A photograph of a forest path with a brown title bar overlaid. The path is dirt and covered with fallen leaves, leading through a dense forest of tall trees. The foliage is mostly green, with some yellowing leaves visible, suggesting an early autumn setting. The title bar is a solid brown color with white text.

Chapter 4
Greenway and Open Space Framework



Introduction

How do Union County citizens see the future of greenways, open space, parks, trails and working landscapes? That question, among others, needed answered as part of this planning process. The first step, however, was to carefully review the results of prior planning and engagement efforts conducted over the past decade to determine what had already been documented in terms of public attitudes toward greenways and open space. Appendix A contains a summary of this review which revealed goals, recommendations, policies, and specific projects that had been previously vetted and validated.

The county and municipal comprehensive plans were reviewed along with the following plans and reports specific to Union County and its communities: Bucknell River Access Report, Buffalo Creek Watershed Plan, Bull Run Neighborhood Plan, Lewisburg Area Comprehensive Park, Recreation, Open Space & Greenway Plan, Buffalo Valley Rail Trail Final Section Feasibility Study, Lewisburg River Launch Report, Riverwoods Greenway Conceptual Plan, US Route 15 Smart Transportation Corridor Plan, and the Union County Natural Areas Inventory.

In addition, plans that were statewide or region-based that contained implications for Union County greenways and open space were reviewed and included the following: Chesapeake Bay Watershed Public Access Plan, Lower West Branch Susquehanna River Conservation Plan, SEDA-COG Metropolitan Planning Organi-



zation's (MPO) Long-Range Transportation Plan, Susquehanna Greenway Plan, West Branch Water Trail Stewardship Plan and greenway plans for the neighboring counties of Centre, Lycoming, and Northumberland.

Public participation results from many of the above and the Lewisburg River Town Community initiative, the Pennsylvania Statewide Outdoor Recreation Plan and from the Pennsylvania Department of Transportation's 12 Year Plan update were also reviewed and are highlighted in Appendix A.

Citizen Engagement

By looking at the results of the various plans and outreach, it was generally known how people in the county felt about retaining farmland,

forests and other open spaces and the development of greenways, parks and trails. Residents value outdoor recreation; therefore greenways and open spaces are needed in order for people to participate in those activities. Overall there is support for greenways, trails, water access points, watershed restoration and the protection of more land as permanent open space. Therefore citizen engagement for this greenway and open space plan was designed to augment what had already been documented and was structured to obtain more specific input.

The public participation process, which included a project steering committee, public meetings, focus groups and interviews, a web-based survey, and landowner interviews, was crucial in understanding the specific needs of Union



County residents regarding greenways and open space. This feedback was used to shape the plan's vision, goals and implementation priorities.

Steering Committee

From the early stages of the planning process through to the final recommendations, the 14-member Steering Committee, representing a diverse set of interests, played an important role in development of the plan. The committee brought a regional and consistent focus while serving as a sounding board for ideas generated throughout the project. The committee also provided input by identifying key issues in addition to assisting with interpreting public input. Overall, the Steering Committee balanced an assortment of contrasting ideas of what is important for a county greenway and open space system and had to weigh various options and implementation strategies.

Interviews

Interviews were used to supplement the Steering Committee and public meetings and were effective for having open dialogue that otherwise may not have happened in a traditional public forum. A total of eight interviews were held, involving more than a dozen people that included natural resource managers, Bucknell University, healthcare professionals, land trusts, community advocates, recreation enthusiasts, and watershed associations. Interview participants were asked to respond to several questions intended to solicit how they envision a successful greenway and open space system

in the county and what the priorities should be for greenways, open space, farmland preservation, trails, and parks over the next 10 years. They were also asked to identify any special needs that should be addressed, along with specific ideas for open space conservation and projects that should be considered as implementation priorities. Finally, everyone was asked how they would allocate a hypothetical \$1 million of funding that was restricted to conservation, greenways, and open space related uses.

These interviews generated a number of common themes. Conservation of farmland, forests, and critical habitat was mentioned frequently along with the need for riparian buffers. Implementation of the Susquehanna Greenway with access to and along the river was noted as a high priority, as was finishing the Buffalo Valley Rail Trail and building new connections to it in order to link neighborhoods and activity centers. Other items repeatedly suggested included improving access to Penns Creek, connecting existing parks and open



spaces, expanding core areas like the Bald Eagle State Forest and establishing riparian corridors that connect resources.

In response to the question about how \$1 million of conservation funding should be allocated, the answers were fairly consistent and included the following:

-  Improve access to and along the West Branch Susquehanna River with a trail system;
-  Permanently preserve farmland, forests, and important wildlife habitat;
-  Install riparian buffers along streams to improve water quality; and
-  Conservation education and marketing for residents and within schools.

Other specific projects that were mentioned as having a high priority were protecting the Shikellamy Bluffs, expanding the conserved wetlands and open space along Buffalo Creek in Mifflinburg, greening the downtowns within communities, and converting the New Berlin Elementary School property into a park and public green space.

In addition, given that the vast majority of new greenways and open space conservation would need to occur on private property, it was important to understand the opinions and concerns of landowners. With the Susquehanna Greenway being the most visible greenway corridor in the county and repeatedly mentioned as a priority by the Steering Committee and in interviews it was decided that large landholders

in the corridor should be interviewed. This greenway has also been the subject of ongoing planning and outreach by the Susquehanna Greenway Partnership. A faculty member from the Bucknell University Center for Sustainability and the Environment personally interviewed eight willing landowners out of a total of 18.

All but one of the people interviewed owned a farm adjacent to the river and every property had a vegetative buffer of 30 to 150 feet between the river and farm fields. Each land owner expressed a desire to preserve the buffer. Most interviewees said they would not have attended a public meeting on this topic and were appreciative that the county was trying to understand their concerns and attitudes. Only two of the landowners were familiar with conservation easements or agricultural preservation and none of the eight had any knowledge about the Susquehanna Greenway. Two interviewees expressed a sincere desire for a greenway along the river, but most were resistant to the idea.

The main concerns to a greenway that provided public access were consistent and included worries about: liability, trash, privacy, being burdened with maintenance, and the belief that a greenway would impede their use of the river and/or their property. One person interviewed reacted in a hostile manner toward the greenway concept and threatened legal action should the government try to impose a trail or any other stipulations on riverfront property owners.

The interview results, and no response by the other 10 landowners after multiple attempts to contact them, would point to an overall lack of interest in developing a greenway and riverfront trail system in the short term among the property owners. However there are opportunities present for a conservation greenway (buffer) and to a limited extent a recreational greenway and trail in a piecemeal fashion. As such, greenway implementation along the river will need to take place through a concerted effort over the next twenty years as changes in ownership could bring to bear a different set of attitudes.

Public Meetings

Five public meetings were held throughout the county to obtain valuable input on the greenway and open space plan. The sessions were announced via press releases/stories in the *Standard Journal*, *The Daily Item*, *Union County Times*, and *Williamsport Sun Gazette* newspapers, posts on the county Facebook page, county and project website, through emailed and mailed notifications to municipal governing bodies and planning commissions and with 11x17 colored flyers posted around the county. Partner organizations and steering committee members also promoted the meetings. For example, the Merrill Linn Conservancy had an

**The UNION COUNTY
GREENWAY and OPEN SPACE PLAN**

A SERIES OF **PUBLIC MEETINGS**

Make a note of the dates!

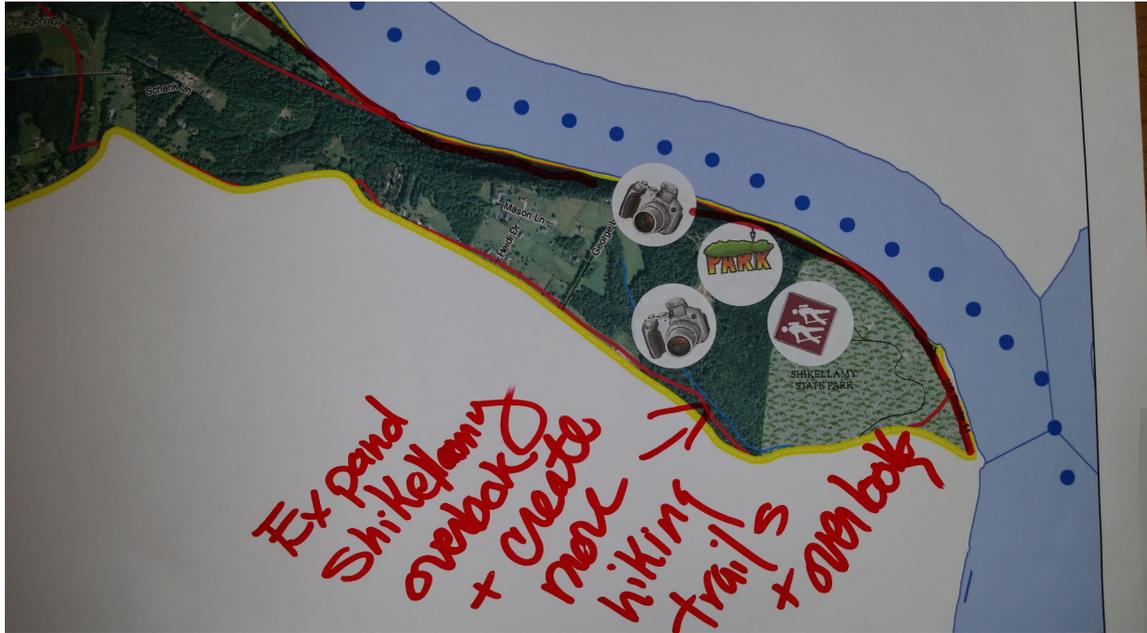
FEBRUARY 25	6:00-8:00 PM	<small>Hartley Twp. Community Center 1724 S.R. 235 Laurelton</small>
MARCH 4	6:00-8:00 PM	<small>UC Government Services Building 343 Chestnut Street Mifflinburg</small>
MARCH 5	6:00-8:00 PM	<small>Union Twp. Municipal Building 70 Municipal Lane Winfield</small>
MARCH 11	6:00-8:00 PM	<small>Allenwood Fire Hall 196 White Deer Avenue Allenwood</small>
MARCH 12	8:00-10:00 AM	<small>Union County Government Center 155 North 15th Street, Lewisburg</small>

- » Join the discussion
- » Ask questions
- » Share your ideas



announcement on their website and Facebook page, while the Buffalo Creek Watershed Alliance and Union County Historical Society emailed members encouraging attendance and participation.





The meetings were held in Laurelton, Mifflinburg, Winfield, Allenwood, and Lewisburg. The format of these sessions included displays of project information and handouts and featured a short presentation about the greenway and open space plan that addressed why the plan was being done, its purpose, benefits of greenways and open space, the project schedule, and instructions on how attendees could have their ideas recorded. The intent was to hear from residents about their thoughts, concerns, needs, desires and issues concerning greenways and open space in the county.

After the presentation, participants were asked to rotate among three stations. This included an “Idea Station” where goals, ideas, and recommendations could be written on a white board.

There was a “Mapping Station” where stickers, representing a variety of greenway and open space resources, could be placed on a set of countywide maps to show where farmland should be preserved, new bike trails should be created, locations for riparian buffers, water access and the like. Comments could be written on the maps and additional features drawn. Lastly was the “Money Station” where people could deposit their \$100 of Monopoly money into boxes representing predetermined project priorities (i.e. land preservation, trails, water access, riparian buffers, community parks) or use the “Other” box to designate a different priority or to suggest the money be “saved”.

The *Idea* and *Mapping* Stations yielded information that primarily centered on the

common themes of community parks, land preservation, riparian buffers/stream quality, trails, and water access. In general people felt a need to establish community parks where residents do not have access to such features, such as in Allenwood Village, and to provide parks in growing residential neighborhoods.

Land preservation was a priority and suggestions included promoting more voluntary land conservation efforts, limiting sprawl development, the use of incentives to encourage greenway and open space protection, and revising local ordinances to provide consistent implementation of land use and conservation goals. Participants identified specific areas for land protection through the mapping exercise. For example large swaths of agricultural areas between Lewisburg and Mifflinburg following the Colonel John Kelly Road, Route 192, Route 45, and Furnace Road corridors were identified as farmland preservation priorities as was the Route 304 corridor between Winfield and New Berlin.

The need to protect existing riparian buffers and to establish greenways for environmental protection where streamside vegetation is minimal was frequently mentioned along with providing education about farm and home best management practices. Trails were a popular topic with emphasis on finishing the Buffalo Valley Rail Trail (BVRT) by completing the US 15 crossing and making a connection to the Susquehanna River in Lewisburg Borough. There was also considerable interest in expanding the trail west beyond Mifflinburg and creating connectors

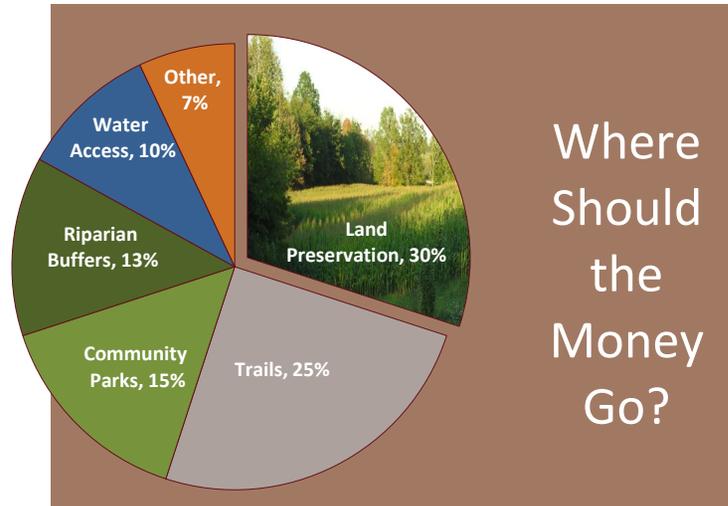
from neighborhoods and activity centers to the BVRT. A trail and greenway system along the West Branch Susquehanna River was another frequently mentioned priority including creating a trail in Gregg Township that would connect Allenwood to Montgomery Borough in Lycoming County. A trail in the southern portion of the county that would connect Winfield to Northumberland Borough in Northumberland County was often cited as well. Other suggestions included improving the PennDOT designated bike routes V and J with wider shoulders, educating the public about proper walking and biking rules, and improving access from Lewisburg Borough to the Riverwoods Soccer Complex.

