines woodlands as a mass of trees of 0.25 acres or more. • SLDO 22-629.1: Requires new developments to minimize disturbance to woodlands. 	
3. Wetlands: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 115.B: Wetlands may only be disturbed as allowed by state and federal permits. 	
4. Riparian Buffers: Not Protected	
<ul style="list-style-type: none"> • None 	
5. Floodplain: Rigorously Protected	
<ul style="list-style-type: none"> • Honey Brook Borough has no floodplains, and so has sufficient regulations. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • Steep Slopes: Include maximum disturbance limitations of 30% for areas with slopes of 15 to 25%. Include maximum disturbance limitations of 15% for areas with slopes greater than 25%. Also consider adding steep slope regulations that include: 1.) a description of the slope measuring method; 2.) a listing of specific activities or uses prohibited on steep slopes; and 3.) standards that provide additional guidance for minimizing the disturbance, grading, and erosion of steep slopes. • Woodlands: (Honey Brook Borough had few if any wooded lots, and so the following recommendation may not be applicable.) Include regulations that limit disturbance of a woodlands to a maximum of 50%. Such regulations would establish a definition for “woodland” that is defined in a measurable way, such as a definition that is based on the number of trees within a wooded area that have grown to a specific diameter at breast height (dbh). Also, consider adding forestry regulations that: 1.) include exceptions for forestry or timber harvesting, as set forth in the MPC, and 2.) require a timber harvesting plan. Lastly, consider adding tree protection regulations that: 1.) include measures that protect the trees remaining on a construction site from construction activities that could be damaging to trees; 2.) prohibit disturbing specimen trees and PNDI sites unless there is no feasible alternative; and 3.) call for tree replacement if more than a specified area or number of trees are removed. • Riparian Buffers: (Honey Brook Borough had few if any waterways or intermittent streams, and so the following recommendation may not be applicable.) Include regulations that establish a riparian buffer which extends 35 to 50 feet from both sides of the stream bank. Also, consider adding requirements that call for the re-vegetation of un-forested riparian buffers. 	



HONEY BROOK BOROUGH

HBB 1

Project Name

Headwaters Green Corridor

Key Partners

Chester County, DCNR, DEP, DCED, local businesses, land trusts, developer, property owners, Honey Brook Community Partnership, volunteers

Project Focus and Location

To educate greenway visitors regarding the origin of the West Branch Brandywine Creek and the importance of headwater streams for water quality.

- Headwaters Visitors Center
- Gateway kiosk
- Reforestation of riparian buffer
- Restoration of native plant community
- Interpretive signage
- Orientation maps
- Greenway guides
- Public parking
- Short term need

Accomplishments to Date

- Consistent with comprehensive plan

Next Steps

- Assemble partners and funding
- Prepare and adopt a concept plan for the interpretive center
- Interpretive center to be implemented possibly at land development
- Approach landowners regarding restoration of riparian buffer
- 1 year to implement landscape restoration
- 3 years to complete a concept plan
- Visitor center contingent upon land development

HONEY BROOK BOROUGH

HBB 2

Project Name

Umble Park Connector

Key Partners

Honey Brook Township, Chester County, local businesses, landowners, DCNR, DCED, Gateway Baptist Church, Honey Brook Community Partnership, volunteers

Project Focus and Location

To provide pedestrian and bicycle connections from downtown Honey Brook Borough/Horseshoe Pike to James A. Umble Memorial Park in Honey Brook Township and the future Northern Struble Trail.

- Portions follow edge of Gateway Baptist Church property
- Portions follow the edge of an agricultural field
- Portions follow Water Street and Walnut Road
- Multi use off-road trail
- Share the road and/or paved side paths
- Short term need

Accomplishments to Date

- Consistent with comprehensive plan
- Consistent with Linking Landscapes

Next Steps

- Assemble partners and funding
- Meet with landowners
- Prepare a feasibility study
- 3 years for feasibility study
- 3 years to implement

HONEY BROOK BOROUGH

HBB 3

Project Name

Downtown Gateway Revitalization

Key Partners

Chester County, DCNR, DCED, local businesses, Honey Brook Community Partnership, volunteers

Project Focus and Location

To implement improvements along Horseshoe Pike that will promote visits to Honey Brook and establish the Borough as a gateway to the greenway.

- Sidewalk and pedestrian crosswalk upgrades from Walnut Street to Route 10 and the Borough Park
- Street lighting
- Street furniture including seating, trash receptacles, bike racks
- Signage
- Street trees and planters
- Orientation maps
- Historic plaques or markers for historic buildings and places
- Short term need

Accomplishments to Date

- Urban Revitalization plan completed with funding from Chester County
- Consistent with the comprehensive plan

Next Steps

- Update and adopt Urban Revitalization Plan
- Assemble partners and funding to implement the plan
- 1 year to update the plan
- 3 years for design and engineering
- 3 years to implement

HONEY BROOK BOROUGH

HBB 4

Project Name

Borough Park Improvements

Key Partners

Chester County, DCNR, DCED, local businesses, Honey Brook Community Partnership, landowners, volunteers

Project Focus and Location

To plan and implement improvements to the Borough Park and provide pedestrian connections to the Headwaters Visitors Center (HBB-1).

- Expand public parking
- Directional Signage to the visitors center
- Bike racks
- Drinking water
- Public restrooms
- Long term need once the Headwaters Visitors Center is established

Accomplishments to Date

- Crosswalk across Route 10 is in place
- Sidewalks in place
- Consistent with comprehensive plan

Next Steps

- Assemble partners and funding
- Add bike racks, drinking water, restrooms
- Meet with landowners of adjacent properties regarding additional parking
- Prepare site design and engineering
- 3 years to design and engineer
- 2 years to construct parking area

Brandywine Creek Greenway Functions Checklist

HONEY BROOK TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	✓
	Protect state- and municipally-designated scenic resources	✓
	Preserve nationally and municipally-designated historic structures and districts	

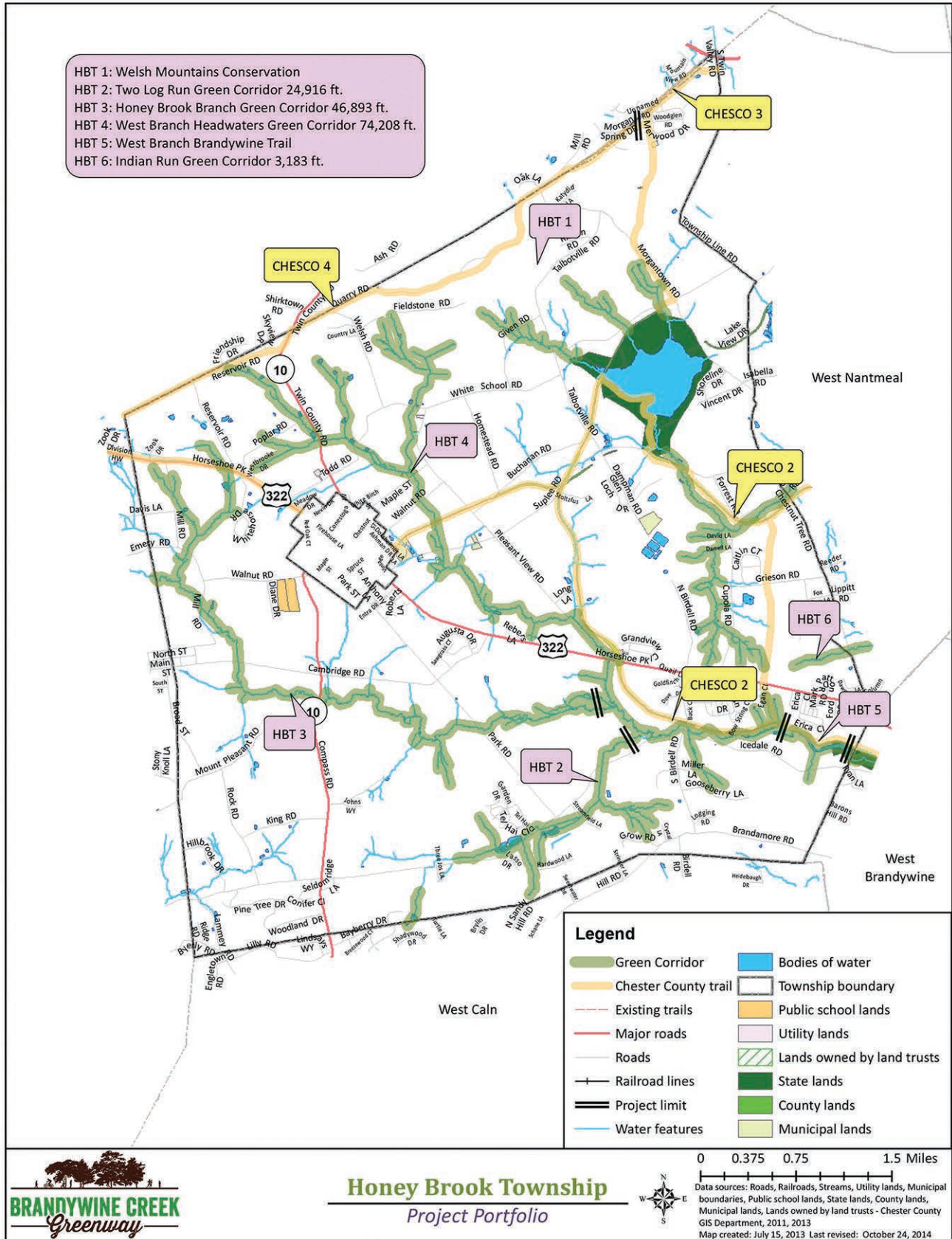
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

HONEY BROOK TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 8/8/13

Zoning Adopted: 10/10/07 Zoning Last Amended: 5/9/07	SLDO Adopted: 5/9/07 SLDO Last Amended: 2/17/11
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> • ZO 27-1303.2: Establishes a “Steep Slope Conservation District.” Defines precautionary slopes as 15% to 25%, and prohibitive slopes as 25%+. • ZO 27-1303.6: Restricts land use in prohibitive slopes to recreation, forestry, and driveways, with specific exceptions. 	
2. Woodlands Protection: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 27-1306.1: Refers to Comp. Plan page 38 which defines woodlands as Class I (50+ ac.), Class II (30-50 ac.), and Class III (under 30 ac.) Up to 5% of Class 1 on prohibitive slopes may be disturbed. Up to 15% of Class 1 and 2 may be disturbed. Up to 25% of Class 3 woodlands may be disturbed. 	
3. Wetlands: Somewhat Protected	
<ul style="list-style-type: none"> • SLDO 22-628.1: Forbids disturbing wetlands with seasonally high water tables and areas of surface water concentrations unless authorized by the Township Engineer. • (Note: The wetland provisions may not be consistent with current state and federal laws.) 	
4. Riparian Buffers: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 27-1304.2: Establishes a “Riparian Corridor Conservation District” with zones. Zone 1 extends 25 feet from the watercourse. Zone 2 extends out 50 feet from Zone 1, and will include the 100-year floodplain if that floodplain extends more than 75 feet from the waterway. Limits land uses to agriculture, preserves, and driveways, with specific exceptions. 	
5. Floodplain: Somewhat Protected	
<ul style="list-style-type: none"> • ZO 27-1320.2: Defines floodplains as areas subject to the 100-year flood. • ZO 27-1302.57: Limits land uses to agriculture, recreation, preserves, stream improvements, yards, bridges, and driveways, with specific exceptions. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • Wetlands: Include regulations which establish specific wetlands identification and delineation criteria. Add regulations which prohibit the disturbance of a wetland except with state and federal permits. Lastly, consider adding regulations that establish a 50-foot wide margin around all wetlands. Within this 50-foot margin, land disturbance would be limited or prohibited. • Floodplains: Include regulations that prohibit both land disturbance and the construction of new structures within a floodplain (which includes both the floodway and the flood fringe.) 	



HONEY BROOK TOWNSHIP

HBT 1

Project Name

Welsh Mountains Conservation

Key Partners

Natural Lands Trust, Brandywine Conservancy, Brandywine Valley Association, DCNR, Chester County, landowners

Project Focus and Location

To conserve and protect the woodlands and steep slopes along the southern edge of the Welsh Mountains and to enhance water quality in impaired headwater streams

- Utilize conservation easements to prevent woodland disturbance and new development
- Natural resource protection ordinance updates
- Promote woodlands and agricultural best management practices
- Short term need

Accomplishments to Date

- Shown on Figure 4: Greenways Plan in the Comprehensive Plan
- Currently zoned RC Resource Conservation
- Included in the PA Highlands Greenway region

Next Steps

- Coordinate with key partners and the PA Highlands Initiative/Natural Lands Trust
- Upgrade woodland protection regulations
- Designate the Welsh Mountains area as a TDR sending area
- 1 year to adopt ordinance modifications
- Multi-year effort to cultivate conservation easements

HONEY BROOK TOWNSHIP

HBT 2

Project Name

Two Log Run Green Corridor

Key Partners

Natural Lands Trust, Brandywine Conservancy, Brandywine Valley Association, DCNR, Chester County, landowners

Project Focus and Location

To conserve and protect the woodlands and steep slopes along Two Log Run at the northern edge of the Barren Hills.

- Utilize conservation easements to prevent woodland disturbance and new development
- Natural resource protection ordinance updates
- Promote woodlands and forestry best management practices
- Short term need

Accomplishments to Date

- Shown on Figure 4: Greenways Plan in the Comprehensive Plan
- Currently zoned RC Resource Conservation
- Included in the PA Highlands Greenway region

Next Steps

- Coordinate with key partners and the PA Highlands Initiative/Natural Lands Trust
- Upgrade woodland protection regulations
- Designate the Welsh Mountains area as a TDR sending area
- 1 year to adopt ordinance modifications
- Multi-year effort to cultivate conservation easements

HONEY BROOK TOWNSHIP

HBT 3

Project Name

Honey Brook Branch Green Corridor

Key Partners

Natural Lands Trust, Brandywine Conservancy, Brandywine Valley Association, DEP, Chester County Water Resources Authority, landowners, City of Wilmington

Project Focus and Location

To enhance impaired water quality along the headwater streams of the Brandywine from Route 322 west of Honey Brook Borough to the Barren Hills

- Promote riparian buffer restoration and reforestation of steep slopes where feasible
- Promote agricultural best management practices including stream fencing and controlled stream crossings for livestock
- Facilitate and promote the use of conservation easements, agricultural easements and TDR
- Implement the City of Wilmington's Source Water Protection Plan
- Short term need

Accomplishments to Date

- Shown on Figure 4: Greenways Plan in the Comprehensive Plan
- Most adjacent properties are located within the TDR sending zone
- At least 2 farms have agricultural easements
- Multiple riparian buffer reforestation and stream fencing efforts underway by multiple key partners
- Included in the PA Highlands Greenway region

Next Steps

- Continue coordination among key partners
- Multi-year effort to cultivate landowners and correct impaired streams

HONEY BROOK TOWNSHIP

HBT 4

Project Name

West Branch Headwaters Green Corridor

Key Partners

Natural Lands Trust, Brandywine Conservancy, Brandywine Valley Association, DCNR, Chester County, landowners

Project Focus and Location

To enhance impaired water quality along the headwater streams of the Brandywine from Route 10 north of Honey Brook Borough to the Barren Hills

- Promote riparian buffer restoration and reforestation of steep slopes where feasible
- Promote agricultural best management practices including stream fencing and controlled stream crossings for livestock
- Facilitate and promote the use of conservation easements, agricultural easements and TDR
- Utilize conservation design to cluster new development
- Implement the City of Wilmington's Source Water Protection Plan
- Short term need

Accomplishments to Date

- Shown on Figure 4: Greenways Plan in the Comprehensive Plan
- Many adjacent properties are located within the TDR sending zone
- At least 2 farms have agricultural easements (?)
- Multiple riparian buffer reforestation and stream fencing efforts underway by multiple key partners
- Included in the PA Highlands Greenway region

Next Steps

- Continue coordination among key partners
- Multi-year effort to cultivate landowners and correct impaired streams

HONEY BROOK TOWNSHIP

HBT 5

Project Name

West Branch Brandywine Trail

Key Partners

Chester County, Hibernia County Park, DCNR, West Brandywine Township, private landowners

Project Focus and Location

To study the feasibility of a multi-use trail along the West Branch of the Brandywine.

- Explore opportunities for a stone dust trail that would connect to Valley Township/Coatesville trails to the south and to Honey Brook Township trails to the north
- Portions abandoned rail line as a potential route
- Portions rural share the road trail
- Trail easements with private landowners, voluntary
- For pedestrians, cyclists, and equestrians
- Short term need

Accomplishments to Date

- Portions owned by Chester County
- Portions used informally by residents
- Shown on Map 8-1 in the municipal Comprehensive Plan

Next Steps

- Pursue partners and funding for a feasibility study
- 5 years for trail feasibility study, design, and implementation

HONEY BROOK TOWNSHIP

HBT 6

Project Name

Indian Run Green Corridor

Key Partners

Private landowners, DCNR, land trusts, Chester County, West Nantmeal Township.

Project Focus and Location

To implement conservation efforts that could include conservation easements, agricultural easements, agricultural BMPs, stream restoration, reforestation of riparian buffers, habitat restoration, and other efforts.

- Ongoing need

Accomplishments to Date

- Shown as a green corridor on the Brandywine Creek Greenway Concept Map

Next Steps

- Land trusts and Chester County continue to cultivate landowners for agricultural easements, conservation easements, and agricultural BMPs
- Ongoing efforts required
- Ongoing conservation opportunities

Brandywine Creek Greenway Functions Checklist

MODENA BOROUGH

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	✓
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	✓
	Provide transportation alternatives for walking, bicycle, and equestrian	
CULTURAL FEATURES	Buffer the Brandywine valley from new development	✓
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	✓
	Preserve nationally and municipally-designated historic structures and districts	

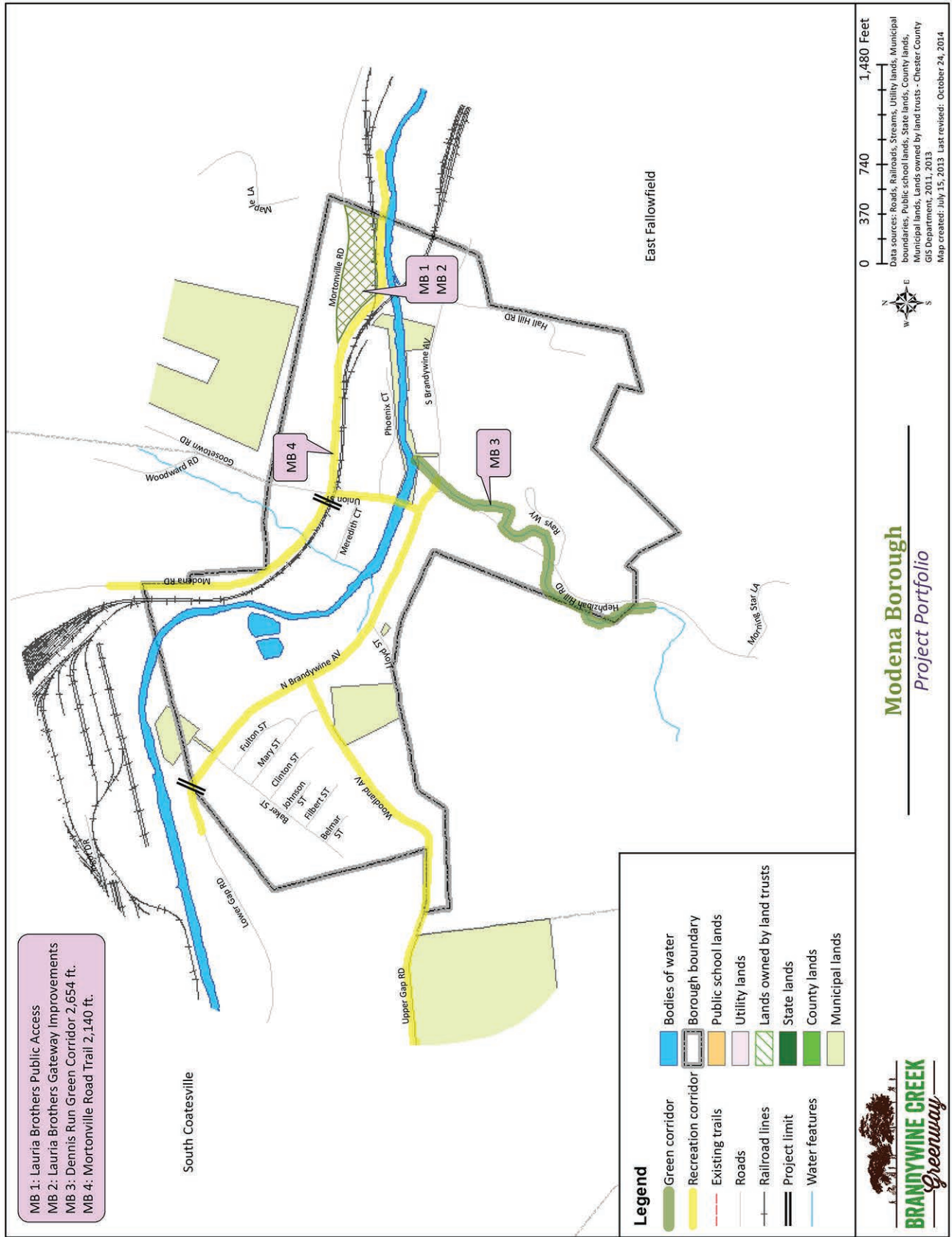
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

MODENA BOROUGH

Natural Resource Protection Ordinance Review

Date Last Reviewed: 7/23/13

Zoning Adopted: 9/24/09 Zoning Last Amended: None	SLDO Adopted: 3/82 SLDO Last Amended: 11/2/09
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> • ZO 1104.B: Defines steep slopes as 25%+. Limits disturbance to parks, open space preservation, recreation forestry and agriculture, with specified exceptions. 	
2. Woodlands protection: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 1107.A: Except for timber harvesting, disturbing woodlands shall be: no more than 75% on 1 acre or less; no more than 65% on greater than 1 acre to less than 5 acres; and no more than 50% of 5 acres +. • SLDO 522.A: Establishes woodland replacement standards. 	
3. Wetlands: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 202: Defines “Wetland Margin” as extending out 50 ft from a wetland boundary. • ZO 1106.G: Wetlands shall not be disturbed. Limits disturbance to 20% of a wetland margin. • SLDO 502.B: Low lying wetlands shall not be built upon unless drained. • (Note: SLDO Wetland provision may contradict state and federal wetland regulations.) 	
4. Riparian Buffers: Rigorously Protected	
<ul style="list-style-type: none"> • 1105.C: Buffer extends out 50 feet from waterways, and 20 feet out from intermittent streams and lakes or ponds. Buffer may also include 25%+ slopes beyond 50 feet • 1105.D: No more than 5% of the buffer may be disturbed. No buffer may be reduced to less than 10 feet wide. Reducing a buffer to less than 20 feet wide requires specific management measures. 	
5. Floodplain; Rigorously Protected	
<ul style="list-style-type: none"> • ZO 1103. C: Establishes a Flood Hazard District consisting of the Floodway Area, Flood-Fringe Area and General Floodplain Area. • ZO 1103. D: Within an Floodway Area, no new construction is permitted that would cause and increase in the 100-year flood elevation. No new construction is permitted without a DEP permit. Within and General Floodplain Area, no construction is permitted within 50 feet of the watercourse. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • None: All evaluated standard provides rigorous resource protection. 	



MB 1: Luria Brothers Public Access
 MB 2: Luria Brothers Gateway Improvements
 MB 3: Dennis Run Green Corridor 2,654 ft.
 MB 4: Mortonville Road Trail 2,140 ft.

MODENA BOROUGH

MB 1

Project Name

Lauria Brothers—Public Access

Key Partners

East Fallowfield Township, Chester County, DCNR, DEP

Project Focus and Location

To obtain permission for public access to the Lauria Brothers property on the West Branch of the Brandywine.

- The property is a former superfund site that, if safe, might be used as a passive park
- Create a new gateway to the greenway at Modena Borough/East Fallowfield Township
- Provide passive open space, picnic area, footpath close to urban areas
- Passive open space
- Public access through easement or lease agreement
- Opportunity to raise awareness of water quality
- Short term need

Accomplishments to Date

- Informal discussion among Modena Borough Council
- Identified as future open space on Recreation and Trail Map 4.1 in the Modena Borough Comprehensive Plan

Next Steps

- Research superfund status
- Initiate discussions with land owner
- Establish a vision and partners
- Real estate appraisal
- Pursue funding with Chester County, DCNR, private donations
- 1 year to negotiate access agreement with landowner

MODENA BOROUGH

MB 2

Project Name

Lauria Brothers Gateway—Improvements

Key Partners

Modena Borough, East Fallowfield Township, Chester County, DCNR, DEP, Brandywine Conservancy.

Project Focus and Location

To provide park amenities and other improvements near the Lauria Brothers Park on the West Branch of the Brandywine.

- Trailhead kiosk
- Public parking at nearby site
- Interpretive signage
- Orientation maps
- Greenway guides
- Bicycle parking
- Picnic facilities/seating
- Portable restrooms
- Creek access/fishing area/viewing area
- Long term need after public access is negotiated

Accomplishments to Date

- Informal discussion among Modena Borough Council
- Informal discussion with local business to provide an alternative gateway location along the Brandywine
- Identified as future open space on Recreation and Trail Map 4.1 in the Modena Borough Comprehensive Plan
- Explore opportunities for parking and public access from adjacent properties
- Conceptual site design

Next Steps

- Assemble partners
- Pursue funding with Chester County, DCNR, private donations
- 2 years to plan and implement

MODENA BOROUGH

MB 3

Project Name

Dennis Run Green Corridor

Key Partners

Modena Borough, South Coatesville Borough, East Fallowfield Township, Chester County Conservation District, Brandywine Valley Association, Brandywine Conservancy, DCNR

Project Focus and Location

To work with landowners to conserve and protect the natural resources along Dennis Run.

- 2,654 linear feet
- Conservation easements
- Restoration of degraded areas
- Habitat enhancement
- BMPs for water quality
- Fencing
- Signage
- Ongoing

Accomplishments to Date

- Informal discussion among Modena Borough Council members

Next Steps

- Begin landowner outreach regarding conservation easements
- Identify erosion-prone areas
- Pursue partners and funding
- 10 years to achieve permanent protection

MODENA BOROUGH

MB 4

Project Name

Mortonville Road Trail

Key Partners

East Fallowfield Township, Chester County Conservation District, Brandywine Valley Association, Brandywine Conservancy, DCNR, DVRPC, South Coatesville Borough

Project Focus and Location

To continue the Mill Trail along Mortonville Road to the Lauria Brothers Gateway and into East Fallowfield.

- 2,140 linear feet
- Line striping
- Signage
- Banners
- Short term need in concert with completion of the Mill Trail

Accomplishments to Date

- Informal discussion among Modena Borough Council members
- Sections of Mortonville Road are abandoned and may be suitable for trail use

Next Steps

- Begin landowner outreach regarding trail concept
- Cultivate partners
- Pursue funding
- 5 years to establish the trail

Brandywine Creek Greenway Functions Checklist

NEWLIN TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	
	Foster outdoor education and school access to open space	
	Provide transportation alternatives for walking, bicycle, and equestrian	
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	
	Preserve nationally and municipally-designated historic structures and districts	

NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

NEWLIN TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 7/22/13

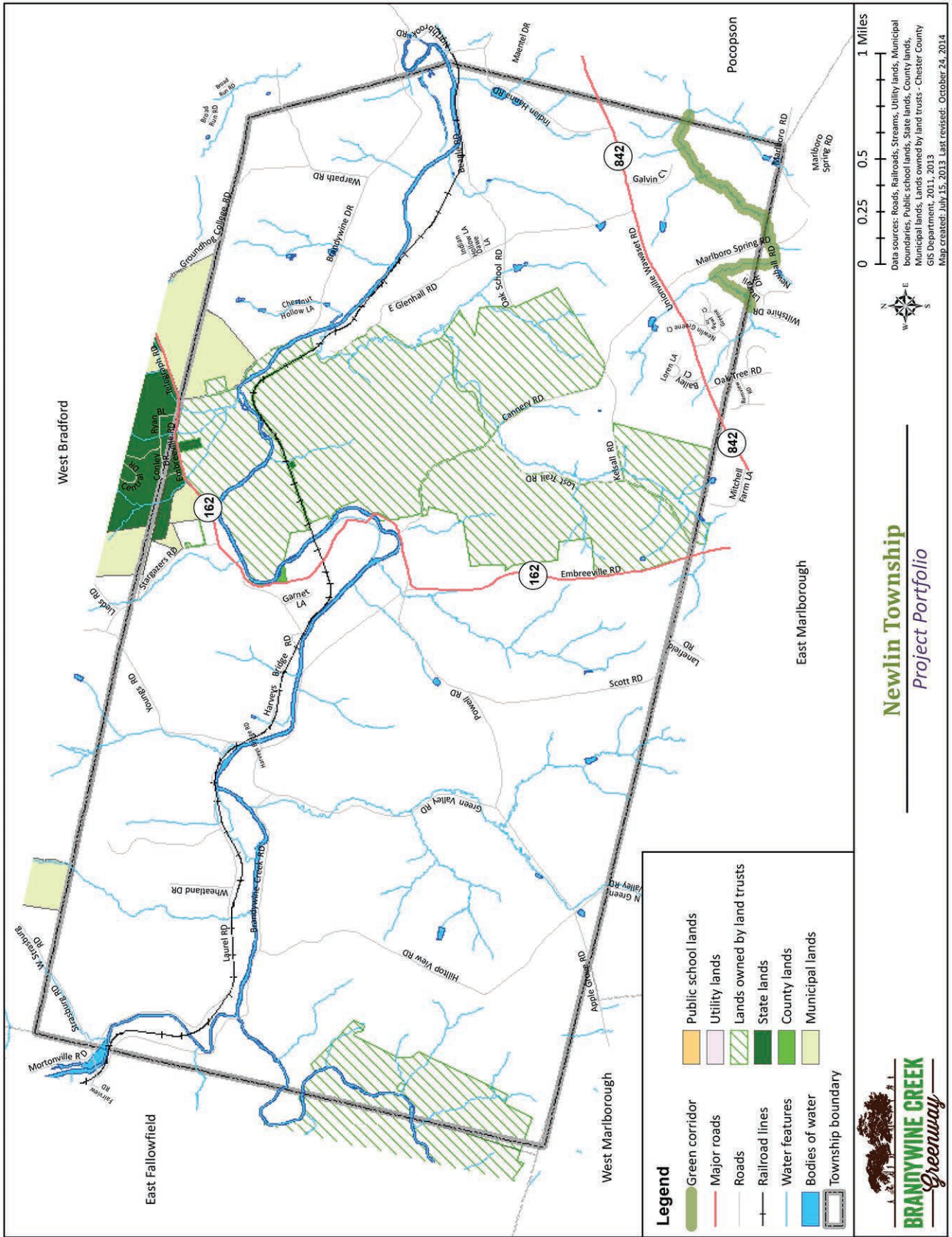
Zoning Adopted: 3/11/13 Zoning Last Amended: None	SLDO Adopted: 3/1/13 SLDO Last Amended: None
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> • ZO 529 C: Establishes a Steep Slope Conservation Overlay District consisting of 20%+ slopes. • ZO 529 D: Limits uses to outdoor recreation, forestry, agricultural uses, driveways, and yards, with specific exceptions. Special exception uses must be authorized by the Zoning Hearing Board. • SLDO 601.F: Defines moderately steep slopes as 15% to 25%, and steep slopes as 25%+. Forbids disturbance of steep slopes, with specific exceptions. Disturbance of moderately slopes shall be minimized. 	
2. Woodlands Protection: Somewhat Protected	
<ul style="list-style-type: none"> • SLDO 601. D. Healthy woodlands exceeding one acre shall be preserved and designated as Greenway areas, to the maximum extent possible. Proposed site improvements shall be located, designed and constructed to minimize the loss or degradation of woodland areas. Disturbance or removal of woodlands occupying environmentally sensitive areas shall be undertaken only when approved by the Township. 7/22/13 	
3. Wetlands: Somewhat Protected	
<ul style="list-style-type: none"> • SLDO 601.C.2: Disturbance of year-round wetlands shall be minimized. 7/22/13 	
4. Riparian Buffers: Not Protected	
<ul style="list-style-type: none"> • None. 	
5. Floodplain: Rigorously Protected	
<ul style="list-style-type: none"> • 410.B: Establishes a floodplain district, consisting of a Floodway, Flood Fringe, and “Approximate Flood Plain.” • 401 D. Disturbance is limited to “passive agriculture,” natural habitat preserves, municipal use, recreational use, yards and impervious paving. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • Woodlands: Include regulations that limit disturbance of a woodlands to a maximum of 50%. Such regulations would establish a definition for “woodland” that is defined in a measurable way, such as a definition that is based on the number of trees within a wooded area that have grown to a specific diameter at breast height (dbh). Also, consider adding forestry regulations that: 1.) include exceptions for forestry or timber harvesting, as set forth in the MPC, and 2.) require a timber harvesting plan. Lastly, consider adding tree protection regulations that: 1.) include measures that protect the trees remaining on a construction site from construction activities that could be damaging to trees; 2.) prohibit disturbing specimen trees and PNDI sites unless there is no feasible alternative; and 3.) call for tree replacement if more than a specified area or number of trees are removed. • Wetlands: Include regulations which establish specific wetlands identification and delineation criteria. Add regulations which prohibit the disturbance of a wetland except with state and federal permits. Lastly, consider adding regulations that establish a 50-foot wide margin around all wetlands. Within this 50-foot margin, land disturbance would be limited or prohibited. 	

continued on page 159

NEWLIN TOWNSHIP, CONT.

Natural Resource Protection Ordinance Review

- **Riparian Buffers:** Include regulations that establish a riparian buffer which extends 75 to 100 feet from both sides of the stream bank. Also, consider adding requirements that 1.) call for the re-vegetation of un-forested riparian buffers, and 2.) establish a two-tiered riparian buffer with stricter standards applied adjacent to streams. This two-tiered buffer would include a 25-35 foot-wide inner buffer in which disturbance is prohibited, and a 50 to 65 foot-wide outer buffer in which a maximum disturbance limit of 20% is allowed.



1 Miles
0.5
0.25
0

Scale bar showing 0, 0.25, 0.5, and 1 Miles.



Data sources: Roads, Railroads, Streams, Utility lands, Municipal boundaries, Public school lands, State lands, County lands, Municipal lands, Lands owned by land trusts - Chester County GIS Department, 2011, 2013
Map created: July 15, 2013. Last revised: October 24, 2014.

Newlin Township
Project Portfolio

Legend

- Public school lands
- Utility lands
- Lands owned by land trusts
- State lands
- County lands
- Municipal lands
- Green corridor
- Major roads
- Roads
- Railroad lines
- Water features
- Bodies of water
- Township boundary



Brandywine Creek Greenway Functions Checklist

PENNSBURY TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	✓
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	
	Provide transportation alternatives for walking, bicycle, and equestrian	
CULTURAL FEATURES	Buffer the Brandywine valley from new development	✓
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	✓
	Preserve nationally and municipally-designated historic structures and districts	✓

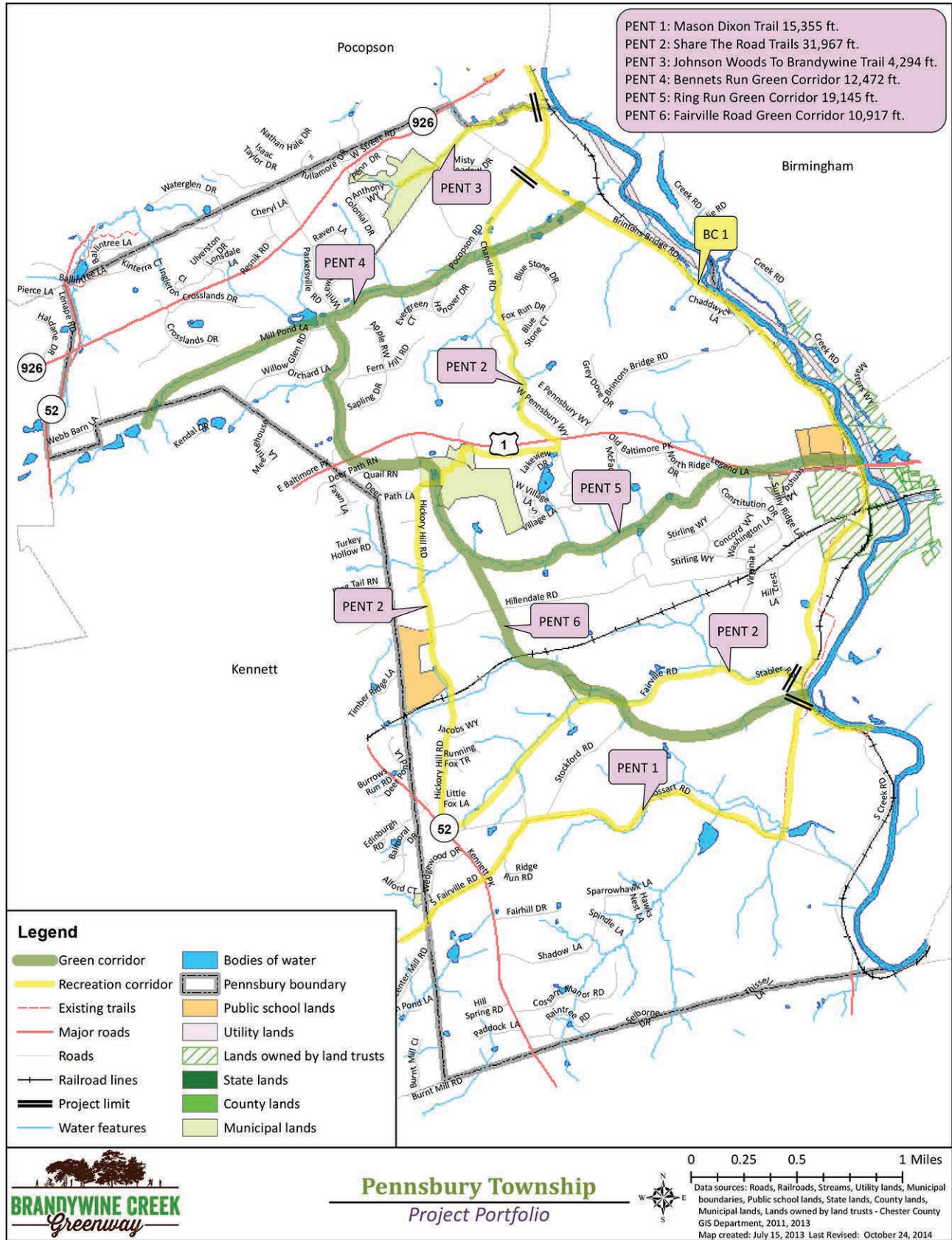
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

PENNSBURY TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 7/15/13

Zoning Adopted: 12/10/12 Zoning Last Amended: No amendments	SLDO Adopted: 12/99 SLDO Last Amended: 10/24/02
RESOURCES AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> ZO 162-1503.B: For 15-25% slopes, no more than 30% disturbance. For 25%+ slopes, no more than 15% disturbance. SLDO 138-42.A.b: No earth moving or stripping of vegetation permitted on 25%+ slopes without supervisor’s approval. 	
2. Woodlands Protection: Rigorously Protected	
<ul style="list-style-type: none"> ZO 162-1503.C.2: For residential use, no more than 30% of woodlands may be disturbed. For non-residential use, no more than 50% of woodlands may be disturbed. Applicant shall consider impacts to woodlands, especially those exceeding 10 acres. SLDO 138-41.F: Requires that all 6 in. or more DBH trees be replaced based on detailed guidelines. 	
3. Wetlands: Rigorously Protected	
<ul style="list-style-type: none"> ZO 162-1503.F: Wetlands shall not be disturbed except where federal and state permits have been obtained. ZO 162-1503.G: Wetland margins extend out 50 feet. No more than 20% of wetland margin shall be disturbed. 	
4. Riparian Buffers: Rigorously Protected, 7/15/13	
<ul style="list-style-type: none"> ZO 162-1503.E: Minimum of 100 feet riparian buffer required with two zones. Inner “Zone 1” is 35 feet, and shall not be disturbed with specific exceptions. Outer “Zone 2” is up to 65 feet with specific exceptions and no more than 20% may be disturbed, with specific exceptions. 	
5. Floodplain: Rigorously Protected, 7/15/13	
<ul style="list-style-type: none"> ZO 162-1503.E: The 100-year floodplain shall not be disturbed, with specific exceptions. ZO 162-1503.A: The 100-year Flood Hazard District shall not be disturbed, except as specified in ZO 162-1504 and ZO Art. XVI. ZO 162-1504: Requires compliance with a Flood District Overlay. ZO Art. XVI: Requires compliance with Natural Resources Protection Standards. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> None: All evaluated standards provide rigorous resource protection. 	



Pennsbury Township
Project Portfolio



PENNSBURY TOWNSHIP

PENT 1

Project Name

Mason Dixon Trail

Key Partners

Chester County Planning Commission, Brandywine Conservancy, DCNR, Martin Foundation, private landowners, Chester County Trail Club, Wilmington Trail Club

Project Focus and Location

To permanently protect the Mason Dixon Trail as a public footpath.