In terms of water access, the idea of a Penns Creek water trail was popular along with developing river access at the county's Great Stream Commons property near Allenwood. Other suggestions included creating a more formalized river access for canoes and kayaks in Lewisburg Borough. Miscellaneous suggestions included providing cultural and historic interpretation; creating an outdoor mentor program for suburban and urban residents; using demonstration projects in high profile areas to show the benefits of greenways, trails, and open space; adequately planning for the maintenance of any future community park, greenway and trail improvements, and evaluating the designation of US 15, and Routes 45, 192 and 44 as Scenic Byways with PennDOT.

The *Money Exercise* showed how people would prioritize and spend limited resources on gre-

enway and open space implementation categories. Land preservation and trails, as illustrated in Figure 1, led the way with 29% and 25% of all funds being designated to those two priorities. Community parks (15%), riparian buffers (13%), and water access (10%) followed. The "Other" category (7%) was the least popular.

Figure 1. The Money Station Exercise



Online Survey

In order to accommodate residents that could not attend a public meeting, or who simply prefer providing input from the convenience and comforts of their home, a brief online survey was available from April through June 2015. A total of 150 people participated in the 15 question survey and answered a variety of questions about greenways and open space. An overwhelming 94% of respondents felt it very important to protect Union County's natural and open space resources with stream cor-

ridors, wildlife habitat, and forests being noted as the types of lands that are most critical to protect. Farmland was a close fourth. When asked to identify which benefits of greenways and open space are most appealing participants cited "clear skies, clean rivers, and protected wildlife" the most followed by "providing a place for outdoor recreation" and "bicycle and pedestrian transportation".

Survey respondents equate greenways, open space, and trails with health and wellness as 98% said these resources are important for such purposes in the community. Trails were reported as the most needed outdoor recreation opportunities.

There were two questions related to funding for greenways and open space. In one 83% agreed that it was an appropriate use of funds for local governments to pre-

serve farmland and natural resources, provide community parks, greenways and trails, install riparian buffers, bicycle lanes on roads and water access areas. When asked whether or not they would be willing to personally contribute money annually to preserve farmland, natural areas, greenways and to establish parks, trails and stream buffers, 57% of survey takers indicated a willingness to provide more than \$50 a year for such purposes while 64% supported \$30 or more a year. Only 15% were not willing to contribute at all.



Framework Methodology

Based on the vision and goals, and an analysis of the opportunities presented in Chapter 3, a greenway and open space framework was prepared that defines an overall spatial pattern that efficiently uses existing resources and facilities, adds to the economic prosperity, and promotes the long-term sustainability and conservation of the county's rich natural and agricultural resources. This framework is consistent with and complements the growth management strategy developed as part of the county and municipal comprehensive plans that recommend directing future development into primary and secondary growth areas while conserving natural resource areas. The land use planning principles of focusing new development in an around established communities, preserving rural resources, conserving energy, and conserving fiscal resources are reinforced by this plan.

As can be seen on the Future Land Use Map in Figure 6 of Chapter 2, excerpted from the aforementioned comprehensive plan, a large percentage of the county is proposed to remain as open space. This current planning effort was designed to look at greenways and open space more closely in order to identify more specific priorities for future implementation within the context of this town and country landscape.

The greenway and open space framework started with analyzing and mapping various community, cultural, historic, and natural resources

within the county by overlapping layers of information using Geographic Information Systems (GIS). Conservation priorities were identified through GIS modeling that assigned values to features present on the land. Then public participation results, the vision, and goals were integrated to shape the structure of the greenway and open space system.

The framework establishes a network of hubs and spokes that generally follows and is consistent with the methodology of the Pennsylvania Greenway Plan. Hubs are state forests and other important destinations and the spokes are greenways and open spaces between the hubs that connect natural areas and recreational and cultural destinations with neighborhoods, schools, and employment centers where people live and work. Furthermore greenways (spokes) have been classified into conservation corridors or multi-use corridors in this plan. Conservation corridors/greenways are to promote ecological functionality for improved water quality and wildlife habitat and do not include amenities such as trails. Multi-use corridors/greenways on the other hand are intended to serve multiple functions including environmental, recreational, and alternative transportation objectives.

Greenway and Open Space Alternative Concepts

Several alternative greenway and open space concepts were considered as part of this planning effort. Each of the concepts presented were evaluated generally to assess what public and private actions would be required to implement it, relative costs, expected benefits, likelihood of success, and other relevant factors such as consistency with the stated plan vision and goals. This information was then used to finalize a preferred greenway and open space network concept.

One alternative for the future is to simply maintain the status quo in terms of open space conservation and greenway development. Under this approach the county, municipalities, land trusts, businesses, landowners, and residents would not do anything different over the next 10 to 20 years than what is being done currently. Meaning there essentially would not be a specific plan to follow and no new initiatives would be pursued, which would certainly limit the actions necessary for implementation. On the surface this alternative would be the most economical in the short-term but could prove to be the most costly over the long-term due to the opportunity costs of inaction. The benefits would be fairly marginal as well. Based on the public input, trends, and guidance from the Steering Committee, this alternative does not appear to be viable and would most likely be rejected. Therefore it was ruled out as a preferred alternative.

A second alternative would be to have an integrated multi-purpose greenway and open space network following every major ridge line and waterway within the county which would include conservation buffers along waterways with public access and trails for recreation and transportation. Given the amount of private landownership, concerns noted in the river-front landowner survey, and the sentiments of property owners when the Buffalo Valley Rail Trail was developed, this is likely not an alternative that will have a great deal of widespread support. Also there are critical habitats where public access and recreational use are not desired due to detrimental impacts to the species being protected. Furthermore the cost of developing and maintaining such an extensive trail system would be prohibitive for the county and municipalities to pursue. While the benefits would be extremely high from a recreation standpoint, and it would set an ambitious goal for the future, low implementation success could be expected during the life of the plan. As a result, an expansive multi-purpose greenway and open space network where public access is maximized to the fullest extent was not given further consideration.

A third alternative would be to have all conservation greenways (i.e. riparian buffers) and protected open space that provide no public access to support recreational opportunities and other functions like alternative transportation and cultural and historic interpretation. This approach would theoretically have a higher probability of implementation and the costs would be much more manageable than for

alternative two above. While this might be supported by some, it would not achieve the vision and goals developed based on citizen engagement. The vision statement and goals specifically reference providing opportunities for improved community health and recreation through access to water resources, greenways, open space, parks and trails. Since this would not be consistent with the vision and goals, it was not recommended.

An approach that would appear to be consistent with the vision statement and goals is the fourth alternative which blends elements of the second and third alternatives described above. Envisioned is a network of greenways and open space that would feature both multi-purpose and conservation only areas. Within this system would be a combination of greenway hubs, spokes, habitat blocks, riparian buffers, trail towns, trails, parks, and priority agricultural areas. It is believed this alternative would:

-  Be consistent with the vision and achieve the conservation goals outlined by the public and the steering committee;
-  Strategically provide new opportunities for public access, recreation, and improved health;
-  Balance the interests of private land owners with the overall community;
-  Have a higher implementation success rate; and
-  Would be more reasonable in terms of long-term fiscal impacts.

Therefore this is the preferred alternative that is recommended and will be addressed in the remainder of this chapter. The map in Figure 4 shows the conceptual layout of the preferred greenway and open space network across the county.

Greenway Hubs and Trail Towns

The proposed Union County Greenway system is built upon hubs and spokes (corridors) that are designed to establish a link between communities where people live and work and open space areas and other activity centers; provide connections between points of interest; offer increased recreation opportunities and transportation choices; and preserve open space for wildlife habitat and important ecological functions.

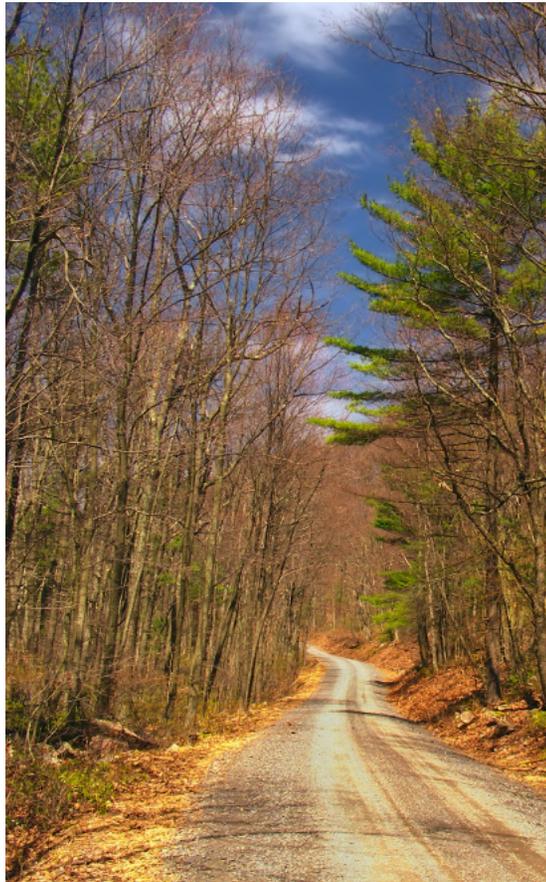
Hubs are areas that feature a high degree of human and/or wildlife activity and are significant destination points within the greenway and open space system. Two hubs have been identified within the county. The first is the Lewisburg area which is designated based on the amenities that are available including lodging, food, a core downtown, fuel, entertainment, recreation, cultural and historical sites, and other services. Additionally it is at the intersection of the Buffalo Valley Rail Trail and the major statewide Susquehanna Greenway corridor, including the West Branch Water Trail. The other hub identified is the Bald Eagle State Forest, which is a major habitat block that provides extensive forest land conservation,



watershed protection, and outdoor recreation. This is a natural resource-based hub that lacks developed amenities, but is a significant activity center for camping, hiking, horseback riding, fishing, hunting, nature study, snowmobiling, and numerous other nature-based activities. It is also an important bird and mammal area and includes a number of sensitive plant and animal species identified in the county Natural Area Inventory.

A hub that is primarily in Northumberland and Snyder Counties, but connects to Union County is the Lake Augusta area that is formed by the City of Sunbury, Northumberland Borough, Monroe Township, and Shikellamy State Park at the confluence of the Susquehanna River's north and west branches. A regional trail network and a Susquehanna River Sports park are proposed greenway related improvements currently being explored within this hub by multiple partners.

Trail Towns, like hubs, are activity centers or destinations along major trails that capture trail-based tourism, whether a rail trail, water trail, or hiking trail. Trail towns support trail users by having needed goods and services available and by providing a location where people can conveniently venture off the beaten path to enjoy other assets. In trail towns the trail often becomes an integral part of the community and is a friendly place that encourages trail users to visit. However trail towns generally are smaller in scale and have fewer amenities available than hubs.