- Negotiate and record trail easements with landowners along the existing trail route
- Coordinate with PennDOT and trail clubs
- Install directional signage
- Implement improvements such as fencing, bridges, signage
- Promote the trail for public use
- Short term need

Accomplishments to Date

- The trail is already in existence. Portions are on private property, and portions follow public roads
- The trail is shown in the municipal Comprehensive Plan

Next Steps

- Review the existing trail conditions
- Identify opportunities for improving the trail experience with directional signage, share the road signage, roadway maintenance
- 3 years from initial review to completion of improvements

PENNSBURY TOWNSHIP

PENT 2

Project Name

Share the Road Trails

Key Partners

Landowners, PennDOT, Brandywine Conservancy, Chester County

Project Focus and Location

To implement a network of rural footpaths that will follow local roads to connect neighborhoods with each other and the Brandywine Trail

- Route begins at Stabler Road/Creek Road and the Brandywine Trail, follows Stabler Road, Fairville Road, Cossart Road, Hickory Hill Road, Pennsbury Township Park, Route 1, Chandler Road, and Pocopson Road to Brintons Bridge Road and the Brandywine Trail
- Mobility study for pedestrian and bicycle use along the trail route
- Design and engineering
- Implementation could include signage, maintenance considerations, roadway markings, cartway or should widening, etc.
- Long term need

Accomplishments to Date

- The trail route is shown in the municipal Comprehensive Plan

Next Steps

- Divide the project into 3 or more phases
- Pursue funding for mobility study
- 2 years from securing funding for a mobility study to project completion

PENNSBURY TOWNSHIP

PENT 3

Project Name

Johnson Woods to Brandywine Trail

Key Partners

Conservation easement landowners with trail easements, PennDOT, Chester County, Brandywine Conservancy, landowners, HOAs

Project Focus and Location

To implement a footpath that would connect the trails at Johnson Woods Preserve to the Brandywine Trail at the outflow of Pocopson Creek.

- Route to follow existing trail easements, sidewalks and roads
- Pedestrian use only
- Short term need

Accomplishments to Date

- Trails exist in Johnson Woods Preserve
- Trail easements exist along portions of the trail
- The trail route is shown in the municipal Comprehensive Plan

Next Steps

- Begin discussions with key landowners and trail easement landowners
- Prepare a concept plan and implementation plan/cost estimate
- Secure funding
- 3 years from concept plan to completion

PENNSBURY TOWNSHIP

PENT 4

Project Name

Bennetts Run Green Corridor

Key Partners

Landowners, land trusts, developers

Project Focus and Location

To promote the conservation and connection of open space along key corridors in the township.

- Key corridors include Bennett's Run, Ring Run, and Craigs Mill Run
- Conservation easements
- Riparian buffer restoration
- Reforestation
- Land and water stewardship BMPs
- Long term need

Accomplishments to Date

- Consistent with map 6-3 Proposed Open Space Network as shown in the municipal Comprehensive Plan
- Significant areas already owned or eased by land trusts, owned by the township

Next Steps

- Partner with land trusts to cultivate conservation easements on land that is open and developable and to promote best land management practices
- Ongoing and long term

PENNSBURY TOWNSHIP

PENT 5

Project Name

Ring Run Green Corridor

Key Partners

Landowners, land trusts, developers

Project Focus and Location

To promote the conservation and connection of open space along key corridors in the township.

- Key corridors include Bennett's Run, Ring Run, and Craigs Mill Run
- Conservation easements
- Riparian buffer restoration
- Reforestation
- Land and water stewardship BMPs
- Long term need

Accomplishments to Date

- Consistent with map 6-3 Proposed Open Space Network as shown in the municipal Comprehensive Plan
- Significant areas already owned or eased by land trusts, owned by the township

Next Steps

- Partner with land trusts to cultivate conservation easements on land that is open and developable and to promote best land management practices
- Ongoing and long term

PENNSBURY TOWNSHIP

PENT 6

Project Name

Fairville Road Green Corridor

Key Partners

Landowners, land trusts, developers

Project Focus and Location

To promote the conservation and connection of open space along key corridors in the township.

- Key corridors include Bennett’s Run, Ring Run, and Craigs Mill Run
- Conservation easements
- Riparian buffer restoration
- Reforestation
- Land and water stewardship BMPs
- Long term need

Accomplishments to Date

- Consistent with map 6-3 Proposed Open Space Network as shown in the municipal Comprehensive Plan
- Significant areas already owned or eased by land trusts, owned by the township

Next Steps

- Partner with land trusts to cultivate conservation easements on land that is open and developable and to promote best land management practices
- Ongoing and long term

Brandywine Creek Greenway Functions Checklist

POCOPSON TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	✓
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	✓
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	
	Preserve nationally and municipally-designated historic structures and districts	✓

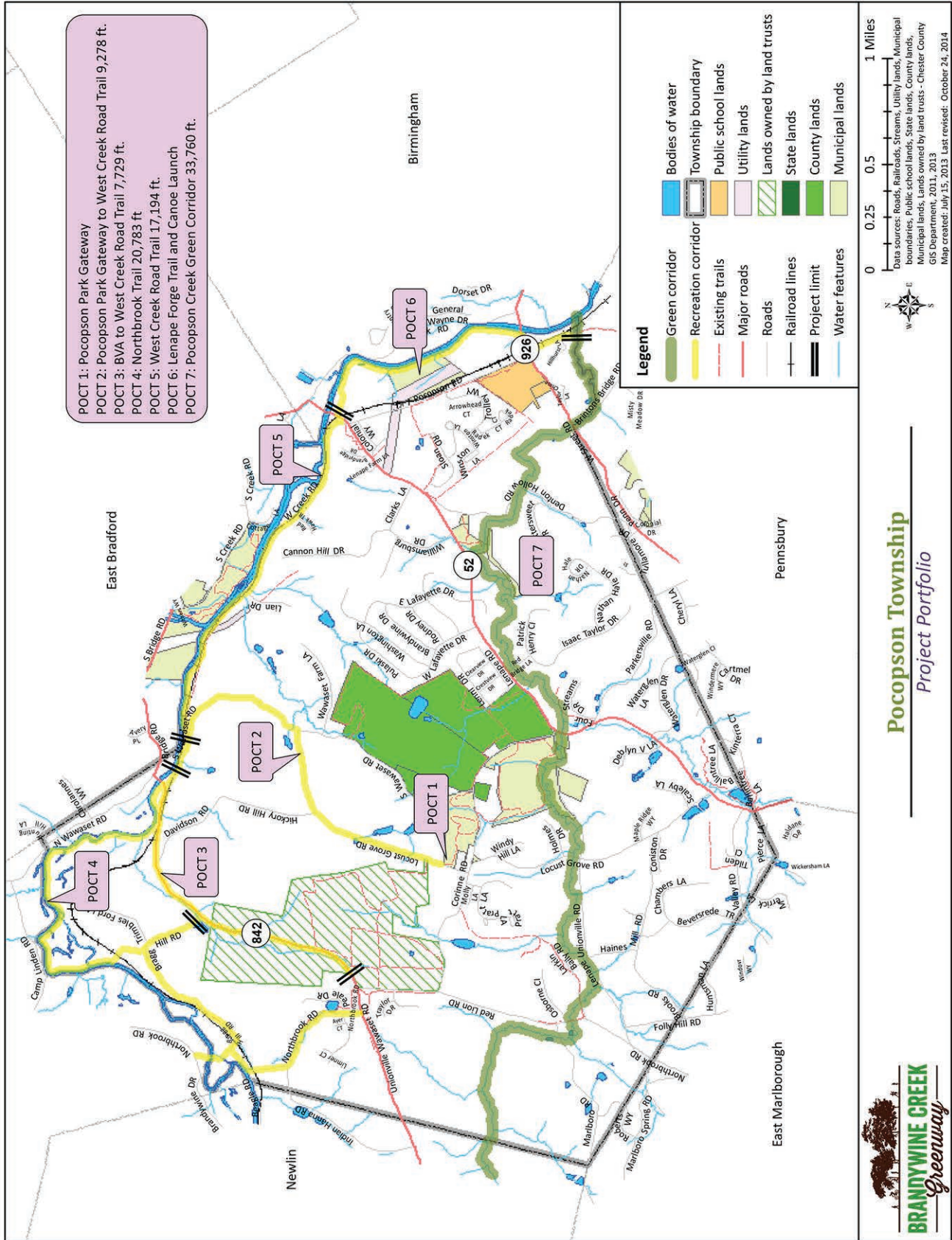
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

POCOPSON TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 8/13/13

Zoning Adopted: 6/15/2006 Zoning Last Amended: 12/3/12	SLDO Adopted: 5/06 SLDO Last Amended: 5/9/11
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> • ZO 250-6: Defines moderately steep slopes as 10 to 20%, very steep slopes as 20%+, and steep slope margins as within 25 feet upslope of any steep slope • ZO 250-87.D: Up to 25% of moderately steep slopes or steep slope margins may be disturbed. Up to 10% of very steep slopes may be disturbed. Land use on very steep slopes is limited to forestry, driveways, and trails. 	
2. Woodlands Protection: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 250-6: Defines woodlands as tree masses of 0.25 acres or more. Designates 3 classifications of woodlands as delineated on the approved Township Woodland Classification Map. • ZO 250-87.K: Up to 15% of Class I or Class II woodland may be disturbed. Up to 25% of any Class III Woodland may be disturbed. 	
3. Wetlands: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 250-6: Defines “Riparian Buffer” in 2 zones. Zone 1 (Inner Riparian Buffer) extends out 15 feet from wetlands, and includes very steep slopes up to 75 feet Zone 2 (Outer Riparian Buffer) extends out 75 feet from wetlands. • ZO 250-87.B: Wetlands may only be disturbed as allowed by state and federal permits. 	
4. Riparian Buffers: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 250-6: Defines “Riparian Buffer” in 2 zones. Zone 1 (Inner Riparian Buffer) extends out 25 feet from any watercourse, and includes very steep slopes up to 100 feet Zone 2 (Outer Riparian Buffer) extends out 100 feet from any watercourse. • ZO 20-87.F: For Zone 1, no disturbance is permitted. For Zone 2, up to 15% may be disturbed. 	
5. Floodplain: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 250-31.A: Establishes a “Floodplain Conservation District” that includes the floodway, flood fringe, and general floodplain area. • ZO 250-38.C: Limits land uses to agriculture, recreation, yards, and forestry, with specific exceptions. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • None: All evaluated standards provide rigorous resource protection. 	



POCOPSON TOWNSHIP

POCT 1

Project Name

Pocopson Park Gateway

Key Partners

Pocopson Township, Chester County Parks and Recreation, DCNR

Project Focus and Location

To upgrade existing facilities and provide new facilities for visitors at the Pocopson Park

- Trailhead kiosk
- Interpretive signage
- Orientation maps
- Greenway guides
- Bicycle parking
- Drinking water
- Short term need

Accomplishments to Date

- Informal discussions within the Township Open Space Committee

Next Steps

- Prepare cost estimates
- Pursue funding
- Completion 1 year project after funding is secured

POCOPSON TOWNSHIP

POCT 2

Project Name

Pocopson Park Gateway to West Creek Road Trail

Key Partners

Pocopson Township, Chester County Parks and Recreation, DCNR, Brandywine Valley Association

Project Focus and Location

To implement planned trail segments in the Pocopson Township Community Trails Master Plan from the Pocopson Park Gateway to the West Creek Road Trail

- Natural surface trail
- Portions follow road
- Portions off road
- Short term need

Accomplishments to Date

- Feasibility study and cost estimates completed
- Existing trail easements in place

Next Steps

- Coordinate partners
- Negotiate with landowners for trail easement
- Pursue funding
- 3 years to implement after funding is secured

POCOPSON TOWNSHIP

POCT 3

Project Name

BVA to West Creek Road Trail

Key Partners

Pocopson Township, Chester County Parks and Recreation, Brandywine Valley Association, DCNR

Project Focus and Location

To implement planned trail segments in the Pocopson Township Community Trails Master Plan, 2010.

Implement trail segments:

- 10103, 10104, and 10105 along Unionville Wawaset Road
- Long term need

Accomplishments to Date

- Feasibility study and cost estimates completed
- One trail easement in place

Next Steps

- Coordinate with PennDOT
- Negotiate with landowners for trail easement
- Pursue funding
- 5 year project after funding is secured

POCOPSON TOWNSHIP

POCT 4

Project Name

Northbrook Trail

Key Partners

Pocopson Township, Chester County Parks and Recreation, Brandywine Valley Association, DCNR, landowners, Northbrook Canoe

Project Focus and Location

To implement planned trail segments in the Pocopson Township Community Trails Master Plan, 2010.
Implement trail segments:

- 10404 at Beagle Road
- 10403 at Northbrook Road
- 10501, 10502, 10503 at Bragg Hill Road
- 10601, 10602, 10603 along the Brandywine
- Long term need

Accomplishments to Date

- Feasibility study and cost estimates completed
- One trail easement in place
- One section complete

Next Steps

- Negotiate with landowners for trail easement
- Pursue funding
- 5 year project after funding is secured

POCOPSON TOWNSHIP

POCT 5

Project Name

West Creek Road Trail

Key Partners

Pocopson Township, Chester County Parks and Recreation, Brandywine Conservancy, DCNR

Project Focus and Location

To implement planned trail segments in the Pocopson Township Community Trails Master Plan, 2010.
Implement trail segments:

- 20302 at West Creek Road
- 20303 at West Creek Road
- Crossing at Route 52
- Add signage to existing trail segments
- Short term need

Accomplishments to Date

- Feasibility study and cost estimates completed
- One trail easement in place
- One section complete

Next Steps

- Negotiate with landowners for trail easements
- Pursue funding
- 2 year project after funding is secured

POCOPSON TOWNSHIP

POCT 6

Project Name

Lenape Forge Trail and Canoe Launch

Key Partners

Pocopson Township, Chester County Parks and Recreation, Brandywine Conservancy, DCNR, Lenape Forge, owner (n/f) Simon Pearce Studio, Northbrook Canoe.

Project Focus and Location

To implement improvements and planned trail segments on lands owned by Pocopson Township along the Brandywine south to Pocopson Creek.

- Implement trail segments 30101 and 30103 along the Brandywine near Lenape Forge as identified in the Trails Master Plan
- Parking
- Interpretive signage
- Canoe/kayak launch
- Fishing area
- Fish cleaning stations
- Seating
- Picnic tables
- Creek-side viewing areas
- Short term need

Accomplishments to Date

- Feasibility study for trail completed
- Informal discussions with Lenape Forge regarding access easement

Next Steps

- Negotiate shared parking with former Simon Pearce owner
- Site design and permitting
- Pursue funding
- 2 year project after funding and easement is secured

POCOPSON TOWNSHIP

POCT 7

Project Name

Pocopson Creek Green Corridor

Key Partners

Pocopson Township, Brandywine Conservancy, DCNR, landowners

Project Focus and Location

To conserve and enhance the Pocopson Creek Minor Corridor

- Reforestation
- Riparian Buffer restoration
- Interpretive signage
- Viewing areas
- Fishing access
- Acquire trail easements as identified in the Trails Master Plan for a natural surface footpath
- Long term need

Accomplishments to Date

- Feasibility study for trail completed
- Some trail easements in place
- Some trail sections completed

Next Steps

- Negotiate missing link trail easements
- Pursue funding
- Design and implementation
- 5 year project

Brandywine Creek Greenway Functions Checklist

SOUTH COATESVILLE BOROUGH

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	
	Foster outdoor education and school access to open space	
	Provide transportation alternatives for walking, bicycle, and equestrian	
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	
	Preserve nationally and municipally-designated historic structures and districts	

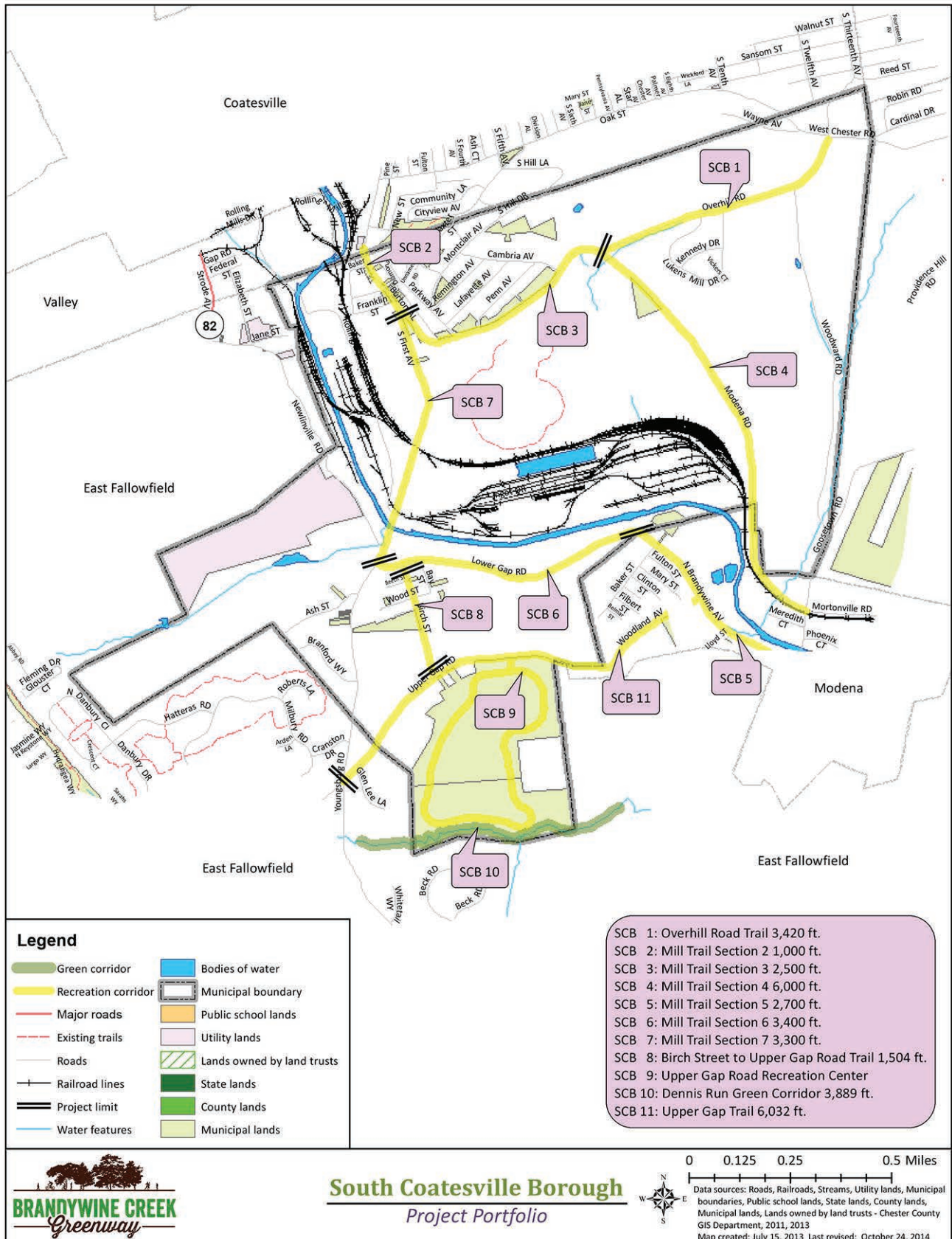
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

SOUTH COATESVILLE BOROUGH

Natural Resource Protection Ordinance Review

Date Reviewed: 8/12/13

Zoning Adopted: 1982 Zoning Last Amended: 7/9/09	SLDO Adopted: 8/98 SLDO Last Amended: 10/14/03
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> • ZO 123-68: Establishes a “Steep Slope Conservation District” composed of slopes of 25%+. • ZO 123-69: Limits land use to preserves, forestry, or yards. 	
2. Woodlands Protection: Somewhat Protected	
<ul style="list-style-type: none"> • SLDO 101-44.1B: Requires the preservation of 12 in. DBH trees. For each 12 in. DBH tree removed, 1 tree of at least 2 in, DBH must be planted. • Notes: Regs. do not detail what “preserved” means, and not clear if the mitigated tree must survive. 	
3. Wetlands: Not Protected	
<ul style="list-style-type: none"> • None. 	
4. Riparian Buffers: Not Protected	
<ul style="list-style-type: none"> • None. 	
5. Floodplain: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 123-62: Establishes a “Flood Hazard Distinct” as areas subject to 100-year floods. • ZO 123-63: Limits land uses to agriculture, recreation, pervious parking and other uses, with exceptions. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • Woodlands: Include regulations that limit disturbance of a woodlands to a maximum of 50%. Such regulations would establish a definition for “woodland” that is defined in a measurable way, such as a definition that is based on the number of trees within a wooded area that have grown to a specific diameter at breast height (dbh). Also, consider adding forestry regulations that: 1.) include exceptions for forestry or timber harvesting, as set forth in the MPC, and 2.) require a timber harvesting plan. Lastly, consider adding tree protection regulations that: 1.) include measures that protect the trees remaining on a construction site from construction activities that could be damaging to trees; 2.) prohibit disturbing specimen trees and PNDI sites unless there is no feasible alternative; and 3.) call for tree replacement if more than a specified area or number of trees are removed. • Wetlands: Include regulations which establish specific wetlands identification and delineation criteria. Add regulations which prohibit the disturbance of a wetland except with state and federal permits. Lastly, consider adding regulations that establish a 50-foot wide margin around all wetlands. Within this 50-foot margin, land disturbance would be limited or prohibited. • Riparian Buffers: Include regulations that establish a riparian buffer which extends 35 to 50 feet from both sides of the stream bank. Also, consider adding requirements that call for the re-vegetation of un-forested riparian buffers. 	



SOUTH COATESVILLE BOROUGH

SCB 1

Project Name

Overhill Road Trail

Key Partners

Coatesville, Chester County, DCNR, DCED, DVRPC

Project Focus and Location

To provide pedestrian and bicycle routes from residential neighborhoods in Coatesville and East Fallowfield Township to the Mill Trail in South Coatesville.