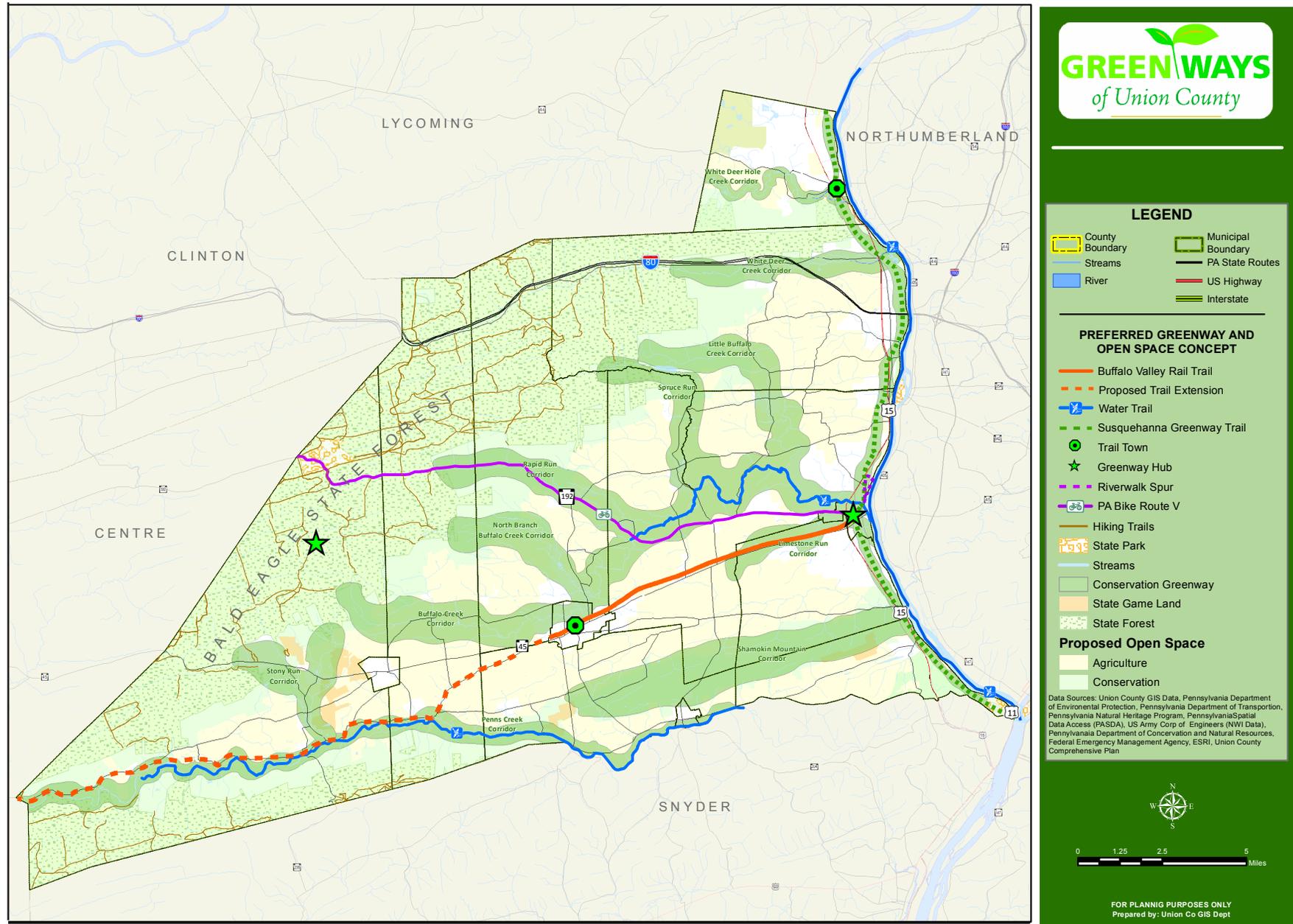


Mifflinburg is designated as an existing trail town and Allenwood is depicted as a future trail town. These are areas that can build a segment of their local economy around an existing or future trail and currently have or are expected to have available food, lodging, fuel and links to other cultural, historic, or natural resource based destinations and points of interest. Additional trail towns could emerge in the future if new trails and routes are established. Greenway hubs and trail towns are identified on Figure 2.

Greenway Corridors Overview

Greenway corridors are the linear segments of green infrastructure that connect hubs, trail towns, habitats, and destinations. In Union County the Susquehanna Greenway along the West Branch of the Susquehanna River that extends from the Lycoming County line in the north to the Snyder County line in the south is a high profile greenway. This is a major state-wide greenway that has been planned by the Susquehanna Greenway Partnership and is a regional priority that was originally identified in the Lower West Branch River Conservation Plan developed by the Northcentral Pennsylvania Conservancy. Here the Susquehanna Greenway is proposed as a multi-use corridor that would incorporate public access and a trail system. Initially the access and trail component would be limited to certain sections where the topography is suitable and landowners have expressed an interest in moving this idea forward.

Figure 2. Preferred Greenway and Open Space Concept



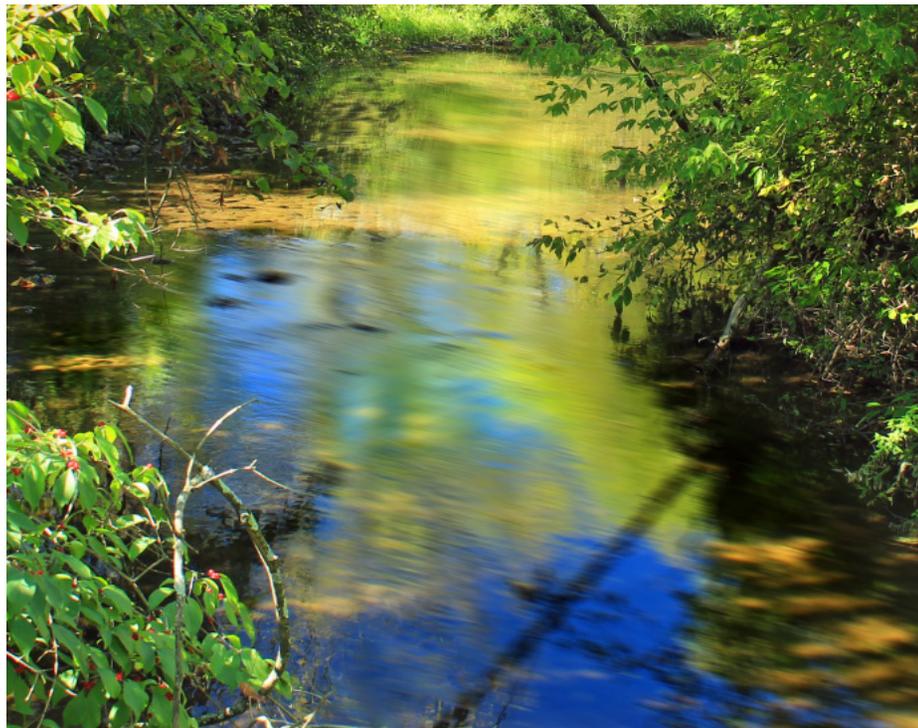
Preferred Greenway and Open Space Concept



Given that the majority of the corridor is in private ownership, it may take decades to fully implement the trail component that could connect communities up and down the river valley. In terms of conservation, it is recommended that a minimum of 100-foot forested buffer be established along the river for ecological purposes regardless of whether a trail is constructed or not. Greenway corridors for conservation purposes are recommended along all other county streams with the width of the buffer varying by stream. In these corridors public access for the most part would not be encouraged or formalized. It would be the decision of each property owner as to whether or not they wished to allow public access for recreational activities. The reason for this approach is that much of these areas are actively farmed and based on landowner feedback it would appear that conservation greenways, while still posing implementation challenges, would be more acceptable if public access was not included. Also as previously noted the fiscal capacity does not exist at the local level to develop and maintain trails in all these corridors even if the property owners were willing to accommodate them.

The Union County Conservation District in its 2025 Strategic Plan has set a goal for years 2016 through 2019 to increase streamside cropland and pastureland buffers with a 35-foot minimum

of permanent vegetation. On the other hand, the Pennsylvania Department of Environmental Protection recommends 50 feet as the minimum buffer while the Stroud Water Research Center suggests a 100-foot minimum based on research studies they have conducted to evaluate the effectiveness of various buffer widths. The consensus is that riparian buffers are extremely beneficial for treating runoff, storing floodwaters, aiding groundwater recharge, and for providing shade and streamside habitat. However the precise width and composition is still a point of debate among regulatory agencies, scholars, conservation organizations, and landowners. In this plan, we have attempted to suggest recommended minimums for stream corridors in the county,



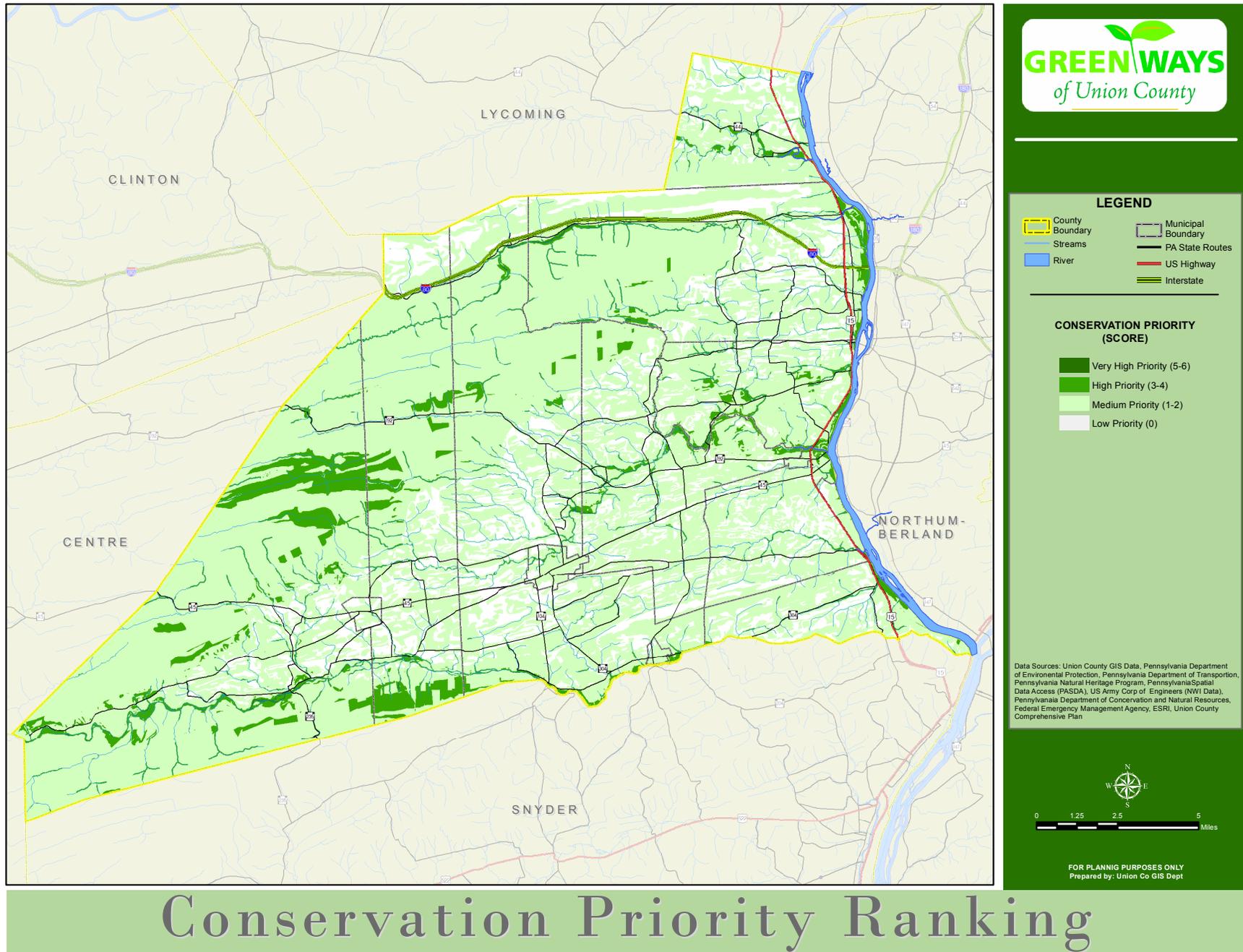
but recognize that some buffer is better than no buffer at all.

The major conservation greenways proposed, which are shown on Figure 2 and run in an east-west orientation, are White Deer Hole Creek, White Deer Creek, Buffalo Creek, and Penns Creek. On these larger streams and their major tributaries (i.e. Spring Creek, Little Buffalo Creek, Spruce Run, Rapid Run, Laurel Run) existing forested riparian buffers should be retained and areas where buffers are presently lacking should have a minimum of 50 feet established for water quality improvements, bank stabilization, and to provide habitat and wildlife movement corridors. Along other county streams conservation greenways should be established with a 35-foot minimum vegetated buffer.

Priority Open Space

In addition to greenways, priority open space areas, including farmland, were evaluated and identified for future conservation. Using GIS analysis that incorporated a scoring methodology the most critical open spaces in terms of environmental sensitivity were identified. These results are shown in Figure 3. The conservation of these natural resource areas is critical to healthy communities and for maintaining important ecological functions.

Figure 3. Conservation Priority Ranking



Forested watersheds and other open spaces provide for recharge of both surface and groundwater supplies. Native vegetation also contributes to clean air, provides habitat for wildlife, and adds to the aesthetics of the landscape by providing a backdrop for the farm valleys. For the most part a significant number of the priority areas have been incorporated into the proposed greenway alignments since they follow stream corridors or are already protected within the state forest. In addition the Merrill Linn Land and Waterways Conservancy provided a list of properties that it feels are a high priority in terms of open space land protection. These lands are shown on the map in Figure 4 and are in sync with the Conservancy’s Linking Landscapes initiative which seeks to establish new land and ecological connections within the region for the purposes of enhancing the resiliency of protected areas and to halt the loss of biodiversity.

Farmland is valued economically and culturally by county residents and is a way of life for farm families. Whether a full-time or part-time vocation, these activities provide valuable income for farmers and agricultural-related businesses. If agriculture is to remain viable into the future it will be dependent on having a sufficient land base of high quality soils to support production. The map on Figure 5 shows priority agricultural conservation areas located in the Route 44 corridor in Gregg Township, in Kelly Township along Colonel John Kelly Road, in East Buffalo, Buffalo and West Buffalo Townships in the Route 45 and 192 corridors, and along Route 304 in Limestone and Union Townships. There

is also an area along Route 45 that extends from Mifflinburg to Hartleton. The other agricultural lands in the county are also important but were not included in the priority areas either due to having lesser soil quality, lack of imminent development pressure, are planned for future development, or similar factors.

Community parks also serve as important open spaces and recreational activity centers where residents can relax, play, and spend time with friends and family. Currently Union County does not meet the minimum acreage for community parks based on population. As population continues to grow, so, too, will the net deficit in community parkland. The creation of new parks was not identified as a

high priority by the public but it will nonetheless be important for certain growing municipalities, like

East Buffalo Township for example, to provide more community park land that is conveniently accessible to residents. If new parks are not planned and developed, it will likely result in overuse of existing parks, which can detract from the recreational experience for park goers, wear out park facilities and equipment ahead of schedule and negatively impact physical features (i.e. trees, turf, streams).

Trails

Although this is not a trail plan, trails were a common topic of discussion and the focus of significant public input. Greenways often include a trail component, so trails have been incorporated into the greenway and open space framework as appropriate. The highest priority is to complete and maintain the existing trails in the county. Several phases of the Buffalo Valley Rail Trail (BVRT) have been constructed which has resulted in a continuous trail from 10th Street in Mifflinburg to 10th Street in East Buffalo Township. A section from 8th Street to 5th Street with a connector to Market Street has also been recently built in Lewisburg Borough. The BVRT sits within a strip of land that averag-

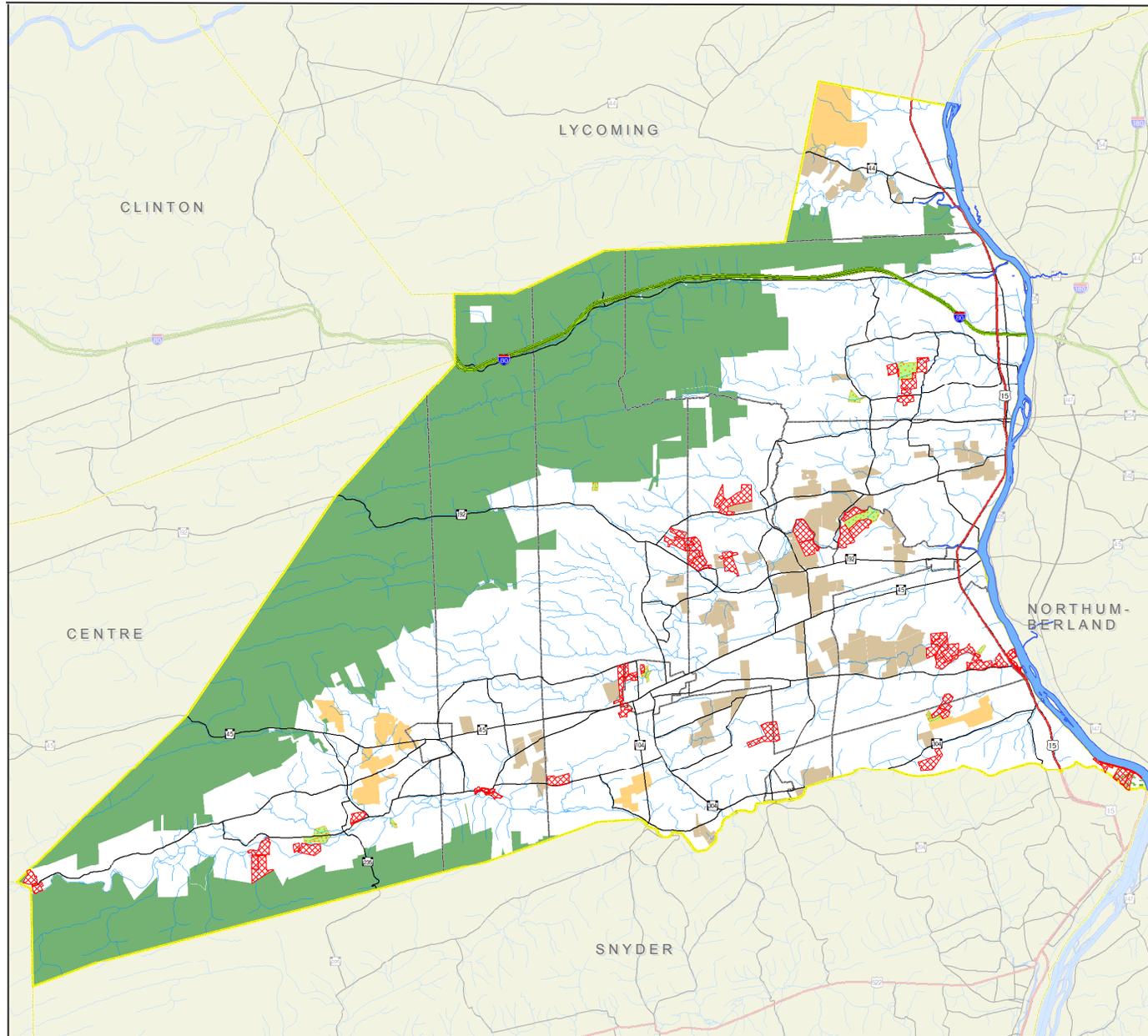
“The very first time I hit the Buffalo Valley Rail Trail, I had an overwhelming feeling of peace. It was one of those early mornings when no other human was on the trail but me. I could hear the birds singing. I could feel the chill in the air. I felt so “full” with all that was around me. And I began to hum a bit as I biked. Life was so good. And since then, it continues to be therapy in so many definitions of life.”

- KJ Reimensnyder-Wagner,
Songwriter/Musician

es 60 feet in width and is a greenway corridor connecting the county’s two largest population centers. The major gap that exists is

the crossing of US Route 15 to complete a link into historic downtown Lewisburg. The public has identified closing this trail gap as a high priority.

Figure 4. Linn Conservancy Priority Parcels



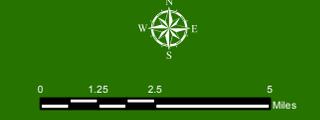
LEGEND

County Boundary	Municipal Boundary
Streams	PA State Routes
River	US Highway
	Interstate

OPEN SPACE AND CONSERVANCY

Linn Conservancy Priority Parcels
Agricultural Preservation Easements
Conservancy Easements
State Gamelands
State Park
State Forest

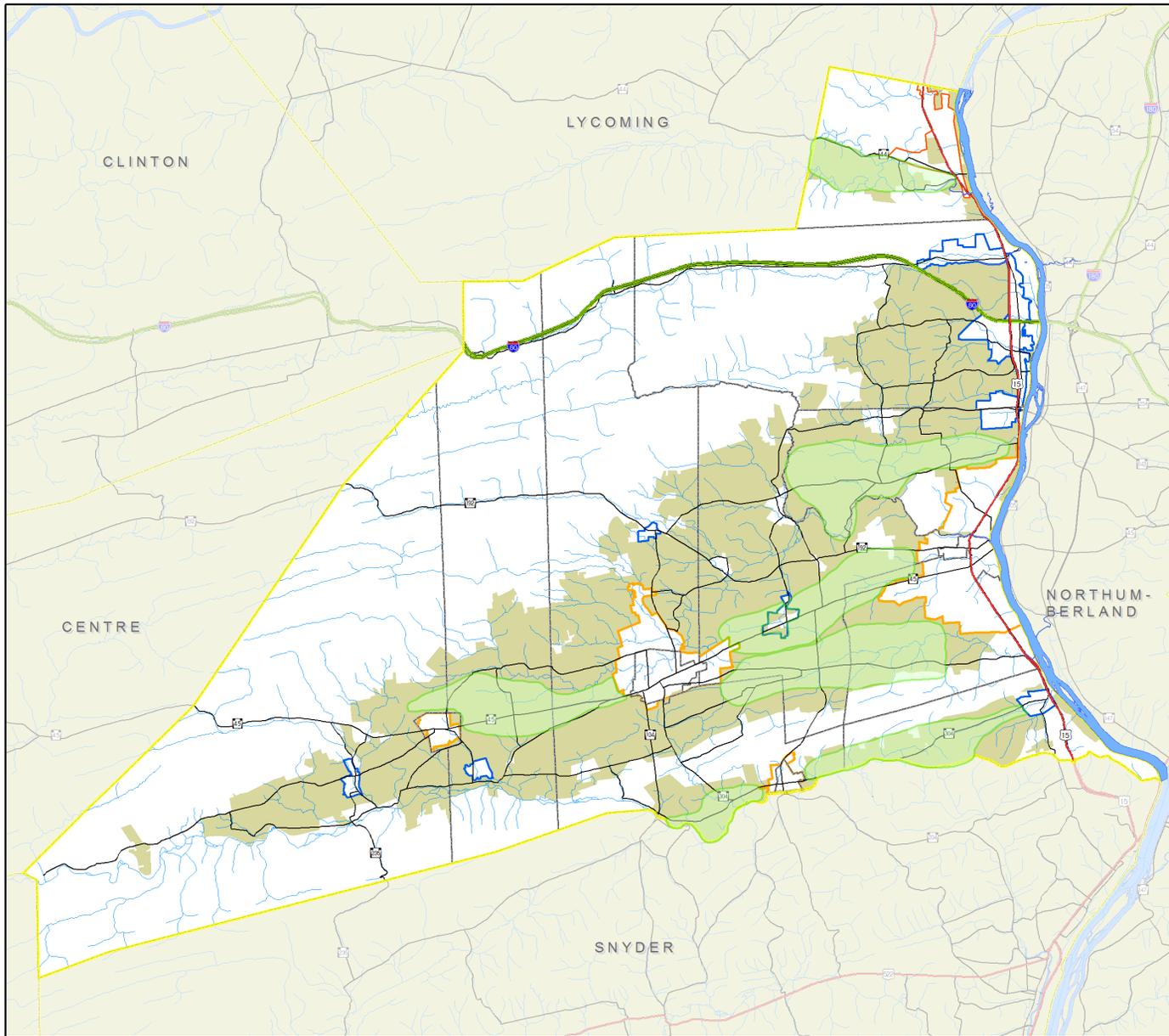
Data Sources: Union County GIS Data, Pennsylvania Department of Environmental Protection, Pennsylvania Department of Transportation, Pennsylvania Natural Heritage Program, Pennsylvania Spatial Data Access (PASDA), US Army Corp of Engineers (NWI Data), Pennsylvania Department of Conservation and Natural Resources, Federal Emergency Management Agency, ESRI, Union County Comprehensive Plan



FOR PLANNING PURPOSES ONLY
Prepared by: Union Co GIS Dept

Linn Conservancy Priority Parcels

Figure 5. Priority Agricultural Conservation Areas



LEGEND

County Boundary	Municipal Boundary
Streams	PA State Routes
River	US Highway
	Interstate

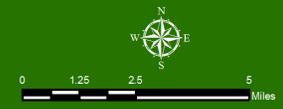
AGRICULTURAL CONSERVATION AREAS

- High Priority Ag Conservation
- Agricultural Conservation (Comp Plan)

GROWTH AREAS

- Primary Growth Areas
- Secondary Growth Areas
- Gregg Township Growth Area

Data Sources: Union County GIS Data, Pennsylvania Department of Environmental Protection, Pennsylvania Department of Transportation, Pennsylvania Spatial Data Access (PASDA), US Army Corp of Engineers (NWI Data), Pennsylvania Department of Conservation and Natural Resources, Federal Emergency Management Agency, Union County Comprehensive Plan



FOR PLANNING PURPOSES ONLY
Prepared by: Union Co GIS Dept

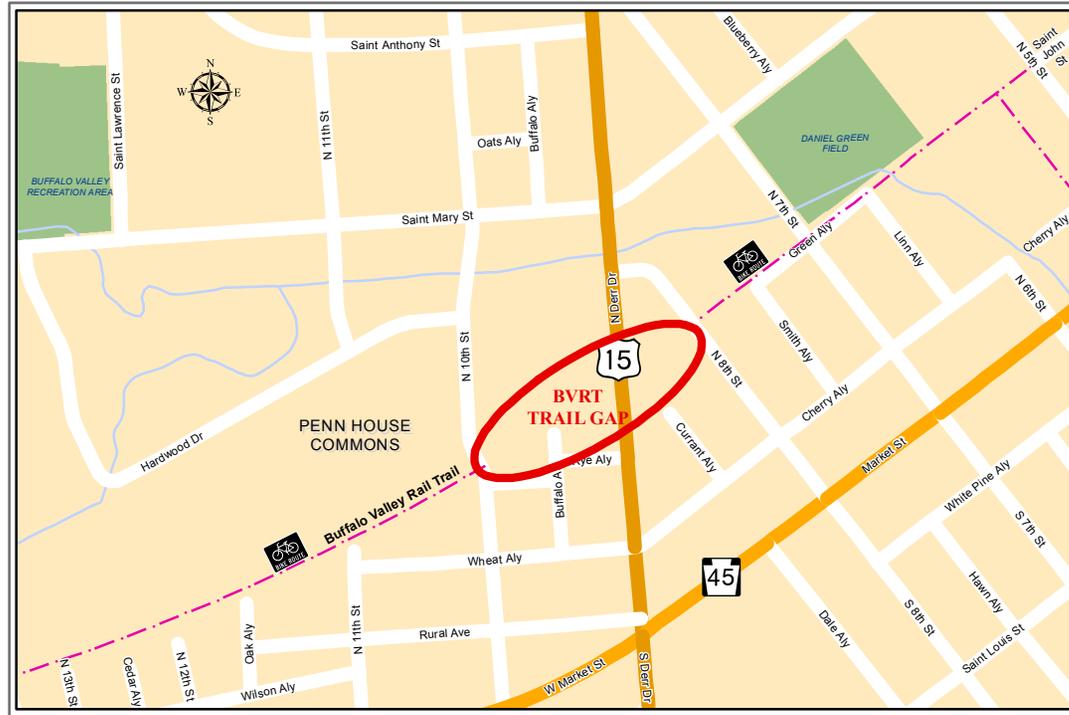
Agricultural Conservation Areas

The other unfinished piece of the BVRT is from 5th Street to the Susquehanna River along St. John Street and the river bridge which was the subject of a feasibility study completed by the Buffalo Valley Recreation Authority. Refer to Figure 6 for the location of the BVRT trail gap and unfinished section in Lewisburg.