- 3,420 linear feet
- Line striping
- sidewalks
- Signage
- Long term need to begin once the Mill Trail is completed

Accomplishments to Date

- Feasibility examined in the Brandywine Trail Feasibility Study, 2012

Next Steps

- Bring together partners and secure local funding
- Apply for matching grants for implementation
- 1 year to implement

SOUTH COATESVILLE BOROUGH

SCB 2

Project Name

Mill Trail—Section 2

Key Partners

Modena Borough, Coatesville, Chester County Planning Commission, PennDOT, DVRPC, business community, schools

Project Focus and Location

To implement the Brandywine Trail as detailed in the Brandywine Trail Feasibility Study, 2012 from the South Coatesville line at Coatesville to Modena Road.

- 1,000 linear feet
- Line striping
- Signage
- Banners
- Wall murals
- Historic interpretive elements
- Short term need

Accomplishments to Date

- Feasibility Study is complete
- Matching funds in place

Next Steps

- PennDOT permits
- 2 years to completion

SOUTH COATESVILLE BOROUGH

SCB 3

Project Name

Mill Trail—Section 3

Key Partners

Modena Borough, Coatesville, Chester County Planning Commission, PennDOT, DVRPC, business community, schools

Project Focus and Location

To implement the Brandywine Trail as detailed in the Brandywine Trail Feasibility Study, 2012 from Modena Road/First Avenue to Overhill Road.

- 2,500 linear feet
- Line striping
- Signage
- Historic interpretive elements
- Gateway kiosk
- Short term need

Accomplishments to Date

- Feasibility Study is complete
- Matching funds in place

Next Steps

- PennDOT permits
- 2 years to completion

SOUTH COATESVILLE BOROUGH

SCB 4

Project Name

Mill Trail—Section 4

Key Partners

Modena Borough, Coatesville, Chester County Planning Commission, PennDOT, DVRPC, business community, schools

Project Focus and Location

To implement the Brandywine Trail as detailed in the Brandywine Trail Feasibility Study, 2012 from Modena Road/Overhill Road to the bridge over the Brandywine in Modena Borough. 6,000 linear feet.

- 6,000 linear feet
- Line striping
- Signage
- Historic interpretive elements
- Short term need

Accomplishments to Date

- Feasibility Study is complete
- Matching funds in place

Next Steps

- PennDOT permits
- 2 years to completion

SOUTH COATESVILLE BOROUGH

SCB 5

Project Name

Mill Trail—Section 5

Key Partners

Modena Borough, Coatesville, Chester County Planning Commission, PennDOT, DVRPC, business community, schools

Project Focus and Location

To implement the Brandywine Trail as detailed in the Brandywine Trail Feasibility Study, 2012 from Modena Bridge in Modena Borough to South Coatesville Borough Line.

- 2,700 linear feet
- Line striping
- Signage
- Historic interpretive elements
- Intermediate need

Accomplishments to Date

- Feasibility Study is complete
- Matching funds in place

Next Steps

- PennDOT permits
- 2 years to completion

SOUTH COATESVILLE BOROUGH

SCB 6

Project Name

Mill Trail—Section 6

Key Partners

Modena Borough, Coatesville, Chester County Planning Commission, PennDOT, DVRPC, business community, schools

Project Focus and Location

To implement the Brandywine Trail as detailed in the Brandywine Trail Feasibility Study, 2012 from South Coatesville Borough line/Lower Gap Road to South First Avenue.

- 3,400 linear feet
- Line striping
- Signage
- Historic interpretive elements
- Intermediate need

Accomplishments to Date

- Feasibility Study is complete
- Matching funds in place

Next Steps

- PennDOT permits
- 2 years to completion

SOUTH COATESVILLE BOROUGH

SCB 7

Project Name

Mill Trail—Section 7

Key Partners

Modena Borough, Coatesville, Chester County Planning Commission, PennDOT, DVRPC, business community, schools

Project Focus and Location

To implement the Brandywine Trail as detailed in the Brandywine Trail Feasibility Study, 2012 from Lower Gap Road along First Avenue to Modena Road.

- 3,300 linear feet
- Line striping
- Signage
- Historic interpretive elements
- Intermediate need

Accomplishments to Date

- Feasibility Study is complete
- Matching funds in place

Next Steps

- PennDOT permits
- 2 years to completion

SOUTH COATESVILLE BOROUGH

SCB 8

Project Name

Birch Street to Upper Gap Road Trail

Key Partners

Chester County Planning Commission, DCED, DVRPC, business community, bicycle clubs, YMCA, Chester County Health Care community

Project Focus and Location

To implement the Brandywine Trail as detailed in the Brandywine Trail Feasibility Study, 2012 from Lower Gap Road along Birch Street and Upper Gap Road to municipal lands on Upper Gap Road.

- 1,504 linear feet
- Line striping
- Signage
- Long term need

Accomplishments to Date

- Included in the Brandywine Trail Feasibility Study, 2012
- Local roads

Next Steps

- Assemble partners and funding
- 1 year to implement

SOUTH COATESVILLE BOROUGH

SCB 9

Project Name

Upper Gap Road Recreation Center

Key Partners

Modena Borough, Chester County Parks and Recreation, DCNR, DCED, Chester County Health Care Community

Project Focus and Location

To design and construct a community recreation center and trails on lands owned by South Coatesville on Upper Gap Road. The Center would also serve as a location for seniors to meet and interact.

- Upper Gap Road Natural Area trails and scenic vistas
- Architectural design
- Land development process
- Long term need

Accomplishments to Date

- South Coatesville owns land on Upper Gap Road where a recreation center can be constructed
- This project has the political support of Borough Council

Next Steps

- Community workshop to determine needs
- Work with an architect to develop a building and site design
- Interior design
- Cost estimates
- Secure local funding
- Apply for grants
- 5 years to ribbon cutting

SOUTH COATESVILLE BOROUGH

SCB 10

Project Name

Dennis Run Green Corridor

Key Partners

Modena Borough, South Coatesville Borough, East Fallowfield Township, Chester County Conservation District, Brandywine Valley Association, Brandywine Conservancy, DCNR

Project Focus and Location

To conserve and protect the natural resources along Dennis Run.

- 3,889 linear feet
- Restoration of degraded areas
- Habitat enhancement
- BMPs for water quality
- Fencing
- Interpretive signage
- Ongoing need

Accomplishments to Date

- Property along Dennis Run is owned by the Borough

Next Steps

- Contact the Brandywine Conservancy regarding funding for reforestation
- Coordinate volunteer tree planting
- 2 years to complete a riparian buffer reforestation project

SOUTH COATESVILLE BOROUGH

SCB 11

Project Name

Upper Gap Trail

Key Partners

Modena Borough, South Coatesville Borough, East Fallowfield Township, Chester County, DCNR, Brandywine Conservancy

Project Focus and Location

To implement a trail from Upper Gap Road/Youngsburg Road along Youngsburg Road and Woodland Avenue to North Brandywine Avenue in Modena.

- 6,032 linear feet
- Line striping
- Signage
- Long term need once the Mill Trail is completed

Accomplishments to Date

- Feasibility examined in the Brandywine Trail Feasibility Study, 2012
- Municipal roads

Next Steps

- Meet with Modena Borough and East Fallowfield Township
- Pursue funding with Chester County, DCNR, PennDOT, private donations
- 1 year to design and implement

Brandywine Creek Greenway Functions Checklist

UWCHLAN TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	✓
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	
	Preserve nationally and municipally-designated historic structures and districts	✓

NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

UWCHLAN TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 8/7/13

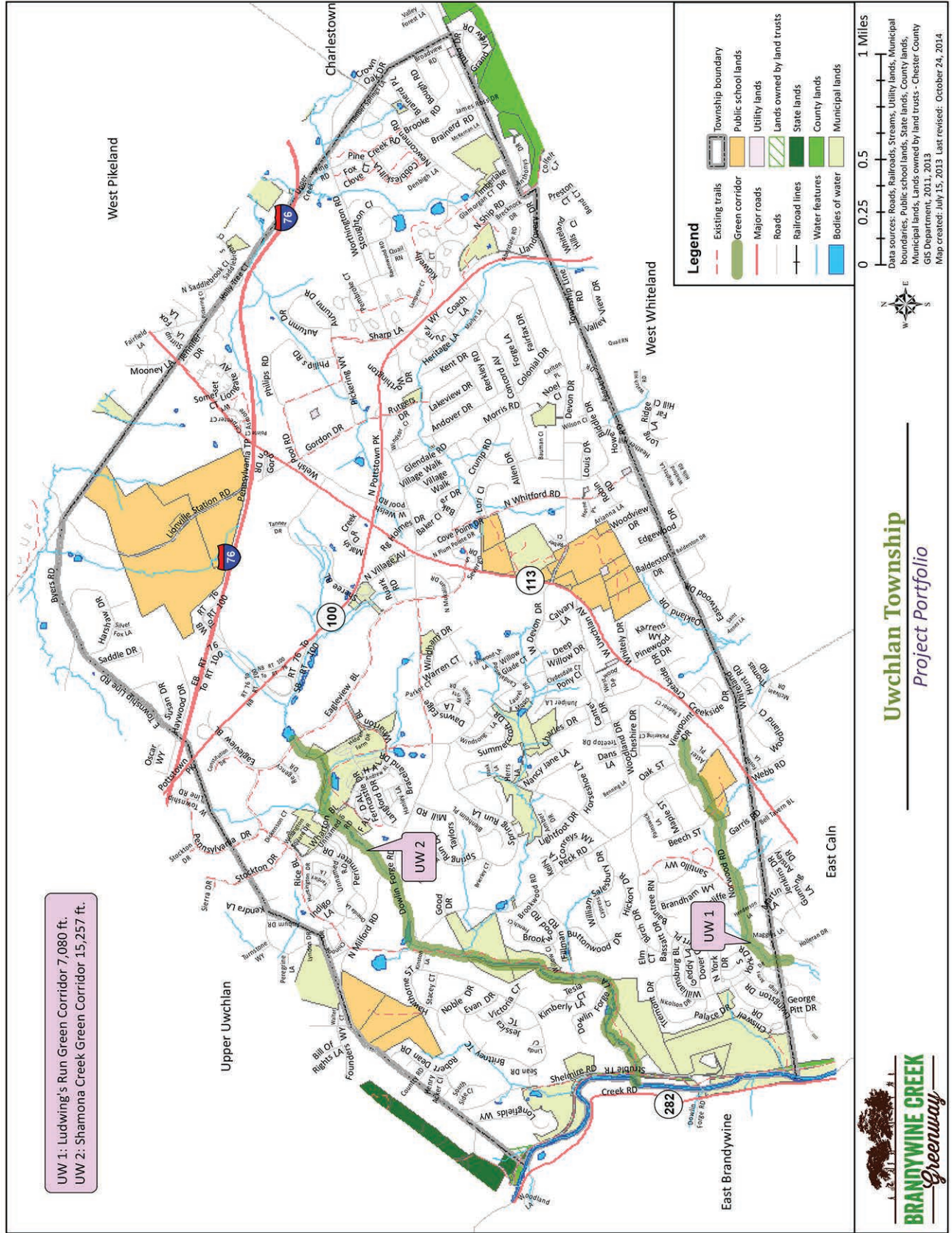
Zoning Adopted: 5/10 Zoning Last Amended: 12/13	SLDO Adopted: 4/8/13 SLDO Last Amended: 12/9/1991
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Somewhat Protected	
<ul style="list-style-type: none"> • SLDO 406.1: Requires an Environmental Impact Assessment (EIA) that depicts 0-15%, 15-25%, and 25%+ slopes. 	
2. Woodlands Protection: Somewhat Protected	
<ul style="list-style-type: none"> • SLDO 406.1.F: EIA must map woodlands, hedgerows and specimen trees, and a woodland management plan must be provided. 	
3. Wetlands: Somewhat Protected	
<ul style="list-style-type: none"> • ZO 301: Defines “Riparian Setback and Buffer Area” as extending out 50 feet from any wetland as determined by the ACOE. • SLDO 406.1.e: Requires a wetland delineation report if any wetland disturbance is provided. 	
4. Riparian Buffers: Somewhat Protected	
<ul style="list-style-type: none"> • ZO 301: Defines “Riparian Setback and Buffer Area” as extending out 50 feet from any permanent or impermanent water body. • ZO 510.9: Prohibits all construction except pervious trails, undeveloped woods or meadows, passive recreation or accessory residential structure (such as decks), with specific exceptions. 	
5. Floodplain: Rigorously Protected	
<ul style="list-style-type: none"> • 510.3: Defines floodplain as the 100-year floodplain. • 501.8: Prohibits all structures and buildings within the floodplain, with specific exceptions. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • Steep Slopes: maximum disturbance limitations of 30% for areas with slopes of 15 to 25%. Include maximum disturbance limitations of 15% for areas with slopes greater than 25%. Also consider adding steep slope regulations that include: 1.) a description of the slope measuring method; 2.) a listing of specific activities or uses prohibited on steep slopes; and 3.) standards that provide additional guidance for minimizing the disturbance, grading, and erosion of steep slopes. • Woodlands: Include regulations that limit disturbance of a woodlands to a maximum of 50%. Such regulations would establish a definition for “woodland” that is defined in a measurable way, such as a definition that is based on the number of trees within a wooded area that have grown to a specific diameter at breast height (dbh). Also, consider adding forestry regulations that: 1.) include exceptions for forestry or timber harvesting, as set forth in the MPC, and 2.) require a timber harvesting plan. Lastly, consider adding tree protection regulations that: 1.) include measures that protect the trees remaining on a construction site from construction activities that could be damaging to trees; 2.) prohibit disturbing specimen trees and PNDI sites unless there is no feasible alternative; and 3.) call for tree replacement if more than a specified area or number of trees are removed. 	

continued on page 198

UWCHLAN TOWNSHIP, CONT.

Natural Resource Protection Ordinance Review

- **Wetlands:** Include regulations which establish specific wetlands identification and delineation criteria. Add regulations which prohibit the disturbance of a wetland except with state and federal permits. Lastly, consider adding regulations that establish a 50-foot wide margin around all wetlands. Within this 50-foot margin, land disturbance would be limited or prohibited.
- **Riparian Buffers:** Include regulations that establish a riparian buffer which extends 75 to 100 feet from both sides of the stream bank. Also, consider adding requirements that 1.) call for the re-vegetation of un-forested riparian buffers, and 2.) establish a two-tiered riparian buffer with stricter standards applied adjacent to streams. This two-tiered buffer would include a 25-35 foot-wide inner buffer in which disturbance is prohibited, and a 50 to 65 foot-wide outer buffer in which a maximum disturbance limit of 20% is allowed.



UWCHLAN TOWNSHIP

UW 1

Project Name

Ludwig's Run Green Corridor

Key Partners

East Caln Township, Chester County, PennDOT, DEP, DCNR, HOAs, land trusts, landowners

Project Focus and Location

To promote the conservation and preservation of water quality along Ludwig's Run along Norwood Road from the municipal boundary to Uwchlan Hills Elementary School.

- Conservation easements
- Riparian buffer restoration
- Invasive vegetation management
- Land and water stewardship BMPs
- Fish habitat restoration
- Stream bank stabilization
- Ongoing need

Accomplishments to Date

- Largely forested
- Parallels Norwood Road/highly visible
- Portions owned by HOAs
- Portions owned or eased by land trust

Next Steps

- Inventory existing resources
- Identify opportunities for conservation and preservation

UWCHLAN TOWNSHIP

UW 2

Project Name

Shamona Creek Green Corridor

Key Partners

Chester County, DEP, DCNR, HOAs, land trusts, landowners

Project Focus and Location

To promote the conservation and preservation of water quality along Shamona Creek from the Struble Trail to Eagleview.

- Conservation easements
- Riparian buffer restoration
- Invasive vegetation management
- Land and water stewardship BMPs
- Fish habitat restoration
- Stream bank stabilization
- Gateway kiosk and other improvements
- Ongoing need

Accomplishments to Date

- Existing footpaths and municipal park
- Largely forested
- Parallels Dowlin Forge Road/highly visible
- Portions owned by HOAs
- Portions owned by municipality

Next Steps

- Inventory existing resources
- Identify opportunities for conservation and preservation

Brandywine Creek Greenway Functions Checklist

UPPER UWCHLAN TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	✓
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	✓
	Promote recreation and public use of municipal-, county-, and state-owned open space	
	Foster outdoor education and school access to open space	
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	✓
	Protect state- and municipally-designated scenic resources	
	Preserve nationally and municipally-designated historic structures and districts	

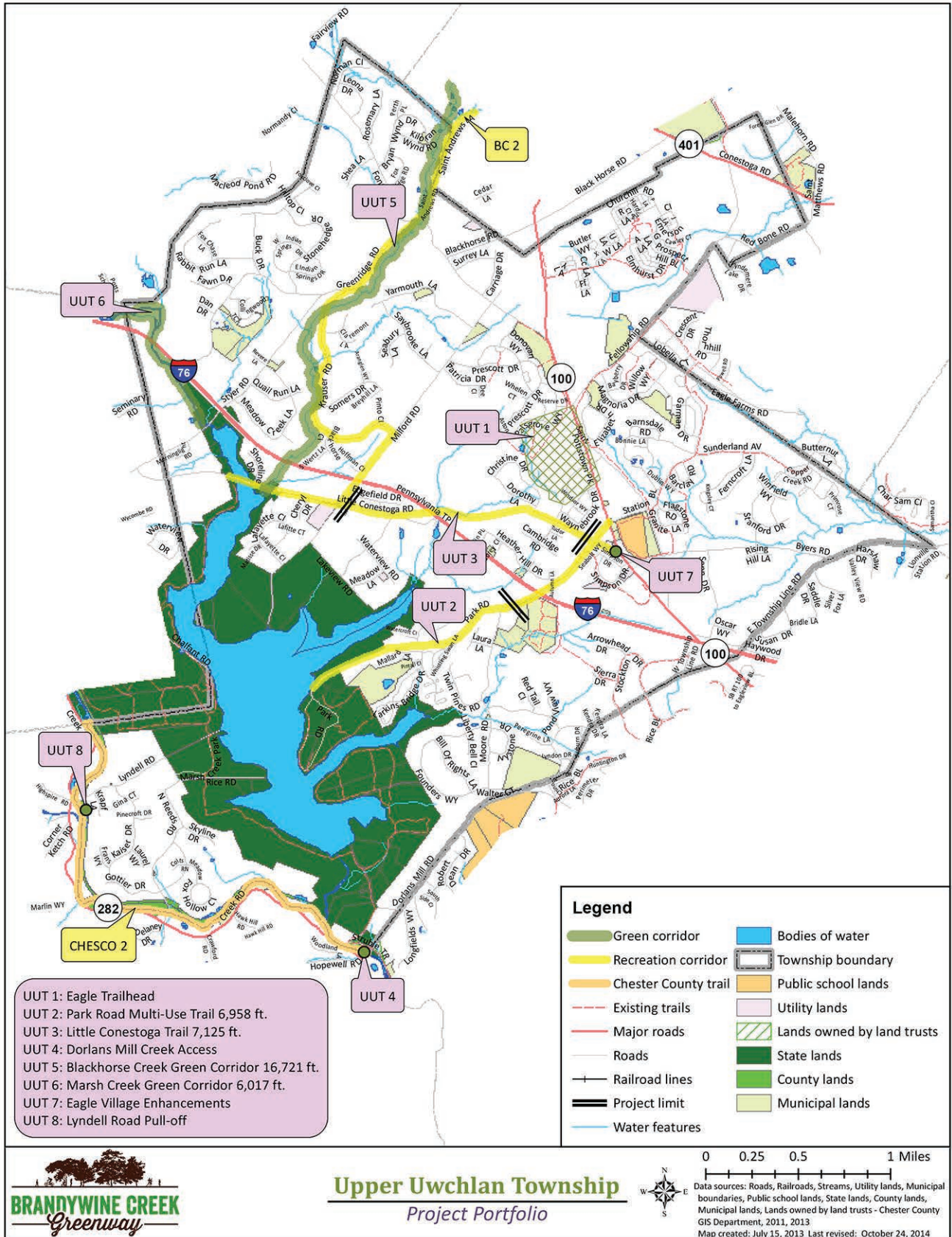
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

UPPER UWCHLAN TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 8/6/13

Zoning Adopted: 9/05 Zoning Last Amended: 11/19/12	SLDO Adopted: 9/2005 SLDO Last Amended: 9/17/2010
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes(15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> • ZO 200-107.A: Defines “Steep Slope Conservation District” as Prohibitive Slopes (25%+) and Precautionary Slopes (15% to 25%). • ZO 200-107.D: Limits land uses to parks, forestry, driveways, and yards, with specific exceptions. 	
2. Woodlands Protection: Rigorously Protected	
<ul style="list-style-type: none"> • SLDO 162-55.B: Woodland and hedgerow shall be minimized to no more than 25% to 50% depending on specific criteria. Woodland replacement is required for specified large-scale woodland disturbance activities. 	
3. Wetlands: Rigorously Protected	
<ul style="list-style-type: none"> • SLDO 162-55.C: No wetlands shall be disturbed, except if permits have been obtained. 	
4. Riparian Buffers: Rigorously Protected	
<ul style="list-style-type: none"> • SLDO 162.5: Riparian buffer extends 75 feet from a stream bank and includes wetlands, a 25 feet wetland buffer, and all hydric soils. • SLDO 162-55.D: No disturbance permitted within the riparian buffer. 	
5. Floodplain: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 200-53.A: Defines “Flood Hazard District” as the floodway area, the flood fringe area, and the general floodplain area. • ZO 200-53.B: Limits land uses to agriculture, recreation, and yards, with specific exceptions. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • None: All evaluated standards provide rigorous resource protection. 	