There is also interest in extending the BVRT westward from Mifflinburg in order to provide a tie-in to the western part of the county. This would need to be evaluated more closely to determine the most desirable route but it is likely that using existing low-volume roads such as Swengel Road would have a higher probability of short-term implementation success than using the former railroad corridor that was vacated in the 1970s. The ultimate goal is to one day have a route that ties into the Cherry Run Rail Trail and the Penns Valley Rail Trail that is proposed in eastern Centre County should that effort materialize.

In terms of major new trails a riverwalk along the West Branch Susquehanna was frequently mentioned by the public and steering committee as a long-term priority within the greenway. There are several landowners that are willing to partner on this which could serve as a demonstration project for early implementation. In Gregg Township, Union County owns 1.5 miles of riverfront property and/or old rail corridor at Great Stream Commons that joins land owned by Lycoming County to the north. There is the potential to have a trail of approximately four miles in length from the village of Allenwood to Montgomery Borough. Lycoming County has

Figure 6. The BVRT Gap and Unfinished Section



plans in the future to bring a trail system from the Williamsport area to Montgomery and eventually one would be able to travel on a trail from Allenwood to Jersey Shore Borough and then access the Pine Creek Rail Trail which goes 60 miles to Wellsboro in Tioga County. From there a connection is planned to the Genesee Valley Greenway in New York which would form the Genesee-Susquehanna Greenway, extending from Rochester, NY on the shores of Lake Ontario to the Chesapeake Bay in Maryland. The opportunity exists for Union County to be part of this interstate 400-mile mega greenway as seen in Figure 7.

The river frontage south of Allenwood downstream of White Deer Hole Creek has severe topographic challenges and an active railroad line which would result in design solutions that are not economically feasible. Therefore it is recommended that at Allenwood a Susquehanna riverwalk would be routed across the State Route 44 Bridge to tie into the State Route 405 greenway corridor that was proposed in the Northumberland County Greenway Plan. Or in lieu of that it could connect to the river canal trail from Dewart to Watsonstown Borough that was previously proposed by the Warrior Run Community Corporation. In all likelihood it would make the most sense to have the riverwalk/trail on the Northumberland County



Figure 7. The Genesee-Susquehanna Greenway



side It should be noted that in Kelly Township, Albright Care Services has shown a willingness to work with the community to establish a trail on their mile of river frontage. North of the Albright Care toward West Milton, the degree of difficulty for establishing a trail increases due to the physical constraints imposed by the floodway, an active rail line, and US Route 15. It may not be impossible to fit a trail in this alignment,

but it would be challenging once beyond Delta Place north to the village of West Milton.

Presently the railroad from West Milton to Winfield that intersects with the BVRT is an active freight line owned by the Lewisburg and Buffalo Creek railroad. If, in the future, the railroad is not economically viable, it should be railbanked and converted to a trail. An-

other option, should the rail remain profitable and in operation, would be to explore the possibility of a rail with trail from Lewisburg to Winfield since a number of short line railroads have started using this practice in circumstances where other achievable alternatives do not exist. The SEDA-COG Joint Rail Authority, for example, has done this on a very limited basis while the Western New York and Pennsylvania Railroad has been expanding its collaboration with trail groups in recent years. This may not be feasible due to liability concerns of the rail owner and operator or due to the costs involved to construct the trail to the required standards.

There is the potential to have a trail from Winfield to Northumberland, if the property owners are open to the concept and would be willing partners. In this stretch, the railroad bed was vacated decades ago and for the most part is intact and privately held. During the development of this plan, it was learned there might be interest on the part of one or more landowners.

Several other community based trails or pathways were also considered and are worthy of exploring. These include a trail along Penns Creek in New Berlin, a trail or bike lane in Mifflinburg along 8th Street, a connector from the BVRT to the Koons Trail in Mifflinburg, and a trail along Buffalo Creek from Lewisburg Borough to the Dale's Ridge Trail. In addition to the potential trails noted here, there are on-road bicycling opportunities throughout the county on low-volume rural roads. For example, the

Sugar Valley Narrows Road, also known locally as the White Deer Pike, provides a continuous ride from the village of White Deer through the White Deer Valley and Bald Eagle State forest which connects to the Sugar Valley Scenic Bike Route loop identified in the Clinton County Greenway and Open Space Plan. Similarly places like South Creek Road in Gregg Township, part of the Warrior Run Pathways Bike Touring Routes “Spring Garden Ride”, Wildwood Drive in Limestone Township, Creek and Weikert Roads in Hartley Township, and many others around the county offer some roads less traveled for cycling enthusiasts. The Susquehanna River Valley Visitors Bureau has also mapped several routes of interest on its website at <http://www.visitcentralpa.org/things-to-do/outdoor-recreation/bicycling>.

Water trails were also reviewed in addition to the traditional land based trails. The West Branch Susquehanna River is a water trail and a National Recreation Trail that is part of the Captain John Smith network in the Chesapeake Bay watershed. There is also a water trail on Buffalo Creek that has been established locally by the Buffalo Creek Watershed Alliance. The only new water trail recommended in this plan is on Penns Creek from Weikert downstream. It should be noted that an official water trail designation communicates certain expectations to users in terms of available goods, services, and other amenities along the route. As such, there can be considerable investment needed to reach a point where volumes of water trail paddlers can be effectively accommodated. Therefore in the short-term, the goal should be



to improve access to Penns Creek for canoeing and kayaking with the long-term goal of building up to official water trail status once the necessary support infrastructure is in place. Below Weikert there are limited places where people can legally put in and take out canoes without trespassing. Related to water trails, water access points mainly for canoe and kayak launching and fishing were identified as a need during the planning process. Once again, consistent with recommendations in other plans

over the past ten years, river access at Great Stream Commons north of Allenwood in Gregg Township was suggested. On the river another access point is needed in Lewisburg Borough and could be at St. George Street or at a number of other locations including where Buffalo Creek enters the river. At the present time, there are no Pennsylvania Fish and Boat Commission (PA FBC) launches in the county, but there are facilities nearby at the West Milton State Park and Chilisquaque Creek accesses. It



should be noted that this will change with the construction of the Central Susquehanna Valley Transportation (CSVT) project since part of the mitigation plan for developing the highway calls for installing a PA FBC boat ramp in Union Township slightly upstream of and within the shadows of the new river bridge.

Summary

A coordinated network of greenways, open space, and trails as proposed by the preferred alternative accomplishes multiple goals and objectives related to conservation, public health, and transportation. It is responsive to public input received during this planning process and is consistent with and seeks to achieve the priorities noted in other plans completed over the last ten years. In Chapter 5 specific implementation strategies are provided to outline how the preferred greenway and open space framework and recommendations presented in this chapter might be achieved over the life of the plan. This includes priorities, potential partners, lead entities, estimated costs, and potential funding sources.



Chapter 5

Implementation



Introduction

The previous chapters in this plan provided an introduction, a look at the benefits of greenways and open space, an overview of the planning process, the vision statement and goals, an analysis of key trends, the county’s existing and expected future conditions, an inventory of county resources and opportunities, and the recommended greenway and open space framework. This chapter presents a series of strategies and actions that, when completed, will implement the greenway and open space framework and the recommendations in this document.

Creating the plan is only an initial step toward the long-range goal of seeing the ideas materialize into real projects that carry forth the vision to preserve, connect, and enjoy greenway and open space resources. A dedicated and concerted effort will be needed among multiple partners over the next several decades to advance the priorities that have been identified.

The implementation structure presented here is a multi-faceted approach that relies on a variety of concurrent approaches, such as voluntary land conservation, land use planning, public policy, and education and outreach among others to preserve agricultural land, protect important open space, and to develop greenways, parks, and trails.

Implementation Strategies

The implementation strategies are organized into tables by category and each table includes a brief description of the recommended action, possible partners, cost range, potential funding, and timing of the priority. The categories are: Conservation Measures; Education and Outreach; Land Preservation; Parks and Recreation and Trails & Non-Motorized Transportation. Under the Partners heading is a list of agencies, organizations and others that could work together to achieve the desired outcome. Although this was a county-led plan, many of the implementation priorities are dependent on the involvement and cooperation of non-county entities including municipalities, private landowners, state agencies, land trusts, and others. In fact, for many actions, the county is not considered a critical lead partner.

Cost estimates for implementation strategies can be wide-ranging and are intended to serve as a starting point for project evaluation. Some strategies have little or no cost beyond the administrative time of the responsible entity while others will require a more

substantial infusion of funding. For planning and comparison purposes, a cost range using one (\$) to five (\$\$\$\$\$) dollar signs has been presented in the tables. Using this method, the values are as follows:

\$ < \$50,000

\$\$ = \$50,000 to \$100,000

\$\$\$ = \$100,000 to \$500,000

\$\$\$\$ = \$500,000 to \$1,000,000

\$\$\$\$\$ > \$1,000,000

More refined costs will be developed through feasibility studies or other pre-design work as a particular project is selected for advancement (which could be a decade or more from now for some tasks). Table 1 presents generalized costs that were used as a basis for estimates in this plan.

Implementation Action	Estimated Cost
Farmland Preservation Easement	\$2,500/acre
Conservation Easement	\$0 to \$1,000/acre
Conservation Land Acquisition	\$10,000/acre
Public Park Land Acquisition	\$10,000 - \$35,000/acre
Riparian Buffer Planting	\$2,500/acre
Perpetual Riparian Buffer Easement	\$6,500/acre
10' wide trail to PennDOT standards	\$400,000/mile
10' wide trail other	\$75,000/mile
Trail Engineering Design-PennDOT	\$40,000/mile
Trail Engineering Design non-PennDOT	\$25,000/mile
Feasibility Studies	\$50,000
Park Master Plan	\$50,000
Construct canoe/kayak launch area	\$75,000
Zoning Ordinance Amendment	\$5,000



For additional perspective, the first phase of the Buffalo Valley Rail Trail (BVRT) cost nearly \$3,000,000 to construct nine miles to PennDOT standards in 2011. Land for a conservation acquisition in 2015 by the Merrill W. Linn Conservancy was appraised at approximately \$12,000 an acre for developable forest land without public utilities and no zoning restrictions; however, real estate costs will vary across the county and are unique to the location and the qualities of each individual property.

Funding is always a moving target and is often dependent upon the economic, fiscal and political climate of the Commonwealth, the region, and county. For greenways, land conservation, open space, parks, and trails there is more state funding available today than at any time in the last 20 years to support these initiatives. In the implementation tables an attempt has been made to identify potential funding sources for the projects listed even though this can change quickly as new initiatives are launched and existing programs are reduced or eliminated. Also the funding opportunities identified do not represent an exhaustive list and other possible resources should be sought.

A funding staple has always been the Department of Conservation and Natural Resources (DCNR) Community Partnerships Grant Program which funds up to 50% of eligible project costs for certain pre-construction (plans, studies, and design) and development activities related to conservation, greenways, trails, and parks. DCNR funding has been obtained by municipalities, the county, and other organizations to



support park rehabilitation, playground installation, youth sports fields, feasibility studies, trail development, land acquisition, and engineering design.

A newer program in recent years is the Commonwealth Financing Authority's Greenway and Trail Program, which is administered through the Department of Community and Economic Development (DCED). With this funding source, DCED will cover up to 85% of eligible costs for a maximum total award of \$250,000. The Merrill W. Linn Conservancy was successful in accessing this grant to cover a portion of the costs on a recent land acquisition in Union Township.

Also at the state level, the Pennsylvania De-

partment of Transportation (PennDOT) awards nearly \$30 million of multi-modal transportation funding annually through Act 89 that can be used for trail projects, but a 30% local match is required. This is in addition to the Federal Transportation Alternatives Program (TAP) which is limited to alternative transportation. The second phase of the BVRT successfully accessed over \$500,000 in TAP funding through PennDOT and the SEDA-COG MPO. In addition to PennDOT, another \$30 million in multi-modal funding is administered by DCED and also requires a 30% match.

For farmland conservation, the Pennsylvania Department of Agriculture (PDA) has been the primary source of funding for the Agricultural Land Preservation Program, which is currently

matched annually with \$125,000 of county funds. The Gregg Township Board of Supervisors also contributes \$5,000 a year to the county program and is the only municipality to do so. To date, PDA has contributed millions of dollars towards preserving more than 8,000 acres of farmland in Union County.

Finally, Union County receives a limited amount of Act 13 revenue through the Marcellus Legacy Fund that, by law, must be used for greenway, trails and open space related purposes. To date, the county has reserved the use of these funds to assist partners with taking on projects that do create a lasting legacy in the community, such as new extensions to the BVRT and the protection of Shikellamy Bluffs.

It is anticipated that grants from the agencies listed above and from private foundations will be sought and used to the greatest extent practical for implementing the recommendations in this plan. In limited instances, different funding streams can be aligned to cover 100% of project costs, but this is the exception rather than the norm and more times than not local match must be incurred. There are also some tasks that simply may not be grant eligible or are not competitive enough so the funding responsibility must be completely local.