UPPER UWCHLAN TOWNSHIP

UUT 1

Project Name

Eagle Trailhead

Key Partners

Chester County, DCNR, PA DEP, local businesses

Project Focus and Location

To provide a destination trailhead at the Village of Eagle at its Upland Farms Park.

- Parking, bike racks, public restrooms, drinking water
- Orientation signage
- Outdoor recreation center with multi-use trail access to Marsh Creek State Park and the Struble Trail, hiking gateway to the Brandywine Trail
- Sidewalk connections into shops and businesses in Village of Eagle
- Short term need

Accomplishments to Date

- Property owned by the municipality includes house and meeting space
- Conceptual master plan completed and trail construction is scheduled to begin in fall 2014.
- Village Transportation Plan/Trail Connections – design and engineering of trails along Route 100 and Little Conestoga Road to be constructed in 2015.
- Park Road Trail Phase IV (Hickory Park to Marsh Creek State Park) plans approved by PennDOT and submitted for environmental review as of September 2014.

Next Steps

- Assemble partners and secure funding
- Prepare design and engineering plans—2 years
- Implementation—3 years

UPPER UWCHLAN TOWNSHIP

UUT 2

Project Name

Park Road Multi-Use Trail

Key Partners

DCNR, PennDOT, Chester County

Project Focus and Location

To extend the Park Road Trail from its terminus at Hickory Park to Marsh Creek State Park.

- Off-road, multi-use trail
- Pedestrian and bicycle use
- Short term need

Accomplishments to Date

- Engineering and design nearing completion
- Construction scheduled for 2015
- Funding secured

Next Steps

- Implementation—2 years

UPPER UWCHLAN TOWNSHIP

UUT 3

Project Name

Little Conestoga Trail

Key Partners

PennDOT, landowners, Chester County, DVRPC, local businesses

Project Focus and Location

To provide a hiking trail connection from the Village of Eagle and the Eagle Trailhead to the Brandywine Trail along a route that parallels Little Conestoga Road.

- Portions off-road
- Portions sidewalks
- Long term need after the Frame Tract is built out

Accomplishments to Date

- Frame Tract granted preliminary plan approval
- Consistent with Comprehensive Plan and with the Trails Master Plan

Next Steps

- Amend Comprehensive Plan and/or Official Map to show desired trail connection
- Discuss with developers of lands along Little Conestoga Road and Milford Road to provide a trail connection as part of a subdivision and land development plan application

UPPER UWCHLAN TOWNSHIP

UUT 4

Project Name

Dorlans Mill Creek Access

Key Partners

Marsh Creek State Park, DCNR, Chester County

Project Focus and Location

To enhance access to the Brandywine Creek for anglers, wading, and informal canoe launch

- Promote access to the creek for recreation and viewing along the Struble Trail
- Additional parking
- Signage
- Seating
- Portable restroom facilities
- Short term need

Accomplishments to Date

- Chester County has submitted preliminary plans to UUT for expansion of a parking facility and pedestrian crossings at Dorlans Mill
- Lands owned by Chester County and Pa DCNR/Marsh Creek State Park

Next Steps

- Assemble partners and prepare concept plan
- Secure funding
- Perform design, engineering—2 years
- Construction—2 years

Brandywine Creek Greenway Functions Checklist

VALLEY TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	✓
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	✓
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	
	Provide transportation alternatives for walking, bicycle, and equestrian	
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	✓
	Preserve nationally and municipally-designated historic structures and districts	

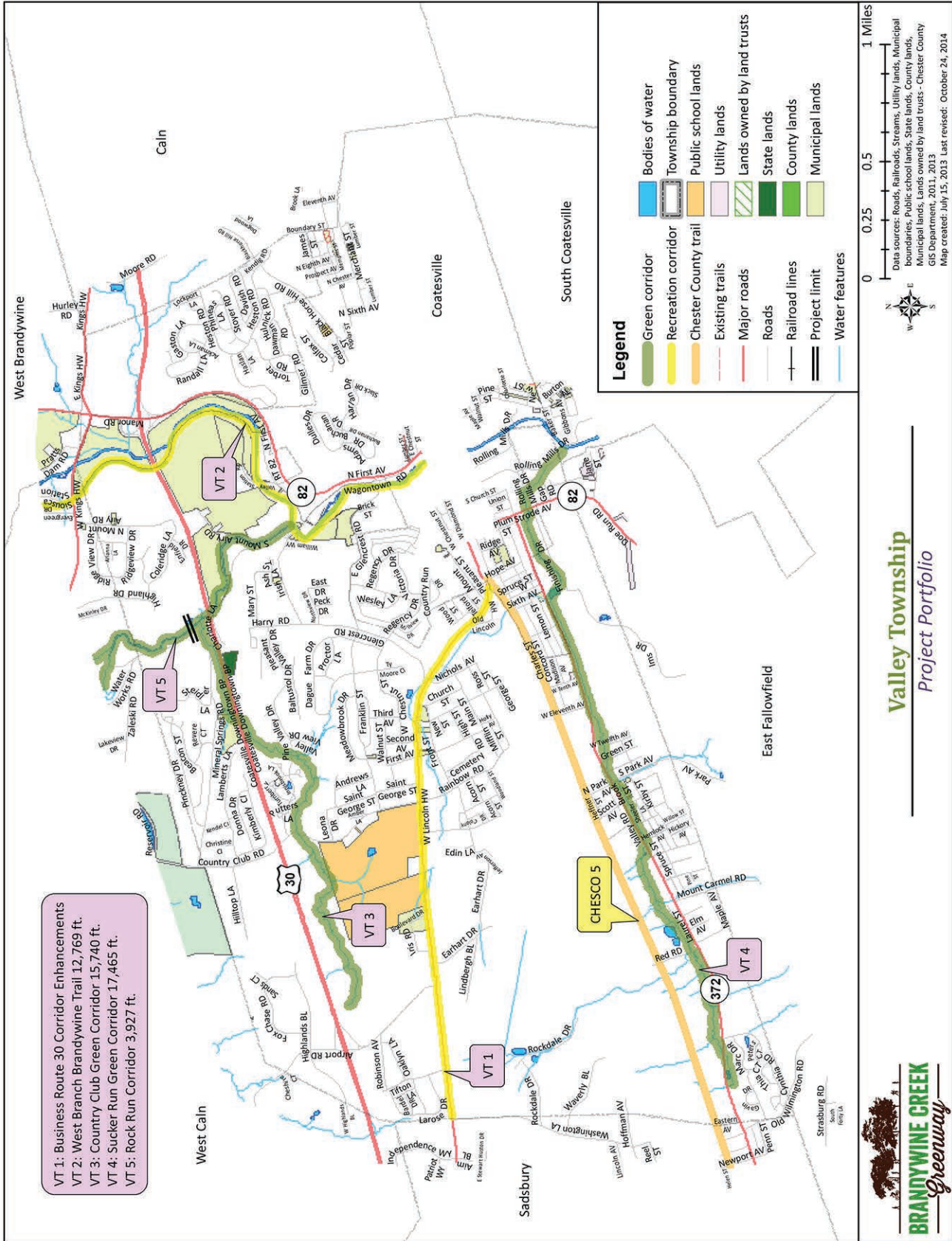
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

VALLEY TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 8/6/13

Zoning Adopted: 1/2/01 BEING UPDATED Zoning Last Amended: 4/16/13	SLDO Adopted: 6/20/89 SLDO Last Amended: 4/16/13
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> • ZO 318.2: For lots with 50% or more of 15-20% slopes, no disturbance, with specific exceptions. • ZO 318.3: For lots with 20-25% slopes, no disturbance, with specific exceptions. • ZO 318.4: For lots with 25%+ slopes, no disturbance, with specific exceptions. 	
2. Woodlands Protection: Somewhat Protected	
<ul style="list-style-type: none"> • SLDO 611.02: Limits disturbing healthy trees of 6 in. DBH or more, unless they are within 15 feet of any planned improvement. Sets criteria for replacement trees. 	
3. Wetlands: Not Protected	
<ul style="list-style-type: none"> • None. 	
4. Riparian Buffers: Not Protected	
<ul style="list-style-type: none"> • None. 	
5. Floodplain: NA	
<ul style="list-style-type: none"> • SLDO 610: References the Official Floodplain Ordinance of Valley Township. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • Woodlands: Include regulations that limit disturbance of a woodlands to a maximum of 50%. Such regulations would establish a definition for “woodland” that is defined in a measurable way, such as a definition that is based on the number of trees within a wooded area that have grown to a specific diameter at breast height (dbh). Also, consider adding forestry regulations that: 1.) include exceptions for forestry or timber harvesting, as set forth in the MPC, and 2.) require a timber harvesting plan. Lastly, consider adding tree protection regulations that: 1.) include measures that protect the trees remaining on a construction site from construction activities that could be damaging to trees; 2.) prohibit disturbing specimen trees and PNDI sites unless there is no feasible alternative; and 3.) call for tree replacement if more than a specified area or number of trees are removed. • Wetlands: Include regulations which establish specific wetlands identification and delineation criteria. Add regulations which prohibit the disturbance of a wetland except with state and federal permits. Lastly, consider adding regulations that establish a 50-foot wide margin around all wetlands. Within this 50-foot margin, land disturbance would be limited or prohibited. • Riparian Buffers: Include regulations that establish a riparian buffer which extends 75 to 100 feet from both sides of the stream bank. Also, consider adding requirements that 1.) call for the re-vegetation of un-forested riparian buffers, and 2.) establish a two-tiered riparian buffer with stricter standards applied adjacent to streams. This two-tiered buffer would include a 25-35 foot-wide inner buffer in which disturbance is prohibited, and a 50 to 65 foot-wide outer buffer in which a maximum disturbance limit of 20% is allowed. • Floodplains: Include regulations that prohibit both land disturbance and the construction of new structures within a floodplain (which includes both the floodway and the flood fringe.) 	



VALLEY TOWNSHIP

VT 1

Project Name

Business Route 30 Corridor Enhancements

Key Partners

Chester County, DCNR, DVRPC, PennDOT

Project Focus and Location

To design and construct streetscape improvements along Business Route 30 from Mount Alto Rd to Washington Ave.

- Sidewalks
- Street trees
- Bicycle lanes and parking
- Seating
- Lighting
- Signage
- Long term need

Accomplishments to Date

– Informal discussions with the Executive Director

Next Steps

- Assemble partners and secure funding
- Feasibility Study and Master Plan – 3 years
- Implementation - 3 years

VALLEY TOWNSHIP

VT 2

Project Name

West Branch Brandywine Trail

Key Partners

Chester County Parks and Recreation, DCNR, Coatesville, landowners, Arcelor Mittal, Courtyard by Marriott, West Brandywine Township

Project Focus and Location

To design, engineer and implement a multi-use trail from the River Walk Trail in Coatesville to Hibernia County Park via West Brandywine Township.

- Portions follow abandoned railroad
- Portions follow low volume roadways/share the road
- Portions through trail easements
- Short term need

Accomplishments to Date

– Consistent with Comprehensive Plan (TBC)

Next Steps

- Assemble partners and secure funding
- Feasibility Study and Master Plan – 3 years
- Implementation – 3 to 6 years

VALLEY TOWNSHIP

VT 3

Project Name

Country Club Green Corridor

Key Partners

Landowners, Brandywine Conservancy, Brandywine Valley Association,

Project Focus and Location

To protect water quality along the headwater streams to Rock Run south of Business Route 30 from Airport Road to the Brandywine.

- Promote riparian buffer restoration and reforestation of steep slopes where feasible
- Promote agricultural best management practices including stream fencing and controlled stream crossings for livestock
- Facilitate and promote the use of conservation easements, agricultural easements and TDR
- Reforestation
- Natural area restoration
- Short term need

Accomplishments to Date

– Consistent with Comprehensive Plan (TBC)

Next Steps

- Detailed mapping and analysis of opportunities
- Meet with partnering organizations
- Ongoing efforts required

VALLEY TOWNSHIP

VT 4

Project Name

Sucker Run Green Corridor

Key Partners

Chester County Parks and Recreation, DCNR, Coatesville

Project Focus and Location

To enhance impaired water quality along Sucker Run from Old Wilmington Road to Strode Ave.

- Promote riparian buffer restoration and reforestation of steep slopes where feasible
- Promote agricultural best management practices including stream fencing and controlled stream crossings for livestock
- Facilitate and promote the use of conservation easements, agricultural easements and TDR
- Reforestation
- Natural area restoration
- Short term need

Accomplishments to Date

– Consistent with Comprehensive Plan (TBC)

Next Steps

- Detailed mapping and analysis of opportunities
- Meet with partnering organizations
- Ongoing efforts required

VALLEY TOWNSHIP

VT 5

Project Name

Rock Run Green Corridor

Key Partners

West Caln Township, Chester County, DEP, land trusts, landowners

Project Focus and Location

To promote the conservation and preservation of water quality along both branches of Rock Run.

- Conservation easements
- Riparian buffer restoration
- Invasive vegetation management
- Land and water stewardship BMPs
- Stormwater BMPs
- Agricultural BMPs
- Fish habitat restoration
- Stream bank stabilization
- Ongoing need
- Short term need

Accomplishments to Date

- Portions in Coatesville Country Club
- Portions privately owned or eased by land trusts
- Portions owned or eased by land trust

Next Steps

- Inventory existing resources
- Identify opportunities for conservation and preservation

Brandywine Creek Greenway Functions Checklist

WALLACE TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	✓
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	
	Preserve nationally and municipally-designated historic structures and districts	✓

NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

WALLACE TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 8/7/13

Zoning Adopted: 5/05 Zoning Last Amended: 5/2/13	SLDO Adopted: 7/22/12 SLDO Last Amended: None
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> • ZO 1213.B: For 15-20% slopes, up to 10% disturbance and up to 5% impervious coverage is permitted. • ZO 1213.C: For 20% slopes, no structures, and up to 5% impervious coverage is permitted. 	
2. Woodlands protection: Rigorously Protected	
<ul style="list-style-type: none"> • SLDO 501.D.5: Limits Disturbance to no more than 10% of Class 1 forests, 15% of Class 2 forests, and 25% of Class 3 forest. 	
3. Wetlands: Somewhat Protected	
<ul style="list-style-type: none"> • ZO 802.A: Defines “Flood Hazard and Wet Soils District” as including land within 50 feet of a waterbody or wetlands, and other features. • ZO 807.A: Restricts uses to agriculture and forestry, with specific exceptions. 	
4. Riparian Buffers: Rigorously Protected	
<ul style="list-style-type: none"> • SLDO 626.D: Establishes a buffer of at least 50 feet from streams and swales that “shall be maintained in a natural state.” 	
5. Floodplain: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 802.A: Defines “Flood Hazard and Wet Soils District” as including 100-year floodplain, and other features. • ZO 807.A: Restricts uses to agriculture and forestry, with specific exceptions. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • Wetlands: Include regulations which establish specific wetlands identification and delineation criteria. Add regulations which prohibit the disturbance of a wetland except with state and federal permits. Lastly, consider adding regulations that establish a 50-foot wide margin around all wetlands. Within this 50-foot margin, land disturbance would be limited or prohibited. 	



WALLACE TOWNSHIP

WT 1

Project Name

Valhalla Loop Trail

Key Partners

Valhalla Brandywine Landowner/developer, adjacent landowners, PennDOT, Chester County

Project Focus and Location

To provide for a multi-use trail through the Valhalla Brandywine community that links into the future Struble Trail.

- Portions in future protected open space
- Portions follow existing roadways
- Constructed as part of the land development
- Long term need to be completed as a component of future land development, if it happens

Accomplishments to Date

- Recent land development proposal includes a multi-use trail network throughout the project

Next Steps

- Monitor land development applications
- Review plans for required pedestrian and trail connections
- Multi-year effort contingent upon the land development process

WALLACE TOWNSHIP

WT 2

Project Name

Burgess Park Water Access

Key Partners

Natural Lands Trust, DCNR, Chester County

Project Focus and Location

To provide access to the Brandywine Creek at Burgess Park.

- Parking facilities
- Recreational tail loop
- Canoe/kayak launch site
- Signage
- Picnic facilities
- Long term need

Accomplishments to Date

- Consistent with Comprehensive Plan
- Located along the future Northern Struble Trail

Next Steps

- Coordinate with key partners to secure funding
- Feasibility Study and Master Plan
- Design, engineering and cost estimate—3 years
- Implementation—3 years

WALLACE TOWNSHIP

WT 3

Project Name

Glenmoore Gateway Enhancements

Key Partners

Natural Lands Trust, PennDOT, landowners, Chester County, DVRPC, local businesses

Project Focus and Location

To provide pedestrian facilities in the village of Glenmoore that will allow safe routes for walking among neighborhoods, parks, trails and businesses.

- Portions sidewalks
- Portions Struble Trail
- Portions paved shoulder
- Streetscape enhancements
- Traffic calming
- Gateway kiosk
- Short term need

Accomplishments to Date

- Struble Trail Feasibility Study underway
- Consistent with Comprehensive Plan

Next Steps

- Assemble key partners and secure funding
- Feasibility Study and Conceptual Master Plan—2 years
- Design and engineering, cost estimates—2 years
- Implementation in phases contingent upon funding—3-6 years

WALLACE TOWNSHIP

WT 4

Project Name

North Branch Indian Run Green Corridor

Key Partners

Natural Lands Trust, Brandywine Conservancy, Brandywine Valley Association, landowners

Project Focus and Location

To preserve and enhance water quality along the North Branch Indian Run from Route 82 to the Brandywine.

- Promote riparian buffer restoration and reforestation of steep slopes where feasible
- Promote agricultural best management practices including stream fencing and controlled stream crossings for livestock
- Facilitate and promote the use of conservation easements, agricultural easements and TDR
- Short term need

Accomplishments to Date

- Currently not an impaired stream
- Majority of the creek has a forested buffer

Next Steps

- Promote conservation easements and agricultural easements
- Multi-year effort to cultivate landowners

WALLACE TOWNSHIP

WT 5

Project Name

West Branch Indian Run Green Corridor

Key Partners

Natural Lands Trust, Brandywine Conservancy, Brandywine Valley Association, landowners

Project Focus and Location

To preserve and enhance water quality along the West Branch Indian Run from the western municipal boundary to the Brandywine.

- Promote riparian buffer restoration and reforestation of steep slopes where feasible
- Promote agricultural best management practices including stream fencing and controlled stream crossings for livestock
- Facilitate and promote the use of conservation easements, agricultural easements and TDR
- Short term need

Accomplishments to Date

- Currently not an impaired stream
- Majority of the creek has a forested buffer

Next Steps

- Promote conservation easements and agricultural easements
- Multi-year effort to cultivate landowners

WALLACE TOWNSHIP

WT 6

Project Name

Rose Pointe Green Corridor

Key Partners

Natural Lands Trust, Brandywine Conservancy, Brandywine Valley Association, landowners

Project Focus and Location

To preserve and enhance water quality along an unnamed tributary to the Brandywine Creek from Rose Pointe Road to the Brandywine.

- Promote riparian buffer restoration and reforestation of steep slopes where feasible
- Promote agricultural best management practices including stream fencing and controlled stream crossings for livestock
- Facilitate and promote the use of conservation easements, agricultural easements and TDR
- Short term need

Accomplishments to Date

- Currently not an impaired stream
- Majority of the creek has a forested buffer

Next Steps

- Promote conservation easements and agricultural easements
- Multi-year effort to cultivate landowners

WALLACE TOWNSHIP

WT 7

Project Name

Marsh Creek Green Corridor

Key Partners

Natural Lands Trust, Brandywine Conservancy, Brandywine Valley Association, DCNR, Chester County, landowners

Project Focus and Location

To preserve and enhance water quality along Marsh Creek along the boundary of Wallace Township.

- Promote riparian buffer restoration and reforestation of steep slopes where feasible
- Promote agricultural best management practices including stream fencing and controlled stream crossings for livestock
- Facilitate and promote the use of conservation easements, agricultural easements and TDR
- Short term need

Accomplishments to Date

- Currently not an impaired stream
- Majority of the creek has a forested buffer

Next Steps

- Promote conservation easements and agricultural easements
- Multi-year effort to cultivate landowners

Brandywine Creek Greenway Functions Checklist

WEST BRADFORD TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	✓
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	✓
	Protect state- and municipally-designated scenic resources	
	Preserve nationally and municipally-designated historic structures and districts	

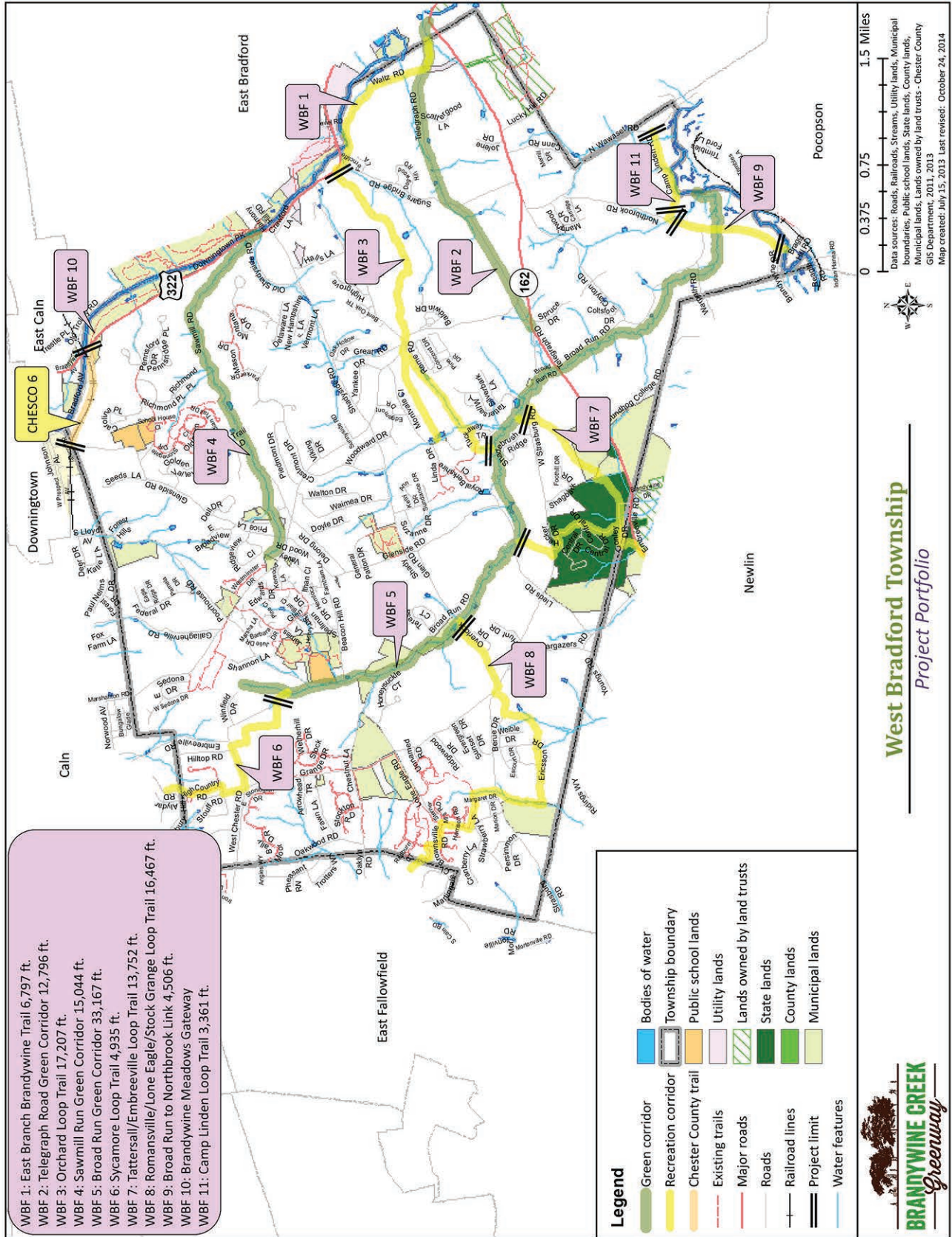
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

WEST BRADFORD TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 7/22/13

Zoning Adopted: 5/27/2008 Zoning Last Amended: 5/14/13	SLDO Adopted: 8/8/2006 SLDO Last Amended: 8/9/11
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes, (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> • ZO 810: Defines steep slopes as 20%+.7/22/13 • ZO 810.A: Limits uses to recreation, forestry, single-family dwellings (subject to requirements), and roads (subject to requirements). 	
2. Woodlands Protection: Somewhat Protected	
<ul style="list-style-type: none"> • SLDO 529.B.:Existing vegetation, such as wood lots, hedgerows, and trees with a caliper of 2 in.+ at 3 feet, should be preserved wherever possible. Existing plants and trees with a caliper of 6 in.+ shall be preserved wherever possible during construction. 7/22/13 • ZO 811.A: Requires permit to remove 30+ trees with 3 in. DBH on any tract of land >1 acre 	
3. Wetlands: Not Protected	
<ul style="list-style-type: none"> • None. 7/22/13 	
4. Riparian Buffers: Rigorously Protected	
<ul style="list-style-type: none"> • SLDO 592.C.1: Establishes two Riparian Buffer Zones: Zone 1/ Inner Buffer extends at least 35 feet from water body. Zone 2/Outer Buffer extends from Zone 1 out to 70 feet 7/22/13 • SLDO 592.C.2: No disturbance in Zone 1, with specific exceptions. No more than 10% of Zone 2 shall be disturbed, with specific exceptions. For development on land with no vegetated riparian buffer, vegetation shall be established. 7/22/13 	
5. Floodplain: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 703.D: Establishes Flood Hazard Overlay District consisting of Floodway, Flood Fringe and “Approximate Floodplain. • ZO 705.A: Uses limited to agriculture, pasture, orchards, forestry, recreation, game farm and nature preserves. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • Woodlands: Include regulations that limit disturbance of a woodlands to a maximum of 50%. Such regulations would establish a definition for “woodland” that is defined in a measurable way, such as a definition that is based on the number of trees within a wooded area that have grown to a specific diameter at breast height (dbh). Also, consider adding forestry regulations that: 1.) include exceptions for forestry or timber harvesting, as set forth in the MPC, and 2.) require a timber harvesting plan. Lastly, consider adding tree protection regulations that: 1.) include measures that protect the trees remaining on a construction site from construction activities that could be damaging to trees; 2.) prohibit disturbing specimen trees and PNDI sites unless there is no feasible alternative; and 3.) call for tree replacement if more than a specified area or number of trees are removed. • Wetlands: Include regulations which establish specific wetlands identification and delineation criteria. Add regulations which prohibit the disturbance of a wetland except with state and federal permits. Lastly, consider adding regulations that establish a 50-foot wide margin around all wetlands. Within this 50-foot margin, land disturbance would be limited or prohibited. 	



WEST BRADFORD TOWNSHIP

WBFT 1

Project Name

East Branch Brandywine Trail

Key Partners

Chester County Planning Commission, Brandywine Conservancy, DCNR, Martin Foundation, private landowners

Project Focus and Location

To permanently protect the Brandywine Trail as a historic public footpath from Stroud Preserve to Route 322.

- Negotiate and record trail easements with landowners
- Implement improvements such as fencing, bridges, signage as required
- Promote the trail for public use
- Short term need

Accomplishments to Date

- The trail is already in existence on private property and along public roads
- Portions along private property are not open to the public
- Shown as proposed trail or sidewalk on Map 5-2 of Comprehensive Plan
- Shown in the West Bradford Township Greenways, Trails and Gateways Plan

Next Steps

- Feasibility Study to determine alignment options and costs
- Work with landowners to dedicate trail easements to West Bradford Township
- 3 years to complete feasibility study
- 6 years to implement

WEST BRADFORD TOWNSHIP

WBFT 2

Project Name

Telegraph Road Green Corridor

Key Partners

Chester County Planning Commission, Brandywine Conservancy, DCNR, private landowners, PennDOT

Project Focus and Location

To promote conservation and recreation for pedestrians and cyclists along Telegraph Road and to provide a connection to the Brandywine Trail.

- Encourage reforestation of open areas not used for agriculture
- Promote best land management practices
- Implement a share the road trail for pedestrians and cyclists
- Provide directional and interpretive signage for users
- Long term need

Accomplishments to Date

- Shown as proposed trail or sidewalk on Map 5-2 of Comprehensive Plan
- Shown in the West Bradford Township Greenways, Trails and Gateways Plan

Next Steps

- Mobility study to determine signage and safety needs
- Secure funding
- 3 years to complete study and implement improvements

WEST BRADFORD TOWNSHIP

WBFT 3

Project Name

Orchard Loop Trail

Key Partners

Chester County Planning Commission, Brandywine Conservancy, DCNR, private landowners, PennDOT

Project Focus and Location

To provide a pedestrian connection to the Brandywine Trail from residential areas located in the center of the Township.

- Prepare a feasibility study for a pedestrian footpath
- Negotiate trail easements with landowners, HOAs and developers
- Provide directional and interpretive signage for users
- Provide public parking facilities and signage at a trailhead
- Long term need

Accomplishments to Date

- Shown as proposed trail or sidewalk on Map 5-2 of Comprehensive Plan

Next Steps

- Secure funding
- Conduct a feasibility study
- Design and engineering
- 6 years to complete

WEST BRADFORD TOWNSHIP

WBFT 4

Project Name

Sawmill Run Green Corridor

Key Partners

Chester County Planning Commission, Brandywine Conservancy, DCNR, private landowners, PennDOT

Project Focus and Location

To promote conservation and recreation for pedestrians and cyclists along Sawmill Road/Sawmill Run. Provide a connection from the Township preserve at Price Lane to the Harmony Hill Gateway on Shadyside Road.

- Implement a share the road trail for pedestrians and cyclists
- Connect residential areas in the north-central region of the Township to the Brandywine Trail
- Promote preservation of woodlands and best management practices
- Provide directional and interpretive signage for users
- Provide public parking facilities and signage at trailhead
- Long term need

Accomplishments to Date

- Shown as proposed trail or sidewalk on Map 5-2 of Comprehensive Plan
- Much of the surrounding land is owned by HOA—trail easements in place

Next Steps

- Secure funding
- Conduct a mobility study
- Design and engineering
- 3 years to complete

WEST BRADFORD TOWNSHIP

WBFT 5

Project Name

Broad Run Green Corridor

Key Partners

Chester County Planning Commission, land trusts, DCNR, private landowners

Project Focus and Location

To promote conservation and provide recreation for pedestrians and cyclists along Broad Run Road. Create a greenway that will provide recreational opportunities for residential areas in the west of the Township.

- Portions to be share the road trail and portions off-road easements for pedestrians and cyclists
- Promote conservation easements, reforestation and riparian buffers
- Provide directional and interpretive signage for users
- Provide public parking facilities and signage at various trailheads
- Provide viewing areas and fishing access in the township park
- Short term need

Accomplishments to Date

- Shown as proposed trail or sidewalk on Map 5-2 of Comprehensive Plan
- Shown in the West Bradford Township Greenways, Trails and Gateways Plan

Next Steps

- Secure funding
- Conduct a feasibility study
- Design and engineering
- 6 years to complete

WEST BRADFORD TOWNSHIP

WBFT 6

Project Name

Sycamore Loop Trail

Key Partners

Chester County Planning Commission, Brandywine Conservancy, DCNR, private landowners, PennDOT

Project Focus and Location

To provide a pedestrian and bicycle connection to the Broad Run Minor Corridor from residential areas located in northwest corner of the Township and Caln Township.

- Portions to be off-road multi-use trails and portions to be sidewalks along public roads
- Future connection to the Chester Valley Trail
- Long term need

Accomplishments to Date

- Shown as proposed trail or sidewalk on Map 5-2 of Comprehensive Plan
- Shown in the West Bradford Township Greenways, Trails and Gateways Plan

Next Steps

- Secure funding
- Conduct a feasibility study
- Negotiate trail easements if applicable
- Design and engineering
- 6 years to complete

WEST BRADFORD TOWNSHIP

WBFT 7

Project Name

Tattersall/Embreeville Loop Trail

Key Partners

Chester County Planning Commission, Brandywine Conservancy, DCNR, private landowners, PennDOT (road crossings)

Project Focus and Location

To provide a pedestrian and bicycle connection between the Broad Run Minor Corridor, residential areas located near the Tattersall area, and Cheslen Preserve in Newlin Township.

- Off-road multi-use paved trails
- Long term need

Accomplishments to Date

- Shown as proposed trail or sidewalk on Map 5-2 of Comprehensive Plan
- Shown in the West Bradford Township Greenways, Trails and Gateways Plan
- Off-road segment completed through Tattersall HOA open space
- Portions of land owned by West Bradford Township
- Embreeville land development proposal is currently in sketch plan phase and the Township will require that trail connections be constructed

Next Steps

- Secure funding
- Conduct a feasibility study
- Negotiate trail easements if applicable
- Design and engineering
- 6 years to complete or as development occurs

WEST BRADFORD TOWNSHIP

WBFT 8

Project Name

Romansville/Lone Eagle/Stock Grange Loop Trail

Key Partners

Chester County Planning Commission, Brandywine Conservancy, DCNR, private landowners, PennDOT (road crossings)

Project Focus and Location

To provide a pedestrian and bicycle connection to the Broad Run Minor Corridor from Romansville and neighborhoods west of Lone Eagle Road.

- Portions to be off-road multi-use trails, portions to be sidewalks, and portions to occur along trail easements on privately-owned land
- Long term need

Accomplishments to Date

- Shown as proposed trail or sidewalk on Map 5-2 of Comprehensive Plan
- Shown in the West Bradford Township Greenways, Trails and Gateways Plan
- Portions completed at western end near Lone Eagle Road
- Portions along sidewalks to be completed in proposed subdivisions

Next Steps

- Secure funding
- Conduct a feasibility study
- Negotiate trail easements if applicable
- Design and engineering
- 6 years to complete or as development occurs

WEST BRADFORD TOWNSHIP

WBFT 9

Project Name

Broad Run to Northbrook Link

Key Partners

Chester County Planning Commission, DCNR, PennDOT

Project Focus and Location

To provide a pedestrian and bicycle connection to the Broad Run Minor Corridor from Camp Linden Loop Trail and Northbrook in Pocopson Township.

- Envisioned as a share the road trail
- Signage
- Line striping, signage
- Long term need

Accomplishments to Date

- Shown as proposed trail or sidewalk on Map 5-2 of Comprehensive Plan
- Shown in the West Bradford Township Greenways, Trails and Gateways Plan

Next Steps

- Secure funding
- Enter into discussions with PennDOT
- Design of signage and striping
- 3 years to complete

WEST BRADFORD TOWNSHIP

WBFT 10

Project Name

Brandywine Meadows Gateway

Key Partners

Chester County, DCNR, corporate sponsors, Eagle Scouts

Project Focus and Location

To provide trailhead facility improvements at the existing Brandywine Meadows Park.

- Gateway kiosk
- Interpretive signage
- Creek access and canoe launch site
- Short term need

Accomplishments to Date

- Greenway guide completed by Eagle Scout
- West Bradford Township owns the park which currently provides parking and trail facilities along the Brandywine

Next Steps

- Secure corporate or other funding
- 1 year to design and implement signage
- 3 years to design and construct canoe launch

WEST BRADFORD TOWNSHIP

WBFT 11

Project Name

Camp Linden Trail

Key Partners

Chester County Planning Commission, DCNR, PennDOT

Project Focus and Location

To provide a pedestrian and bicycle connection to the Broad Run Minor Corridor along Camp Linden Road (Wawaset Road to Northbrook Road).

- Envisioned as a share the road trail on an unpaved road
- Signage
- Long term need

Accomplishments to Date

- Shown as proposed trail or sidewalk on Map 5-2 of Comprehensive Plan
- Shown in the West Bradford Township Greenways, Trails and Gateways Plan

Next Steps

- Enter into discussions with PennDOT
- Secure corporate or other funding
- 1 year to design and implement signage

Brandywine Creek Greenway Functions Checklist

WEST BRANDYWINE TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	✓
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	
	Preserve nationally and municipally-designated historic structures and districts	✓

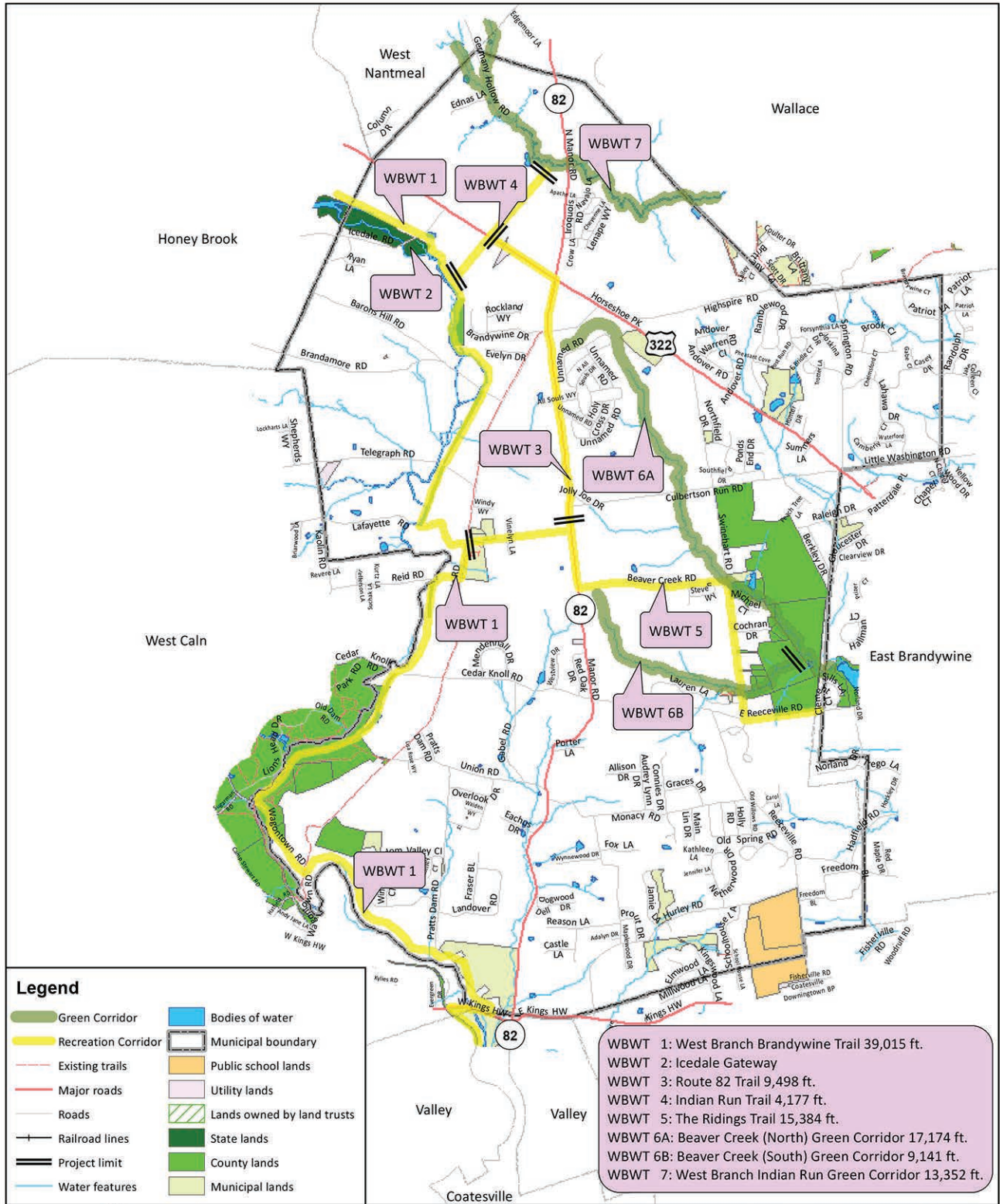
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

WEST BRANDYWINE TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 8/14/13

Zoning Adopted: 8/15/07 Zoning Last Amended: 1/3/11	SLDO Adopted: 10/00 SLDO Last Amended: 10/15/09
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> • ZO 200-72: Establishes a “Steep Slope Conservation District” consisting of “Moderate Slope Districts” at 15 to 25%, and “Severe Slope Districts” at 25%+. For moderate slopes limits land uses to preserves, forestry, agriculture, yards and residential development, with specific exceptions. For severe slopes, limits land uses to residential yards, and up to 25% of common open space in a cluster design. 	
2. Woodlands Protection: Rigorously Protected	
<ul style="list-style-type: none"> • SLDO 167-65: Requires woodland disturbance be minimized. Forbids removal of up to 8-in. DBH tree masses, unless “clearly necessary.” Establishes a formula for when woodland replacement is required. 	
3. Wetlands: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 1-20: Defines Riparian Buffer as including areas within wetlands, areas extending out 25 feet from wetlands in headwaters, and areas extending out 15 feet, from all other wetlands. • SLDO 167-64: For Riparian Buffers, allows no disturbance, except for forestry, vegetation management, agriculture and activities with a state permit, with specific exceptions. 	
4. Riparian Buffers: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 1-20: Defines Riparian Buffer as extending out 100 feet from all headwaters waterways, and 75 ft, out from all other waterways; and areas within wetlands, areas extending out 25 feet from wetlands in headwaters, and areas extending out 15 feet, from all other wetlands. • SLDO 167-64: For Riparian Buffers, allows no disturbance, except for forestry, vegetation management, agriculture and activities with a state permit, with specific exceptions. 	
5. Floodplain: Somewhat Protected	
<ul style="list-style-type: none"> • ZO 200-54: Defines “Flood Plain District” as areas that experience 100-year flood, Floodway Areas, Flood Fringe Areas, and “General Flood Plain Areas.” • ZO 200-61: Limits use in “Flood Plain District” to agriculture, recreation, common open space, yards, outdoor events, public facilities and other uses, with specific exceptions. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • Floodplains: Include regulations that prohibit both land disturbance and the construction of new structures within a floodplain (which includes both the floodway and the flood fringe.) 	