The last column in the table is the timing of each implementation task presented in terms of whether it is viewed as a short, medium, or long-term endeavor. For the purposes of this plan, a short-term ranking suggests that the strategy be implemented in the first (1st) to fifth

(5th) year following adoption of the plan.

Medium-term strategies then would be implemented in the sixth (6th) to tenth (10th) year, and long-term projects are expected to happen ten (10) or more years out. Timing of a strategy should not be confused with the priority status. It is possible that a recommendation is an extremely high priority, but the timing of completion is listed as long-term. Prioritization will be addressed later in this Chapter.

Of the 54 implementation strategies listed, 12 are short term, 18 medium, and 24 long-term. It should also be noted that this is a general guide as certain tasks may move on this continuum, depending on challenges that arise or due to new opportunities that are presented. For example, protection of the Shikellamy Bluffs has long been a high conservation priority of the Merrill W. Linn Conservancy and the county that emerged from the 1993 Natural Areas Inventory. It is also a priority in this plan, but due to new and unexpected circumstances a significant portion of the remaining unprotected bluffs area was conserved while the plan was being developed. The other take-away message is that long-term can literally be 10 to 20 years or more, as was the case here and also with the BVRT which took 10 years to go from an idea to having the first phase open for public use.

Note that a number of potential partners and funding sources are abbreviated in the implementation tables. These include:

- BCWA (Buffalo Creek Watershed Alliance)
- BVRA (Buffalo Valley Recreation Authority)
- BOF - Bureau of Forestry
- CSWOA Central Susquehanna Woodland Owners Association)
- LASD (Lewisburg Area School District)
- LDP (Lewisburg Downtown Partnership)
- LNC (Lewisburg Neighborhoods Corporation)
- LPCWA (Lower Penns Creek Watershed Association)
- MHRA (Mifflinburg Heritage and Revitalization Association)
- MLC (Merrill Linn Conservancy)
- NCPC (North Central Pennsylvania Conservancy)
- NPS (National Park Service)
- NRCS (Natural Resources Conservation Services)
- PA DCED (PA Department of Community and Economic Development)
- PA DCNR (PA Department of Conservation and Natural Resources)
- PA DEP (PA Department of Environmental Protection)
- PGC (Pennsylvania Game Commission)
- PLTA (Pennsylvania Land Trust Alliance)
- PSE (Penn State Extension)
- SEDA COG MPO (Susquehanna Economic Development Association Council of Governments Metropolitan Planning Organization)
- SGP (Susquehanna Greenway Partnership)
- UCALPB (Union County Agriculture Land Preservation Board)
- UCCD (Union County Conservation District)
- UCHS (Union County Historical Society)
- USFWS (United States Fish and Wildlife Service)
- LOWV - WREN (League of Women Voters - Water Resources Education Network)



No.	Implementation Action	Partners	Cost	Potential Funding	Timing
Conservation Measures					
C-1	Provide incentives for compact development, such as Traditional Neighborhood Development and open space conservation in new developments	Municipalities	\$	Municipalities	M
C-2	Permanently protect 250 miles of existing riparian buffers using easements with a priority on headwater areas and impaired streams	Conservation District, Watershed Associations, DEP, Linn Conservancy, NRCS, Farm Bureau, Landowners	\$\$\$\$\$	DEP	L
C-3	Install 200 miles of riparian forested buffers along the Susquehanna River and county streams, particularly impaired reaches, to improve water quality	Conservation District, Linn Conservancy, DEP, Watershed Associations, Farm Bureau, NRCS, Landowners	\$\$\$\$\$	DEP, DCNR, NRCS	L
C-4	Permanently protect 200 miles of newly-installed riparian forest buffers through conservation easement	Conservation District, Watershed Associations, DEP, Linn Conservancy, NRCS, Farm Bureau, Landowners	\$\$\$\$\$	DEP	L
C-5	Protect and enhance wildlife habitat throughout the county for game and non-game species	PA Game Commission, PA Fish Commission, Conservation District, NRCS, Landowners	\$\$	Game Commission, Fish Commission, NRCS, DEP	M
C-6	Use Official Maps as per the PA Municipal Planning Code to identify conservation priorities and trail routes	Municipalities, Union County, DCNR, Linn Conservancy	\$	Municipalities, Union County	M
C-7	Use planters and other measures to green downtown areas and existing developments	Lewisburg Downtown Partnership (LDP), Mifflinburg Heritage & Revitalization Association (MHRA)	\$\$\$	LDP, MHRA, Private Donors	M
C-8	Revise minimum parking standards to reduce impervious coverage and to create more open space within non-residential developments	Municipalities, Union County, Watershed Associations, Conservation District	\$	Union County	M
Education and Outreach					
E-1	Educate the public on proper bicycling and walking rules	Media, Local Police Departments, BVRA, School Districts	\$	BVRA, Police Departments, Schools	S
E-2	Help landowners better understand best management practices for improved water quality (i.e. chemical application, erosion, vegetation management)	Linn Conservancy, Conservation District, NRCS, Media, Watershed Associations, DEP	\$	Conservation District, DEP, League of Women Voters - WREN	S
E-3	Establish an outdoor mentor program for urban residents	Linn Conservancy, Conservation District, Watershed Associations	\$	Conservation District, Linn Conservancy	M
E-4	Develop a "Council of Conservation" to act as a clearing-house/coordinator of greenway, land conservation, and open space efforts	Linn Conservancy, Conservation District, Watershed Associations, NRCS, DEP	\$	Conservation District, Linn Conservancy	M

No.	Implementation Action	Partners	Cost	Potential Funding	Timing
Education Outreach (con't)					
E-5	Educate the public on the benefits of greenways and open space	Linn Conservancy, Conservation District, Watershed Associations, Planning Commission, Bucknell	\$	Conservation District, DEP, Linn Conservancy	S
E-6	Provide cultural and historic interpretation including the pre-Colonial period	Union County Historical Society (UCHS), Heritage Associations, Museums, Bucknell	\$	UCHS, Private Foundations	S
E-7	Publicize resources such as technical and financial resources that are available to landowners and the public for conservation and preservation	Conservation District, NRCS, Linn Conservancy, DEP, DCNR, Service Forester, Watershed Associations, UCHS	\$	Conservation District, Linn conservancy, DEP	S
E-8	Improve landowner understanding of private land conservation options, such as conservation easements and other benefits.	Linn Conservancy, Pennsylvania Land Trust Alliance	\$	Linn Conservancy	S
Land Preservation					
L-1	Amend local ordinances to establish conservation goals (i.e. sliding scale for forest preservation)	Planning Commissions, Municipalities, Conservation District	\$	Municipalities	S
L-2	Protect Shikellamy Bluffs and cliff community from alteration and development	Linn Conservancy, Landowners, Union County, DCNR	\$\$\$\$\$	DCNR, DCED, Union County, Land Trusts	S
L-3	Permanently protect the 1.5 miles of riverfront land in Great Stream Commons	Union County, Linn Conservancy	\$	Union County	S
L-4	Invest in agriculture and watershed protection in designated priority conservation areas	Union County Agricultural Land Preservation Board, Linn Conservancy	\$\$\$\$\$	DCED, DCNR, Union County, Land Trusts	L
L-5	Create permanent fund for land preservation and conservation efforts	Union County, Linn Conservancy. Conservation District	\$\$\$\$\$	Union County, DCED, DCNR	L
L-6	Encourage voluntary land conservation through the use of conservation easements	Linn Conservancy, Union County Agricultural Land Preservation Board	\$	Linn Conservancy	S
L-7	Establish a permanent and multi-purpose greenway along the West Branch Susquehanna River	SGP, Union County, Municipalities, DCNR	\$\$\$\$\$	DCNR, DCED, Union County, Municipalities	S
L-8	Protect priority natural areas identified in the county Natural Heritage Inventory, by Linn Conservancy and this plan to create open space blocks and corridors	Linn Conservancy, DCNR	\$\$\$	DCNR, DCED	L
L-9	Protect 50 acres +/- of floodplain, floodway, and wetlands next to Koons Easement in Mifflinburg	Linn Conservancy, DCNR, Landowners, US Fish and Wildlife Service (USFWS)	\$\$\$	Linn Conservancy, DCNR, USFWS	L



No.	Implementation Action	Partners	Cost	Potential Funding	Timing
Land Preservation (con't)					
L-10	Make strategic additions to the State Forest and other public lands (e.g. PA American Water land near Spruce Run and along White Deer Creek)	Linn Conservancy, DCNR, PA Game Commission (PGC)	\$\$\$\$\$	DCNR, DCED, PGC	L
L-11	Protect open space along Penns Creek at New Berlin including outcroppings, George Long property, and spring	Linn Conservancy, New Berlin Borough	\$\$	Private Donors	M
Parks and Recreation					
P-1	Establish a community park in Allenwood at Columbia Avenue or south of SR 44 river bridge	Gregg Township, DCNR	\$\$	DCED, DCNR, Gregg Township	L
P-2	Determine feasibility of using existing public open space in East Buffalo Township for new parks	East Buffalo Township, BVRA, DCNR	\$	BVRA, DCNR, East Buffalo Township	M
P-3	Develop a park master plan for the riverfront lands at Great Stream Commons	Union County, Gregg Township, DCNR	\$\$	DCNR, DCED, Union County	L
P-4	Develop park master plans where needed (i.e. Soldiers Park, East Buffalo pond area) and update existing community parks	Municipalities, DCNR, BVRA, Union County	\$\$\$\$\$	DCNR, DCED	L
P-5	Develop formal river access at Great Stream Commons north of Allenwood	Union County, Warrior Run Community Corporation, Northcentral Conservancy, SCP	\$\$	DCNR, DCED, Union County	M
P-6	Implement Bull Run Greenway Plan	Lewisburg Borough, Lewisburg Neighborhoods Corp. (LNC), DCNR, Bucknell, USFWS	\$\$\$\$\$	DCNR, DEP, DCED, USFWS	L
P-7	Develop greenways and trails that connect existing parks with neighborhoods to promote community health	Municipalities, BVRA, Evangelical Community Hospital	\$\$\$\$	DCNR, DCED, Municipalities	L
P-8	Establish fishing and strategic canoe/kayak access points on Penns Creek and the Susquehanna River	LPCWA, Landowners, Bureau of Forestry, Municipalities, SGP	\$\$\$	DCNR, NPS	M
P-9	Convert former New Berlin Elementary School property into a community park	New Berlin Borough, DCNR	\$\$\$	DCNR, DCED, Municipalities, Union County	L
P-10	Add 110 acres of community park land in eastern and central Union County to reduce deficit under minimum national standards	Municipalities, BVRA, DCNR, Union County	\$\$\$\$\$	DCNR, DCED, Municipalities, Union County	L

No.	Implementation Action	Partners	Cost	Potential Funding	Timing
Trails and Non-Motorized Transportation					
T-1	Buffalo Valley Rail Trail (BVRT) US 15 crossing as per the US 15 corridor study. Engineering design, permitting, and construction	Buffalo Valley Recreation Authority (BVRA), DCNR, PennDOT, Municipalities	\$\$\$	DCNR, BVRA, PennDOT, DCED	M
T-2	Feasibility study of developing a multi-use trail from Allenwood Village to Montgomery Borough along river	Union County, Lycoming County, Susquehanna Greenway Partnership (SGP)	\$	DCNR, Union & Lycoming Counties	S
T-3	Engineering, design and construction of Allenwood Village to Montgomery Borough multi-use riverfront trail	Union County, Lycoming County, SGP	\$\$\$\$	DCNR, PennDOT, DCED, Counties	L
T-4	Evaluate feasibility of extending BVRT west of Mifflinburg across SR 45 to Swengel Road	BVRA, Bucknell University, Mifflinburg Borough, Landowners	\$	BVRA, Bucknell	S
T-5	Explore routes, both on-road and off-road for connecting the BVRT to the Cherry Run Trail	Union County, PennDOT, Municipalities	\$	Union County	L
T-6	Engineering, design and construction of BVRT extension from 5 th Street to the Susquehanna River in St. John's Street corridor	BVRA, Lewisburg Borough	\$\$\$\$\$	BVRA, Lewisburg Borough, PennDOT, DCNR, DCED	L
T-7	Rehabilitate BVRT railroad bridge over the Susquehanna River to link with proposed SR 405 greenway and trail in Northumberland County	BVRA, SGP	\$\$\$\$\$	BVRA, PennDOT, DCNR, DCED	L
T-8	Evaluate feasibility of creating a multi-use trail from Winfield Village to Northumberland Borough	Union County, Bucknell University, SCP	\$	Union County, DCNR	L
T-9	Monitor potential for rail with trail or tail trail connecting BVRT in Lewisburg to Winfield Village	Union County, Lewisburg & Buffalo Creek Railroad, Bucknell University, SGP	\$	Union County, DCNR, DCED, Private Donors	L
T-10	Plan for wider shoulders on state-designated bike routes	PennDOT, SEDA-COG MPO	\$\$\$\$\$	PennDOT	M
T-11	Evaluate feasibility of improved pedestrian access on St. Anthony Street bridge as a safer link to Riverwoods and soccer complex along with riverwalk concept	Kelly Township, Lewisburg Borough, Riverwoods, Bucknell University, PennDOT	\$	Riverwoods, Municipalities	M
T-12	Explore feasibility of connecting new Lewisburg High School to Lintown, Penn House Commons, BVRT, etc	Lewisburg Area School District (LASD), Kelly, Buffalo, and East Buffalo Townships, PennDOT	\$	LASD, Municipalities	L
T-13	Create north/south connections to the BVRT (e.g. link to Koons Trail in Mifflinburg Borough)	BVRA, Municipalities, PennDOT	\$\$\$	DCNR, DCED, PennDOT	L
T-14	Develop and implement a Penns Creek water trail and access plan	Lower Penns Creek Watershed Association (LPCWA), Bureau of Forestry, Landowners, Linn Conservancy	\$\$\$	DCNR, LPCWA	M



No.	Implementation Action	Partners	Cost	Potential Funding	Timing
Trails and Non-Motorized Transportation (con't)					
T-15	Improve West Branch Susquehanna water trail infrastructure throughout the county	SGP, Land Trusts, DCNR	\$\$\$	DCNR, DCED, National Park Service (NPS)	M
T-16	Determine feasibility with landowners the potential to reopen the Shamokin Mountain Trail	Landowners, Linn Conservancy, Union Township	\$	Union County	M
T-17	Develop George Long Trail along Penns Creek frontage in New Berlin and Limestone Township	Landowners, New Berlin Borough, Linn Conservancy, DCNR, LPCWA	\$\$	Private Donors, New Berlin Borough, DCNR	M

Implementation Priorities

As previously noted, this plan includes 54 implementation strategies that have varying degrees of cost and difficulty of execution. Given the constraints on funding and staff resources at the county and among lead partners, it is beneficial to identify the highest priorities in the plan. Ranking a project as a high priority does not equate to immediate implementation. As part of the planning process, the project Steering Committee, using a ranking tool, was tasked with evaluating the level of priority for each of the 54 implementation strategies. The Steering Committee completed the ranking based on how important they felt the individual projects were, regardless of costs and other challenges that might actually impede implementation. The following list shows the highest priorities in each category of implementation strategies; however, it is worth noting that riparian buffers were the highest priority overall.