West Brandywine Township
Project Portfolio



0 0.25 0.5 1 Miles

Data sources: Roads, Railroads, Streams, Utility lands, Municipal boundaries, Public school lands, State lands, County lands, Municipal lands, Lands owned by land trusts - Chester County GIS Department, 2011, 2013
Map created: July 15, 2013 Last revised: October 24, 2014

WEST BRANDYWINE TOWNSHIP

WBWT 1

Project Name

West Branch Brandywine Trail

Key Partners

Chester County, Hibernia County Park, DCNR, private landowners

Project Focus and Location

To study the feasibility of a multi-use trail along the West Branch of the Brandywine.

- Explore opportunities for a stone dust trail that would connect to Valley Township/Coatesville trails to the south and to Honey Brook Township trails to the north
- Portions abandoned rail line as a potential route
- Portions rural share the road trail
- Trail easements with private landowners, voluntary
- For pedestrians, cyclists, and equestrians
- Gateway kiosk at municipal campus
- Short term need

Accomplishments to Date

- Portions owned by Chester County
- Portions used informally by residents
- Shown on Map 8-1 in the municipal Comprehensive Plan

Next Steps

- Pursue partners and funding for a feasibility study
- 5 years for trail feasibility study, design, and implementation

WEST BRANDYWINE TOWNSHIP

WBWT 2

Project Name

Icedale Gateway

Key Partners

Chester County, PA DCNR, PA DEP,

Project Focus and Location

To provide site improvements for visitors and boaters at the Icedale Gateway.

- Trailhead kiosk
- Expanded public parking area
- Interpretive signage
- Orientation maps
- Bicycle parking
- Picnic facilities
- Seating
- Enhanced creek access for boating or fishing
- Dam removal
- Short term need

Accomplishments to Date

- Gravel parking area already in place
- Bridge condemned and road closed, suitable for trail and/or parking

Next Steps

- Begin landowner outreach regarding conservation easements
- Pursue partners and funding
- 5 years for trail feasibility study, design, and implementation
- 10 years to achieve permanent protection

WEST BRANDYWINE TOWNSHIP

WBWT 3

Project Name

Route 82 Trail

Key Partners

Archdiocese of Philadelphia, developers, PennDOT, Chester County, PECO, landowners, businesses

Project Focus and Location

To design and construct a multi-use trail along Route 82 from Route 322 to Lafayette Road.

- Project to be initiated by West Brandywine Township and implemented by the Archdiocese of Philadelphia Cemetery
- Grass trail/footpath
- Signage, fencing, landscaping, crosswalks
- Short term need

Accomplishments to Date

- Land development plans and approval includes a trail easement along Route 82
- The Archdiocese has agreed to underwrite and implement the trail along its property frontage

Next Steps

- Research land development plans and agreements
- Municipal officials to meet with Archdiocese representatives
- Meet with other partners to discuss gaps and connections
- 1 year to implement Archdiocese trails
- 5 years for trail feasibility study, design, and implementation of trail gaps

WEST BRANDYWINE TOWNSHIP

WBWT 4

Project Name

Indian Run Trail

Key Partners

PECO, PennDOT, Chester County, DCNR, landowners, businesses

Project Focus and Location

To design and implement a trail along the PECO corridor from the West Branch Brandywine Trail to Indian Run Village.

- Natural surface
- Mowed trail for walkers and mountain bikes
- Route 322 crossing
- Fencing
- Landscaping
- Signage
- Long term need once the West Branch Brandywine Trail is implemented

Accomplishments to Date

- Portions of land on south side of Route 322 owned by the municipality
- PECO corridor is owned by PECO

Next Steps

- Begin discussions with PECO representatives
- Transportation study for a trail crossing at Route 322
- Pursue partners and funding
- 3 years for trail study, design, and implementation

WEST BRANDYWINE TOWNSHIP

WBWT 5

Project Name

The Ridings Trail

Key Partners

Chester County, DCNR, PennDOT, PECO, Archdiocese of Philadelphia, Applecross Country Club

Project Focus and Location

To provide an east-west trail connection to link the West Branch Brandywine Trail with open space at Applecross Country Club.

- Off road trail or sidewalks
- Portions share the road
- Portions follow Lafayette Road, Route 82, Beaver Creek Road, Swinehart Road and Reeceville Road.
- Connection to Guthriesville Village in East Brandywine Township
- Signage
- Long term need once the West Branch Brandywine Trail is implemented

Accomplishments to Date

- Connections recommended in the comprehensive plan Map 8-1.

Next Steps

- Begin dialogue with East Brandywine Township re. inter-municipal trail
- Pursue partners and funding
- Prepare a feasibility study
- 5 years for trail feasibility study, design, and implementation

WEST BRANDYWINE TOWNSHIP

WBWT 6A

Project Name

Beaver Creek North Green Corridor

Key Partners

Chester County, DCNR, land trusts, landowners, businesses

Project Focus and Location

To conserve and enhance natural resources along Beaver Creek from Sills Lane to PA Route 322.

- Restoration of degraded areas
- Habitat enhancement
- BMPs for water quality
- Signage
- Footpath connection to trails in Applecross Country Club
- Long term need

Accomplishments to Date

– Connections recommended in the comprehensive plan Map 8-1.

Next Steps

- Begin landowner outreach
- Cultivate trail easements
- Pursue partners and funding
- Ongoing conservation opportunities

WEST BRANDYWINE TOWNSHIP

WBWT 6B

Project Name

Beaver Creek South Green Corridor

Key Partners

Chester County, DCNR, land trusts, landowners, businesses

Project Focus and Location

To conserve and enhance natural resources along Beaver Creek from Beaver Creek Road to Swinehart Road.

- Restoration of degraded areas
- Habitat enhancement
- BMPs for water quality
- Signage
- Footpath connection to trails in Applecross Country Club
- Long term need

Accomplishments to Date

– Connections recommended in the comprehensive plan Map 8-1.

Next Steps

- Begin landowner outreach
- Cultivate trail easements
- Pursue partners and funding
- Ongoing conservation opportunities

WEST BRANDYWINE TOWNSHIP

WBWT 7

Project Name

West Branch Indian Run Green Corridor

Key Partners

DCNR, DEP, Chester County, landowners, PECO, West Nantmeal Township, Wallace Township, Brandywine Conservancy, land trusts, watershed associations

Project Focus and Location

To conserve and enhance the natural resources along West Branch Indian Run

- Conservation easements with private landowners, voluntary
- Restoration of degraded areas
- Habitat enhancement
- Restore woodland cover and increase woodland interior habitat
- Restoration of riparian buffers
- BMPs for water quality
- Stream bank stabilization
- Short term need

Accomplishments to Date

- Informal discussion among Modena Borough Council members

Next Steps

- Identify high priorities for reforestation of riparian buffers
- Begin landowner outreach regarding conservation easements
- Pursue partnerships and funding
- Ongoing

Brandywine Creek Greenway Functions Checklist

WEST CALN TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	✓
	Provide transportation alternatives for walking, bicycle, and equestrian	
CULTURAL FEATURES	Buffer the Brandywine valley from new development	✓
	Preserve productive agricultural lands	
	Protect state- and municipally-designated scenic resources	
	Preserve nationally and municipally-designated historic structures and districts	✓

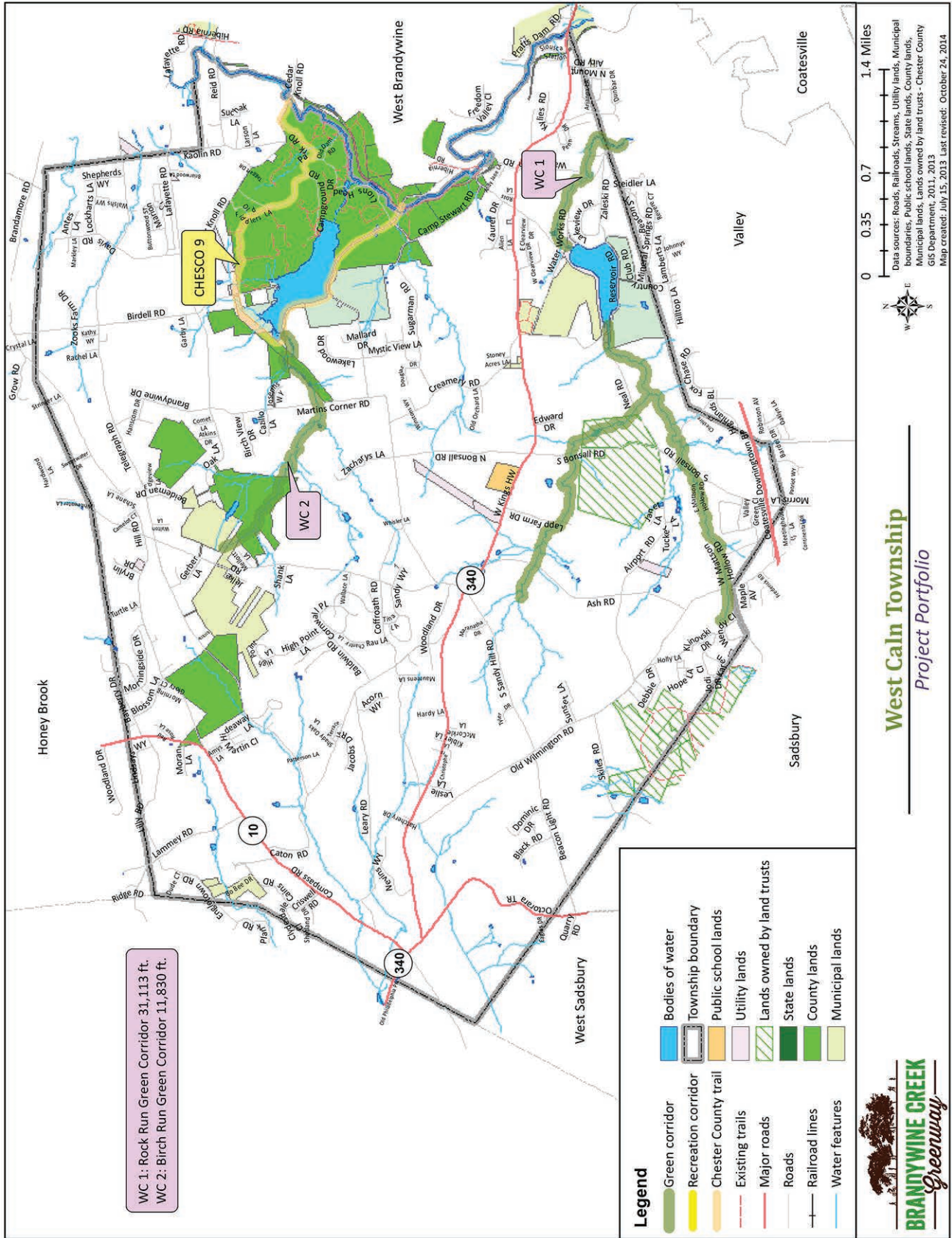
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

WEST CALN TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 8/12/13

Zoning Adopted: 2/27/06 Zoning Last Amended: None	SLDO Adopted: 9/13/10 SLDO Last Amended: None
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> ZO: 201: Defines “moderately steep slopes” as 15-25%, and very steep slopes” as 25%+. ZO 1002.B: Up to 30% of moderately steep slopes may be disturbed, and up to 15% of very steep slopes. 	
2. Woodlands Protection: Rigorously Protected	
<ul style="list-style-type: none"> ZO 1002.D: Up to 35% of woodlands may be disturbed for residential uses, and up to 50% for non-residential uses. 	
3. Wetlands: Rigorously Protected	
<ul style="list-style-type: none"> ZO 201: “Wetland margin” extends out 100 feet from any wetlands and includes adjacent hydric soils. ZO 1002.E : Wetlands may only be disturbed as set forth in state and federal permits. Up to 20% of a wetland margin may be disturbed. 	
4. Riparian Buffers: Rigorously Protected, 1/14/10	
<ul style="list-style-type: none"> ZO 1002.C: Establishes a Zone 1 Riparian Buffer, extending out 35 ft, from any waterway, and a Zone 2 Riparian Buffer extending out 65 feet from any waterway. No disturbance allowed in Zone 1, with specific exceptions. Up to 20% of Zone 2 Riparian Buffers may be disturbed, with specific exceptions. 	
5. Floodplain: Rigorously Protected, 1/14/10	
<ul style="list-style-type: none"> ZO 1002.A: Establishes a “Floodplain Overlay District” that includes areas subject to 100-year floods, Floodway Area, Flood Fringe Area, Special Floodplain Area, and “Approximate or General Floodplain Area.” No disturbance is permitted in any Floodway Area. For the Floodplain Overlay District, land uses are limited to agriculture, recreation, municipal impervious use or impervious yards, driveways and parking. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> None: All evaluated standards provide rigorous resource protection. 	



WEST CALN TOWNSHIP

WCT 1

Project Name

Rock Run Green Corridor

Key Partners

Valley Township, Chester County, DEP, land trusts, landowners

Project Focus and Location

To promote the conservation and preservation of water quality along both branches of Rock Run.

- Conservation easements
- Riparian buffer restoration
- Invasive vegetation management
- Land and water stewardship BMPs
- Stormwater BMPs
- Agricultural BMPs
- Fish habitat restoration
- Stream bank stabilization
- Ongoing need
- Short term need

Accomplishments to Date

- Portions in Coatesville Country Club
- Portions privately owned or eased by land trusts
- Portions owned or eased by land trust

Next Steps

- Inventory existing resources
- Identify opportunities for conservation and preservation

WEST CALN TOWNSHIP

WCT 2

Project Name

Birch Run Green Corridor

Key Partners

Valley Township, Chester County, DEP, land trusts, landowners

Project Focus and Location

To promote the conservation and preservation of water quality along both branches of Birch Run from Hibernia County Park to County-owned lands at Route 10.

- Conservation easements
- Riparian buffer restoration
- Invasive vegetation management
- Land and water stewardship BMPs
- Stormwater BMPs
- Agricultural BMPs
- Fish habitat restoration
- Stream bank stabilization
- Ongoing need
- Short term need

Accomplishments to Date

- Portions owned by Chester County
- Portions owned by West Caln Township
- Portions of other protected lands

Next Steps

- Inventory existing resources
- Identify opportunities for conservation and preservation

Brandywine Creek Greenway Functions Checklist

WEST NANTMEAL TOWNSHIP

GREENWAY THEME MAPS	POSSIBLE GREENWAY FUNCTIONS	CHECK <input checked="" type="checkbox"/> TOP 6
NATURAL FEATURES	Preserve vital plant and animal habitat corridors such as riparian buffers, wetlands, and woodlands	✓
	Enhance water quality in the Brandywine and its tributaries	✓
	Improve air quality in developed areas	
	Control and/or mitigate flooding in flood-prone areas	✓
OPEN SPACE AND RECREATION	Manage economic opportunities to boost local economy	
	Promote recreation and public use of municipal-, county-, and state-owned open space	✓
	Foster outdoor education and school access to open space	
	Provide transportation alternatives for walking, bicycle, and equestrian	✓
CULTURAL FEATURES	Buffer the Brandywine valley from new development	
	Preserve productive agricultural lands	✓
	Protect state- and municipally-designated scenic resources	
	Preserve nationally and municipally-designated historic structures and districts	

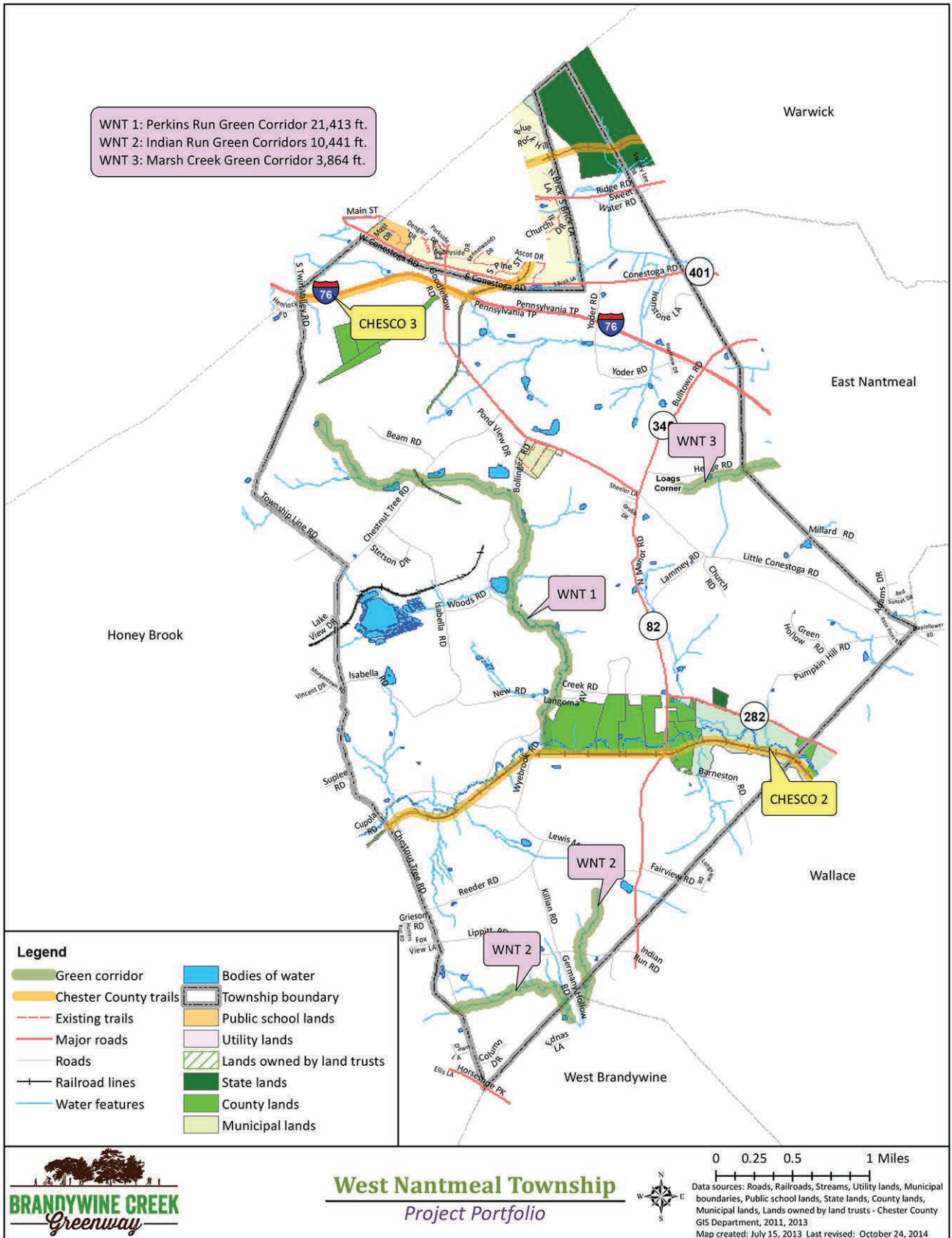
NOTE: ✓ Top six functions prioritized by this municipality during a regional workshop.

WEST NANTMEAL TOWNSHIP

Natural Resource Protection Ordinance Review

Date Reviewed: 8/7/13

Zoning Adopted: 8/17/10 Zoning Last Amended: 10/10/11	SLDO Adopted: 7/94 SLDO Last Amended: 4/14/08
RESOURCE AND PROTECTION STANDARDS	
1. Steep Slopes (15-25%, 25%+): Rigorously Protected	
<ul style="list-style-type: none"> • ZO 502.B: Establishes Category 1 slopes as 15-25% slopes, and Category 2 as 25%+. • ZO 504.D: For Category 1, limits disturbance to up to 50%, with specific exceptions. • ZO 504 D: For Category 2, limits disturbance to up to 10%, with specific exceptions. 	
2. Woodlands Protection: Somewhat Protected	
<ul style="list-style-type: none"> • ZO 505. C and D: Requires a permit for removing 10% or more of a woodland. • ZO 505 F: Establishes a 50 feet buffer from any street, road, or watercourse or wetland, within which timbering shall not occur. 	
3. Wetlands: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 503.D: Forbids disturbance of wetlands or a 50 feet buffer around wetlands, except with permits. 	
4. Riparian Buffers: Not Protected	
<ul style="list-style-type: none"> • None. 	
5. Floodplain: Rigorously Protected	
<ul style="list-style-type: none"> • ZO 502.B: Defines “Flood Hazard District” as a floodway, flood fringe, and general flood hazard district. • ZO 502. H: Limits disturbance to agriculture, forestry, recreation, and nature preserves. 	
RECOMMENDED IMPROVEMENTS TO RESOURCE PROTECTION STANDARDS	
<ul style="list-style-type: none"> • Woodlands: Include regulations that limit disturbance of a woodlands to a maximum of 50%. Such regulations would establish a definition for “woodland” that is defined in a measurable way, such as a definition that is based on the number of trees within a wooded area that have grown to a specific diameter at breast height (dbh). Also, consider adding forestry regulations that: 1.) include exceptions for forestry or timber harvesting, as set forth in the MPC, and 2.) require a timber harvesting plan. Lastly, consider adding tree protection regulations that: 1.) include measures that protect the trees remaining on a construction site from construction activities that could be damaging to trees; 2.) prohibit disturbing specimen trees and PNDI sites unless there is no feasible alternative; and 3.) call for tree replacement if more than a specified area or number of trees are removed. • Riparian Buffers: Include regulations that establish a riparian buffer which extends 75 to 100 feet from both sides of the stream bank. Also, consider adding requirements that 1.) call for the re-vegetation of un-forested riparian buffers, and 2.) establish a two-tiered riparian buffer with stricter standards applied adjacent to streams. This two-tiered buffer would include a 25-35 foot-wide inner buffer in which disturbance is prohibited, and a 50 to 65 foot-wide outer buffer in which a maximum disturbance limit of 20% is allowed. 	