Conservation

- Permanently protect 250 miles of existing riparian buffers
- Install and protect 200 miles of additional riparian buffers
- Promote and incentivize TND and conservation development

Education and Outreach

- Help landowners with best management practices for water quality
- Improve landowner understanding of conservation easements
- Publicize technical and financial resources available to property owners for conservation

Land Preservation

- Protect the riverfront at the Great Stream Commons
- Encourage the use of conservation easements
- Agriculture and view shed protection in priority conservation areas

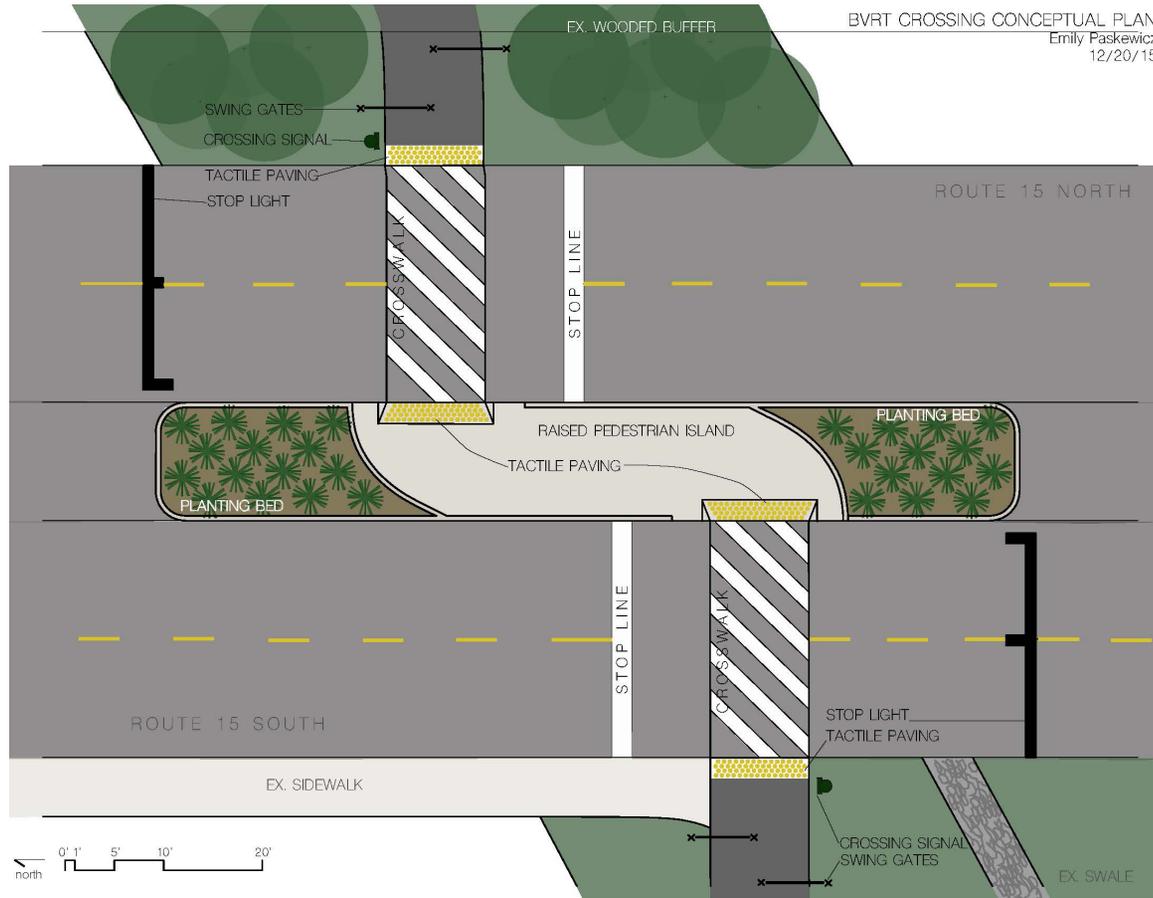
Parks and Recreation

- Develop formalized river access at Great Stream Commons
- Use greenways to connect parks and to promote community health
- Develop a park master plan for the riverfront lands at Great Stream Commons

Trails and Non-Motorized Transportation

- BVRT US 15 crossing (See Figure 1)
- BVRT westerly extension
- Allenwood to Montgomery trail

Figure 1. Schematic of US 15 Crossing of the Rail Trail



Implementation Tools

Given the number and diversity of implementation actions noted in this plan, and the investment needed to achieve them, a variety of tools will be needed by local governments, conservation organizations and landowners to achieve tangible results. Several of these tools have been highlighted in this section including land acquisition, conservation easements,

effective zoning, the official map, mandatory dedication of open space, and education.

Land Acquisition

Land acquisition is exactly that; land is acquired through a negotiated sale or donation from a landowner and then is retained as a public park or natural area. It could also have an easement placed on it and be resold, although this is not typically done. Land acquisition is one of the

most expensive forms of land conservation and is often reserved for extremely important properties and/or as a last resort when other conservation techniques have been ruled out. In most cases, the land is not donated and has to be purchased. In Union County, this approach is most often used by state agencies like the Pennsylvania Game Commission and the Department of Conservation and Natural Resources to add acreage to their inventory.

Recently the Merrill W. Linn Conservancy purchased 36 acres of forestland on Shikellamy Bluffs bordering the Shikellamy State Park Overlook. The acquisition of this high conservation priority property was made possible through local donations and two state grants. The land will be donated to the Commonwealth as an addition to the State Park. This was the first time the Conservancy has used this approach, which proved to be challenging due to the significant cost of the land and the timing of the grant revenues. An issue with land acquisition can be the sensitivity of elected officials with removing property from the tax rolls. Once the land is transferred into public ownership, it no longer generates property tax for the county, municipality, and school district.

Conservation Easement

The conservation easement, unlike land acquisition, leaves the land in private ownership. Conservation easements fall into two main types: purchased and donated. Historically in Union County, the Agricultural Land Preservation Program has been the only purchaser of



conservation easements through the statewide Purchase of Agricultural Conservation Easement (PACE) program. This program uses local matching funds to leverage state and federal funding to acquire the development rights and place a conservation easement on farmland. It uses a ranking system that gives preference to higher productivity soils and proximity to other protected lands.

The value of the easement is determined by comparing the development potential of the property to the value of the land with an easement in place. Most recently the cost to purchase an easement has been approximately \$2,500 an acre.

The Union County Conservation District and Agricultural Land Preservation Board originally set a goal of preserving 40,000 acres in the county. As noted previously, 8,000 acres have been preserved using this technique.

At the current price per acre, it would take an additional \$80 million to preserve the remaining 32,000 acres of the goal, not taking into account increasing future prices.

Just to purchase easements on the 17,000 acres of priority agricultural areas identified in this plan that are not under easement now would cost \$42.5 million. While the easements are permanent and provide an infusion of cash to the landowner to reinvest into the agricultural operation, they are nonetheless costly from an implementation standpoint. The program has always proved more popular than funds available, leaving many landowners on a growing waiting list to have their easement purchased. The reality is many farms may never rank high enough to be selected.

Another option is the donated conservation easement, which can be granted to a qualified land trust, such as the Merrill W. Linn Conser-

vancy, or to the Agricultural Land Preservation program. The Merrill W. Linn Conservancy has used this tool almost exclusively to permanently protect 1,440 acres of unique ecological habitat and farmland from development in a multi-county region. Since the easement is donated by the landowner, there are fewer up-front costs associated with this tool.

However, the property owner can potentially receive substantial Federal tax deduction benefits. In some cases, this might be worth more than if the landowner was actually paid for the easement. In order to maximize land conservation for greenway corridors and open space blocks, including priority agricultural areas, the donated easement will need to become a more prominent tool due to the value compared to the cost.

Effective Zoning

Effective zoning at the municipal level is another important conservation tool. Zoning is temporary, since it can be changed by a majority vote of the local governing body and is not permanent like an easement. However, agricultural and forest conservation zoning can protect large blocks of land from development while land trusts, landowners, and the farmland preservation program work to establish perpetual land protection. The key here is “effective” conservation zoning. Agricultural or forest preservation zoning district regulations that allow unlimited residential development on 1-acre lots is not considered effective as it will not protect those lands from uncontrolled housing development.



The Pennsylvania Department of Community and Economic Development (DCED) defines effective *agricultural zoning as zoning that limits the number of dwellings and sizes of lots for non-agricultural use to a true rural density, such as one dwelling unit per 20 acres.*¹ Eleven of Union County’s 14 municipalities have zoning ordinances and the majority of townships have implemented a sliding scale form of agricultural zoning.

However, not all townships have implemented a “true rural density” in the agricultural and forest zoning districts. Many zoning ordinances permit development at much higher densities on forest land than in the agricultural areas. One exception is Gregg Township, which adopted a sliding scale for the forest conservation zoning district. In addition, some agricultural zones have 10-acre minimum lot sizes, which can result in farm fragmentation and large residential estate lots. It is recommended that townships consider ordinance criteria that result in a “true rural density” for both agricultural and forest conservation areas.

Traditional Neighborhood Development

Other ways municipalities can positively influence land conservation through the use of zoning is by permitting higher densities within designated growth areas and by allowing more compact Traditional Neighborhood Development (TND). By creating walkable and denser

mixed-use developments that are attractive and inviting to people where they can enjoy convenient access to homes, shops, offices, schools, parks, and public facilities, there is the opportunity to reduce the demand and pressure to develop prime farmland and important conservation areas.

TND was recommended as a strategy for implementing municipal and the county comprehensive plans, but for the most part, has not been incorporated into municipal zoning ordinances. As a result, developers in the county seeking to be innovative and responsive to growing national trends for this style of community building would not be permitted to plan and construct walkable mixed-use neighborhoods, except, ironically, in the three municipalities that do not have zoning.



The Official Map

The official map is yet another land use tool authorized by Article IV of the Pennsylvania Municipalities Planning Code (PA MPC) that can facilitate greenway and open space implementation. This is perhaps one of the most underutilized and misunderstood of the planning options available, often confused with the zoning map. The official map is separate and distinct from the adopted zoning map and it does not divide a municipality into land use zones. Instead, it identifies geographical locations of future streets, parks, trails and other facilities. It can be used to reserve private land for future public use and to preserve farmland or open space.

The official map is accompanied by an ordinance and is a declaration by the governing body of a county or municipality of areas the community will eventually need for public purposes. By identifying the specific lands on which public projects are envisioned, the municipality is announcing its intent to acquire the land for municipal purposes prior to other development occurring. It should be made clear that an official map is not equal to eminent



domain. The official map serves more as a notice of reservation and intent and acts similarly to a “right of first refusal” to acquire the property. The local government may exercise or decline this right to acquire the property and is not bound to act because of the official map.

Although one might assume a high cost involved with acquiring lands on the official map, this is generally not the case. Typically what happens is the municipality and developer negotiate a mutually-agreed upon solution prior to, or as part of, the land development process. So, for example, the developer might build the street shown on the official map or donate an easement for a trail.

In Pennsylvania, more than 60 municipalities and one county have adopted an official map. In Union County, only New Berlin Borough has utilized this tool to date, but other municipalities and the county should explore the possibility of creating official maps for greenway and open space conservation. For more information on the official map, see PennDOT Publication 703.

Mandatory Dedication of Land

Another seldom used implementation mechanism in rural areas, authorized by Section 503 (11) of the PA MPC, is the mandatory dedication of land for recreation or payment of fees in lieu of which can be enacted through the local subdivision and land development ordinance. This can be used to require developers to set aside land for community parks and/or trails within new developments or alternatively allow them to pay what is essentially an impact fee.