WEST NANTMEAL TOWNSHIP

WNT 1

Project Name

Perkins Run Green Corridor

Key Partners

Private landowners, DCNR, land trusts, Chester County, West Nantmeal Township.

Project Focus and Location

To implement conservation efforts that could include conservation easements, agricultural easements, agricultural BMPs, stream restoration, reforestation of riparian buffers, habitat restoration, and other efforts.

- Ongoing need

Accomplishments to Date

- Much of the surrounding land is under Chester County agricultural easements or conservation easement
- Shown as a green corridor on the Brandywine Creek Greenway Concept Map

Next Steps

- Land trusts and Chester County continue to cultivate landowners for agricultural easements, conservation easements, and agricultural BMPs
- Ongoing efforts required
- Long term priority

WEST NANTMEAL TOWNSHIP

WNT 2

Project Name

Indian Run Green Corridors

Key Partners

Private landowners, DCNR, land trusts, Chester County, West Nantmeal Township.

Project Focus and Location

To implement conservation efforts that could include conservation easements, agricultural easements, agricultural BMPs, stream restoration, reforestation of riparian buffers, habitat restoration, and other efforts.

- Ongoing need

Accomplishments to Date

- Shown as a green corridor on the Brandywine Creek Greenway Concept Map

Next Steps

- Land trusts and Chester County continue to cultivate landowners for agricultural easements, conservation easements, and agricultural BMPs
- Ongoing efforts required
- Ongoing conservation opportunities

WEST NANTMEAL TOWNSHIP

WNT 3

Project Name

Marsh Creek Green Corridor

Key Partners

Private landowners, DCNR, land trusts, Chester County, West Nantmeal Township

Project Focus and Location

To focus conservation efforts that could include conservation easements, agricultural easements, agricultural BMPs, stream restoration, reforestation of riparian buffers, habitat restoration, and other efforts.

- Ongoing need

Accomplishments to Date

- Shown as a green corridor on the Brandywine Creek Greenway Concept Map

Next Steps

- Land trusts and Chester County continue to cultivate landowners for agricultural easements, conservation easements, and agricultural BMPs
- Ongoing efforts required
- Long term priority

Project Portfolio Summary

The following table lists all agency and municipal projects described in the Greenway Project Portfolio. Each project is identified with a letter code that reflects the name of the lead municipality or agency.

The projects are arranged alphabetically below in Table 2 according to their project code number. They are also given a priority rating as:

- Short-term (1-5 years)
- Intermediate (5-10 years)
- Long-term (10+ years)
- Ongoing—ongoing projects require continual effort and/or are undertaken on an as-needed basis.

Table 2: Project Codes

PROJECT CODE	MUNICIPALITY/AGENCY
BC	Brandywine Conservancy
BT	Birmingham Township
CC	City of Coatesville
CHESCO	Chester County
CFT	Chadds Ford Township
CT	Caln Township
DB	Downingtown Borough
DCNR	PA Department of Conservation and Natural Resources
DELCO	Delaware County
EBFT	East Bradford Township
EBWT	East Brandywine Township
ECT	East Caln Township
EFT	East Fallowfield Township
HBB	Honey Brook Borough
HBT	Honey Brook Township
MB	Modena Borough
NT	Newlin Township (none at this time)
PENT	Pennsbury Township
POCT	Pocopson Township
SCB	South Coatesville Borough
UW	Uwchlan Township
UUT	Upper Uwchlan Township
VT	Valley Township
WBFT	West Bradford Township
WBWT	West Brandywine Township
WCT	West Caln Township
WNT	West Nantmeal Township
WT	Wallace Township

The projects are arranged alphabetically according to their project code number. They are also categorized as short-term (1-5 years), intermediate (5-10 years), long-term (10+ years), and ongoing. Ongoing projects require continual effort or are undertaken on an as-needed basis. Individual municipalities should refer to its Project Portfolio for more detailed information about specific projects, key partners, project focus and location, accomplishments to date, and recommended next steps.

PROJECTS	SHORT-TERM	INTER-MEDIATE	LONG-TERM	ONGOING
BC 1 Historic Brandywine Trail*	X			
BC 2 North Brandywine Trail			X	
BT 1 Sandy Hollow to Birmingham Hill Trail	X			
BT 2 Brinton Run Green Corridor				X
BT 3 Wylie Run Green Corridor				X
BT 4 Renwick Run Green Corridor				X
BT 5 Radley run Green Corridor				X
CC 1 Downtown Revitalization	X			
CC 2 Gateway Park Improvements*		X		
CC 3 West Branch Brandywine Trail		X		
CC 4 South First Avenue Improvements	X			
CFT 1 Chadds Ford Gateway Enhancements*	X			
CFT 2 Walkable Chadds Ford		X		
CFT 3 Municipal Lands		X		
CFT 4 Harvey Run Green Corridor				X
CHESCO 1 Bike Route L Safety Enhancements	X			
CHESCO 2 Northern Struble Trail	X			
CHESCO 3 Elverson Trail			X	
CHESCO 4 Welsh Mountain Trail			X	
CHESCO 5 Chester Valley Trail			X	
CHESCO 6 Brandywine Trail to Struble Trail Link	X			
CHESCO 7 Barneston Creek Access Enhancements	X			
CHESCO 8 Reeds Road Creek Access			X	
CHESCO 9 Chambers Lake Trail*			X	
CT 1 Lincoln Highway Business District Enhancements	X			
CT 2 Valley Run Green Corridor	X			
CT 3 Lloyd Park to Downingtown Trail Connector		X		

PROJECTS	SHORT-TERM	INTER-MEDIATE	LONG-TERM	ONGOING
CT 4 GO Carlson Trail Connections	X			
CT 5 North Bailey Road Trail			X	
CT 6 Valley Run Municipal Park Enhancements	X			
CT 7 South Bailey Road Trail			X	
CT 8 Beaver Creek Green Corridor				X
DB 1 Parke Run Green Corridor				X
DB 2 Beaver Creek Green Corridor	X			
DB 3 Kerr Park Enhancements*	X			
DB 4 Downingtown Gateway Enhancements	X			
DB 5 Pennsylvania Avenue Bike Route	X			
DCNR 1 Marsh Creek Lake Trail			X	
DELCO 1 Route 1 Bike Safety Enhancements	X			
EBFT 1 County Seat Corridor Trail			X	
EBFT 2 Taylor Run Trail			X	
EBFT 3 Ingrams Mill to Stroud Connector	X			
EBFT 4 Shaws Bridge park Improvements	X			
EBFT 5 Plum Run Green Corridor				X
EBFT 6 Stroud Preserve Gateway*		X		
EBFT 7 Gibsons Bridge Gateway*		X		
EBFT 8 Ingrams Mill Park Enhancements	X			
EBFT 9 Paradise Farm Camps Improvements			X	
EBFT 10 Historic Brandywine Trail	X			
EBFT 11 Valley Creek Green Corridor				X
EBFT 12 M. John Johnson Nature Center to Ingrams Mill	X			
EBFT 13 Sugars Bridge Master Plan			X	
EBWT 1 Lyndell Gateway-fee interest			X	
EBWT 2 Lyndell Gateway- site design and development*			X	
EBWT 3 Wissahickon Spring Water Co. Access	X			
EBWT 4 Dowlin Forge Road Creek Access	X			
EBWT 5 Shady Acres Campground Fee Interest	X			
EBWT 6 Shady Acres Campground Creek Access	X			

PROJECTS	SHORT-TERM	INTER-MEDIATE	LONG-TERM	ONGOING
EBWT 7 Shady Acres Bridge			X	
EBWT 8 Beaver Creek Green Corridor				X
EBWT 9 Dowlin Forge Road Trail	X			
EBWT 10 Whittaker Memorial Park Bridge			X	
EBWT 11 Culbertson Run Trail			X	
EBWT 12 Beaver Creek Headwaters Trail			X	
ECT 1 East Branch Brandywine Stewardship Plan	X			X
ECT 2 Valley Creek Corridor Trail			X	
ECT 3 Ebenezer Corridor Trail	X			
ECT 4 Ludwig’s Run Green Corridor				X
EFT 1 Dennis Run Green Corridor*			X	
EFT 2 Misty Patch Loop Trail	X			
EFT 3 Lauria Brothers- Public Access	X			
EFT 4 Mortonville Creek Access Enhancements	X			
EFT 5 Buck Run Trail			X	
EFT 6 Hayes-Clark Bridge Creek Access Enhancements	X			
EFT 7 Buck Run Green Corridor	X			
EFT 8 Sucker Run Green Corridor	X			
EFT 9 West Branch Brandywine Trail			X	
EFT 10 Buck Run to West Branch Trail			X	
HBB 1 Headwaters Green Corridor*	X			
HBB 2 Umble Park Connector	X			
HBB 3 Downtown and Streetscape Revitalization	X			
HBB 4 Borough Park Improvements			X	
HBT 1 Welsh Mountains Conservation	X			
HBT 2 Two Log Run Green Corridor	X			
HBT 3 Honey Brook Branch Green Corridor	X			
HBT 4 West Branch Headwaters Green Corridor	X			
HBT 5 West Branch Brandywine Trail	X			
HBT 6 Indian Run Green Corridor				X
MB 1 Lauria Brothers Public Access	X			
MB 2 Lauria Brothers Gateway Improvements*			X	

PROJECTS	SHORT-TERM	INTER-MEDIATE	LONG-TERM	ONGOING
MB 3 Dennis Run Green Corridor				X
MB 4 Mortonville Road Trail	X			
PENT 1 Mason Dixon Trail	X			
PENT 2 Share the Road Trails			X	
PENT 3 Johnson Woods to Brandywine Trail	X			
PENT 4 Bennetts Run Green Corridor			X	
PENT 5 Ring Run Green Corridor			X	
PENT 6 Fairville Road Green Corridor			X	
POCT 1 Pocopson Park Gateway*	X			
POCT 2 Pocopson Park Gateway-West Creek Road Trail	X			
POCT 3 BVA to West Creek Road Trail			X	
POCT 4 Northbrook Trail			X	
POCT 5 West Creek Road Trail	X			
POCT 6 Lenape Forge Road and Canoe Launch	X			
POCT 7 Pocopson Creek Green Corridor			X	
SCB 1 Overhill Road Trail			X	
SCB 2 Mill Trail Section 2	X			
SCB 3 Mill Trail Section 3*	X			
SCB 4 Mill Trail Section 4	X			
SCB 5 Mill Trail Section 5		X		
SCB 6 Mill Trail Section 6		X		
SCB 7 Mill Trail Section 7		X		
SCB 8 Birch Street to Upper Gap Road			X	
SCB 9 Upper Gap Road Recreation Center			X	
SCB 10 Dennis Run Green Corridor				X
SCB 11 Upper Gap Trail			X	
UW 1 Ludwig's Run Green Corridor				X
UW 2 Shamona Creek Green Corridor*				X
UUT 1 Eagle Trailhead	X			
UUT 2 Park Road Multi-Use Trail	X			
UUT 3 Little Conestoga Trail			X	
UUT 4 Durlans Mill Creek Access	X			

PROJECTS	SHORT-TERM	INTER-MEDIATE	LONG-TERM	ONGOING
UUT 5 Blackhorse Creek Green Corridor	X			
UUT 6 Marsh Creek Green Corridor	X			
UUT 7 Eagle Village Enhancements	X			
UUT 8 Lyndell Road Pull-off			X	
VT 1 Business Route 30 Corridor Enhancements			X	
VT 2 West Branch Brandywine Trail	X			
VT 3 Country Club Green Corridor	X			
VT 4 Sucker Run Green Corridor	X			
VT 5 Rock Run Green Corridor	X			
WBFT 1 East Branch Brandywine Trail	X			
WBFT 2 Telegraph Road Green Corridor			X	
WBFT 3 Orchard Loop Trail			X	
WBFT 4 Sawmill Run Green Corridor			X	
WBFT 5 Broad Run Green Corridor	X			
WBFT 6 Sycamore Loop Trail			X	
WBFT 7 Tattersall/Embreeville Loop Trail			X	
WBFT 8 Romansville/Lone Eagle/Stock Grange Loop Trail			X	
WBFT 9 Broad Run to Northbrook Link			X	
WBFT 10 Brandywine Meadows Gateway*	X			
WBFT 11 Camp Linden Trail			X	
WBWT 1 West Branch Brandywine Trail*	X			
WBWT 2 Icedale Gateway*	X			
WBWT 3 Route 82 Trail	X			
WBWT 4 Indian Run Trail			X	
WBWT 5 The Ridings Trail			X	
WBWT 6A Beaver Creek North Green Corridor			X	
WBWT 6B Beaver Creek South Green Corridor			X	
WBWT 7 West Branch Indian Creek Run Green Corridor	X			
WCT 1 Rock Run Green Corridor	X			
WCT 2 Birch Run Green Corridor	X			
WNT 1 Perkins Run Green Corridor				X
WNT 2 Indian Run Green Corridors				X

PROJECTS	SHORT-TERM	INTER-MEDIATE	LONG-TERM	ONGOING
WNT 3 Marsh Creek Green Corridor				X
WT 1 Valhalla Loop Trail			X	
WT 2 Burgess Park Water Access			X	
WT 3 Glenmoore Gateway Enhancements*	X			
WT 4 North Branch Indian Run Green Corridor	X			
WT 5 West Branch Indian Run Green Corridor	X			
WT 6 Rose Pointe Green Corridor	X			
WT 7 Marsh Creek Green Corridor	X			

* Denotes a Gateway project. See Concept Map Figure 1 for Gateway locations.

Cost Estimates

It is challenging to establish anticipated short term and long term costs associated with the Project Portfolios because of several factors:

1. Many of the projects are in the conceptual phase and exact locations and details of proposed facilities are not known.
2. The cost of protecting open space, whether by conservation easement, agricultural easement, trail easement, fee acquisition, or other methods, will be determined by a real estate appraisal for each property, and market conditions fluctuate.
3. Projects will be implemented over time and the cost of materials, labor and real estate is likely to be highly variable over time.

Notwithstanding these factors, the following basic cost assumptions are presented to provide a rough guideline for potential costs associated with Greenway projects in today’s dollars. These are based upon a relatively recent Trail Feasibility Study completed by the Brandywine Conservancy and Register Associates for Pocopson Township.

Trail Easements

There are many factors that affect the value of a trail easement project. For example, existing site conditions, zoning/land uses, and current property values in the immediate vicinity will all affect the value of an easement. In some cases, the Township may be able to negotiate with a landowner to lower the price for the easement. In each case, the Township will engage a real estate appraiser with experience in easements to determine the real estate value of each individual trail easement based upon its unique conditions. For the purposes of estimating the cost of purchasing trail easements, it is assumed that trail easements will have a value of \$22,000 per acre or \$7.58 per linear foot of trail easement. This is based upon an estimate by Register Associates, Pocopson Trails Feasibility Study, 2010. See Table 3 Easement Cost Factor.

Table 3: Trail Easement Cost Factor

Average Easement \$/Acre	\$ 22,000
\$/sq ft	\$ 0.5057
Easement Width in feet	15
Average Easement \$ per linear ft	\$ 7.5862

Construction of Trails and Related Facilities

The estimated trail construction costs and the costs of trail-related facilities are outlined in Table 4 Estimated Construction Costs by Terrain Type and Table 5 Bridge and Crossing Cost Assumptions. The unit costs were determined by Regester Associates, Inc., registered professional engineers. These costs do not include the cost of purchasing the trail easement which is detailed in Table 3 Easement Cost Factor. Other associated costs are outlined in Table 6 Other Trail Facilities Costs.

Table 4: Estimated Trail Costs Per Foot by Terrain

Terrain Adders \$/ft *1	Basic Overland Cost	Flood Plain (add \$3)	Flood Plain with Slopes	Flood Plain with Woods	Flood Plain with Wetlands	Slopes (add \$15)	Slopes with Woods	Wetlands (add \$5)	Wetlands with Woods	Woods (add \$15)
Share-The-Road (Signs&Lines) \$/ft *2	\$0.48									
Gravel Trail \$/ft	\$10.00	\$13.00	\$28.00	\$33.00	N/A	\$25.00	\$45.00	N/A	N/A	\$30.00
Mowed Trail \$/ft	\$3.50	\$6.50	\$21.50	\$26.5	\$11.50	\$18.50	\$18.50	\$8.50	\$28.50	\$8.50
Paved Trail \$/ft	\$17.00	\$20.00	\$35.00	\$40.00	N/A	\$32.00	\$62.00	N/A	N/A	\$22.00

- NOTES:** 1. To determine to cost per linear foot for any given stretch of trail, add the terrain type cost(s) to the basic overland cost. As an example, a gravel trail constructed within Floodplain with Woods would be $10.00 + 3.00 + 20.00 = \$33.00$ per linear foot.
2. Share-the-Road (STR) costs include a sign costing \$140 every quarter mile (\$0.11/Ft), and \$0.37/Linear Foot for a 4 inch white line. No other costs were considered for STR's.

Table 5: Bridge and Crossing Cost Assumptions

	Crossing <5ft	Crossing >5ft <10ft	Crossing >10ft	
Bridge Cost	\$7,500	\$15,000	\$35,000	
	Driveway Crossing	Railroad Crossing	State RD Crossing	Town RD Crossing
Surface Crossing Cost	\$500	\$3,600	\$3,600	\$2,500

Table 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		\$7,500
Information sign		\$1,000
Direction/warning signs		\$200
Bike racks		\$500
Bench		\$500
Drinking Fountain		\$2,000

Trail Maintenance

An estimated trail maintenance cost was prepared to outline anticipated expenditures associated with the trail network. Tables 7, 8 and 9 identify estimated unit costs associated with maintenance of stone dust trails, mowed trails, and paved trails.

Table 7: Annual Maintenance Costs—Stone Dust Trails

Source: *Trails for the Twenty-First Century, Rails to Trails Conservancy, 2001*

Task	Times per Year	Cost/Mile	Cost/Ft
Drainage and storm channel maintenance	2	\$500	\$0.09
Sweep/blow debris from trailhead	4	\$1,200	\$0.23
Pick up/removal of trash	8	\$1,200	\$0.23
Weed control and vegetation management	2	\$1,000	\$0.19
Mow 2ft grass shoulder	4	\$1,200	\$0.23
Minor repairs to trail furniture/safety features	2	\$500	\$0.09
Maintenance supplies for Public Works crew	N/A	\$500	\$0.09
Equipment fuel and repairs	N/A	\$1,000	\$0.19
Total Annual Costs		\$7,100	\$1.34

Table 8: Annual Maintenance Costs—Mowed Trails

Source: *Trails for the Twenty-First Century, Rails to Trails Conservancy, 2001*

Task	Times per Year	Cost/Mile	Cost/Ft
Drainage and storm channel maintenance	1	\$500	\$0.09
Pick up/removal of trash	4	\$1,200	\$0.23
Weed control and vegetation management	2	\$1,000	\$0.19
Mow 8ft grass trail	10	\$2,400	\$0.45
Maintenance supplies for Public Works crew	N/A	\$500	\$0.09
Equipment fuel and repairs		\$1,000	\$0.19
Total Annual Costs		\$6,600	\$1.25

Table 9: Annual Maintenance Costs—Paved Trails

Task	Times per Year	Cost/Mile	Cost/Ft
Drainage and storm channel maintenance	2	\$500	\$0.09
Sweep/blow debris from trailhead	4	\$1,200	\$0.23
Pick up/removal of trash	8	\$1,200	\$0.23
Weed control and vegetation management	2	\$1,000	\$0.19
Mow 2ft grass shoulder	4	\$1,200	\$0.23
Minor repairs to trail furniture/safety features	2	\$500	\$0.09
Maintenance supplies for Public Works crew	N/A	\$500	\$0.09
Equipment fuel and repairs	N/A	\$1,000	\$0.19
Total Annual Costs		\$7,100	\$1.34

While cash is the most obvious resource for implementing trails and other Greenway projects, there are many other tools that municipalities can utilize to supplement their budgets. The Implementation Tool Kit that follows includes descriptions of regulatory and non-regulatory tools available to municipalities to implement Greenway projects. It also provides a comprehensive list of funding opportunities for all municipalities, non-profits, and other Greenway advocates.