One obstacle is that a municipality must have a formally adopted recreation plan in order for this to be done legally. Additionally, there has to be enough development occurring to make it worthwhile; in communities seeing very little growth it is often not worth it. As it stands now, only East Buffalo Township, Kelly Township and Lewisburg Borough could do this if they officially adopted their multi-municipal recreation plan that was done in 2008 and incorporated standards into their subdivision ordinances. Of these three, East Buffalo Township would likely benefit the most, given the potential for future residential growth. Therefore this does not appear to be a viable implementation tool at this time for the majority of the county municipalities.



Education in Conservation

Finally education has to play a role given its potential long-term value compared to delivery costs. However, if the past is any predictor of the future, education efforts alone will not be the answer. Education and voluntary participation in conservation programs have long been a major emphasis of state and county agencies and non-profit conservation organizations.

Unfortunately the results have been mixed. While some landowners have been willing to place properties under restrictive conservation easements, especially if compensated, the same cannot be said in terms of best management practices like riparian buffers to improve water quality. If future education and outreach

efforts are to be successful, they will need to involve a diverse array of partners and be carefully calculated and tailored in order to deliver an effective and action inspiring message to intended audiences.

Long-Term Costs and Benefits

Plain and simple, a lot of money will be needed over the life of this plan and beyond to implement it. It is estimated that it could require over \$50,000,000 for completing the majority of the 54 implementation strategies for land preservation, parks and recreation, trails, conservation measures, and education.² This after careful selection from a much larger list of potential projects that was considered based on the public input received.

Such a staggering figure in today's dollars, which will only increase with time and inflationary forces seems overwhelming considering all the non-open space and greenways needs that exist in our communities for roads, water and sewer infrastructure, and a variety of public services. Even over a 30-year period, this would equate to more than \$1.6 million dollars per year in a county where the annual local contribution to these causes is typically less than 10% of that figure.

Is this fiscally responsible and balanced, given limitations on private and public funding available? There is also the cost of inaction, which is difficult to quantify, but can be equally or even more burdensome. By doing nothing, or not enough to make a difference, goals are not met and the proverbial can is kicked down the road for future generations to grapple with. This funding question and others will need to be answered by the citizenry and public officials in

the years ahead.

The other cost factor not included above or in the list of strategies is that of long-term maintenance. Some actions, like conservation easements, which have monitoring requirements, have little to no ongoing maintenance costs. Others, like trails and new parks, require both annual routine maintenance and eventual major capital replacement at the end of the life cycle. A 2015 report by the Rails to Trails Conservancy on annual rail trail maintenance notes an average cost of \$1,000 to \$2,000 per mile, which mirrors the local experience with the BVRT where maintenance costs are averaging close to \$2,000 per mile per year.³

Therefore, in addition to installation costs, every new mile of trail will carry an approximate cost of \$2,000 per mile for ongoing maintenance. This means if 11 miles of a new Susquehanna Greenway trail are developed in Union County, with the balance in Northumberland County, \$22,000 of additional maintenance needs would be created. This is just one example. Similarly-developed open space, like community parks, require an estimated \$6,000 per acre each year for proper maintenance.⁴ A new 10-acre community park could necessitate \$60,000 in annual maintenance, although there are ways to design parks to be less maintenance intensive, which could reduce this amount by 75%. It should also be noted that there is no current entity established for managing and maintaining an expanded trail network though there have been suggestions that a county or

regional organization be created to address these needs.

Overall on the surface, looking only at the costs, this paints a fairly bleak picture for issues that so many people get excited about and have a passion for. Fortunately grants and funding allocations will most likely soften the financial impact considerably to the point where the local dollars required to implement the non-recurring costs in the plan, while still significant, won't be quite as overwhelming. A million plus dollars a year is definitely not fiscally or politically sustainable at the local level today. However, this does raise an important question. What is realistic in terms of an annual local contribution to conservation, community parks, greenways and trails? Would \$500,000 or \$250,000 annually be acceptable to the taxpayers since \$125,000 is already allocated for



agricultural land preservation? Would the citizenry support higher levels of investment?

Historically, in the United States, when local conservation ballot measures have gone to the voters to decide, nearly 75% have passed and 79% of measures have passed in Pennsylvania since 1988.⁵ Yes, voters have typically chosen to impose higher fees and taxes on themselves for these initiatives. In response to the on-line survey that was posted for this plan, which was a limited sample size and self-selected, 75% of respondents supported paying \$20 a year, while nearly 60% indicated they would pay \$50 or more a year in support of greenways, open space, parks, trails, and related conservation. Using \$20 per person per year would generate approximately \$500,000 annually assuming there are 25,000 contributing adults in the county. This number excludes Bucknell University students, United States correctional inmates, nursing home residents, and children.

If \$500,000 per year of local funds (county and municipal) were allocated to implementing this plan, and assuming grants could be secured for 50% of all the costs that have been identified,

it would take 50 years to complete the majority of implementation actions.

If \$250,000 of local annual funding is considered more reasonable, then full implementation would take a century. Neither of these two scenarios account for new projects and priorities emerging in the future or increased costs.

It is evident that moving forward with implementation will necessitate funding beyond current local levels, keeping in mind the strategies proposed are seen as the middle ground between doing nothing and an even more robust approach. In light of the projected dollar amount, are there ways to implement the plan at a reduced cost or should certain priorities be eliminated due to unaffordability? Looking at the implementation recommendations more closely, the higher cost items are agricultural land preservation, conservation measures like securing and installing riparian buffers, and community parks. Education and outreach is the lowest cost item, followed by trails.

One way to significantly reduce implementation costs is by more volunteerism on the part

of property owners through the donation of conservation easements. If more people would participate because they believed it was the right thing to do, the savings to taxpayers would be tremendous since purchasing easements on farms is the highest implementation cost of this plan.

Similarly, if landowners were to allow riparian areas to revert to a more natural state, this would reduce the need for buffer planting. Riparian areas are resilient if given the space and time to recover. Alternatively, since targets for nutrient and sediment reductions within the Chesapeake Bay Watershed are not being met, perhaps water quality issues and buffer implementation could be more effectively and efficiently addressed by the Commonwealth of Pennsylvania through incentives and regulatory measures. Local governments and non-profit organizations simply do not have the staff, volunteer, or financial resources to address these widespread environmental concerns in a comprehensive manner.

On the other side of the balance sheet, the benefits of greenway and open space resources cannot be ignored in terms of ecosystem, com-

The Survey Says....

- ➔ Three-quarters of survey responders support paying \$20 annually to maintain greenways, open space, and related conservation.
- ➔ Over half of the responders support paying \$50 annually.



munity health, and positive economic impact. There are annual and long-term benefits that accrue from these resources that, at best, are difficult to quantify, but must be recognized.

The Trust for Public Land has conducted analysis and estimated a dollar figure for the annual per acre value of land by cover type. For example, they show forest lands as having an annual \$790 per acre value derived from stormwater management, carbon storage and sequestration, erosion control, water quality protection, and air pollution removal benefits.⁶In Union County, public and private forests would have an annual value of \$96 million.

Wetlands had the most annual value at \$1,252 per year while developed lands had no value and farmland was on the lower end of the scale at \$66 per acre for cultivated crops and \$46 per acre for pasture. However agricultural land brings considerable economic value to the region. According to the most recent United States Census of Agriculture, the market value for agricultural products sold in Union County was \$135,970,000.⁷

In addition, greenways, open space, parks, and trails attract visitors, other investment and increase property values. In the first year the Buffalo Valley Rail Trail was open, it was estimated to have had a \$478,000 economic impact to the region.⁸More established and longer trails, like the Pine Creek Rail Trail in Lycoming County, generate an estimated \$3 to \$5 million per year in financial benefits.⁹ A study by Colorado State University found that where permanently

protected open space had been incorporated into neighborhoods, homes commanded prices 20 to 29 percent higher than those without open space.¹⁰ This is consistent with prior research documenting that property values increase based on proximity to greenways and open space.¹¹

Demonstration Projects

The 54 recommended implementation actions were reviewed, including those identified as being high priorities, to determine which could be highlighted as early implementation or demonstration projects. Demonstration projects typically should meet the following criteria:

1. Create momentum for future expansion of the greenway and open space system;
2. Be visible and increase awareness of the presence and benefits of local natural resources;
3. Attract both local and regional use and attention; and
4. Have a high probability of implementation success and condensed project delivery.

Potential demonstration projects ideally would be more readily achievable with fewer challenges to overcome for implementation. For example, a greenway and trail that would need to be routed across multiple private properties where there is known landowner opposition would not be a good candidate as a demon-

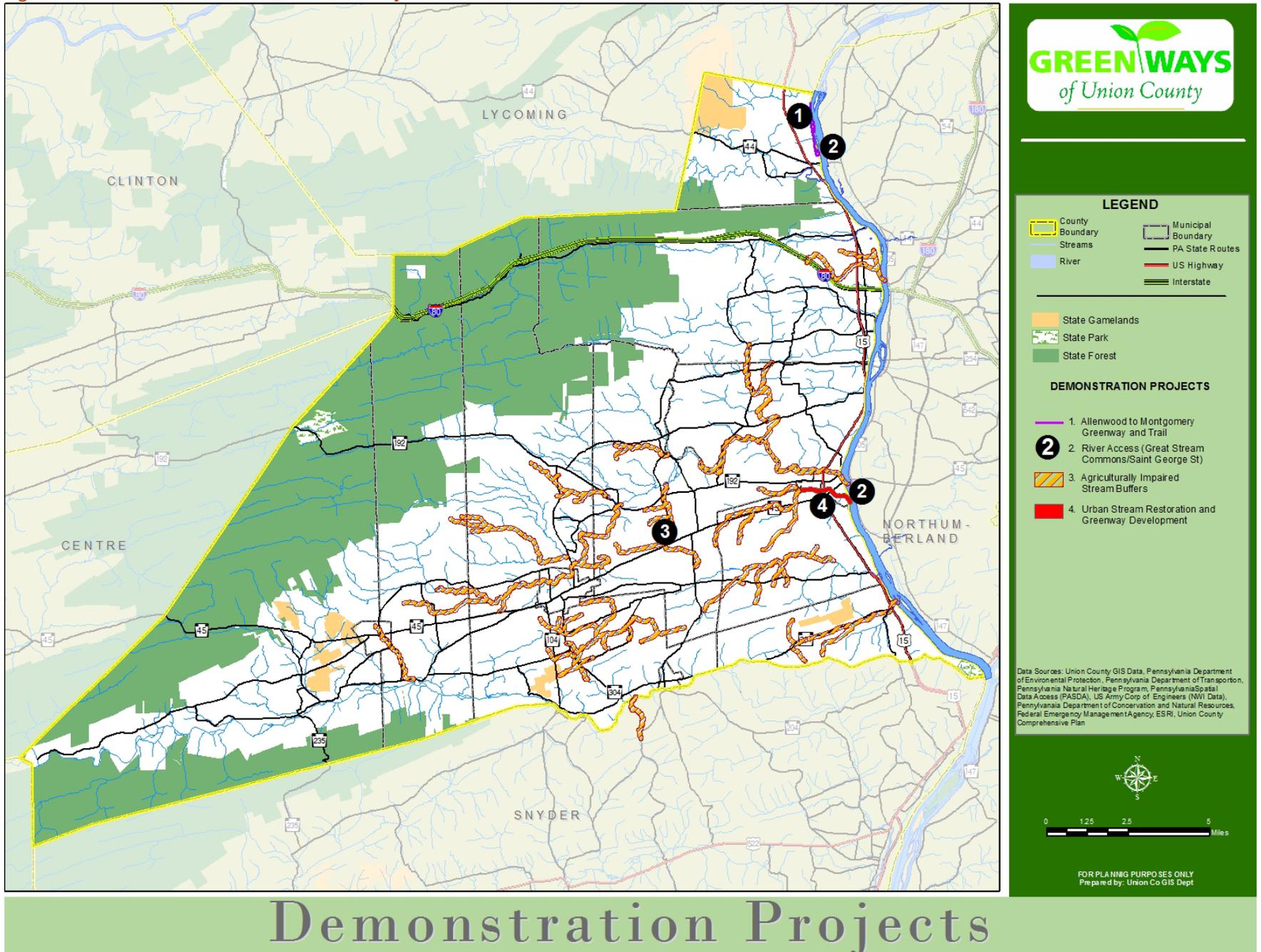
stration project. On the other hand, installing a canoe and kayak access within an existing greenway on publicly controlled lands would qualify.

Listed below are the demonstration projects selected by the project Steering Committee with the general locations presented on the map in Figure 2.

1. Allenwood to Montgomery Greenway and Trail (See Figure 3)
2. River accesses at Great Stream Commons and St. George Street
3. Riparian Buffer Installation on Select Impaired Stream Segments
4. Urban stream restoration and greenway development
5. Develop conservation marketing materials



Figure 2. Locations of Selected Demonstration Projects



Allenwood to Montgomery Greenway and Trail

Project: In collaboration with Lycoming County create a four (4) mile rail trail linking Allenwood Village to Montgomery Borough with the potential for an additional loop trail on Great Stream Commons open space areas.

Municipalities: Gregg Township, Brady Township and Montgomery Borough

Potential Partners: Brady Township, Gregg Township, Lycoming County, Lycoming County Resource Management Services, Montgomery Borough, PA Department of Conservation and Natural Resources, Susquehanna Greenway Partnership, Union County and West Branch Regional Authority

Delivery Steps:

- (1) Conduct a feasibility study for the Union County portion to determine the preferable routing through Great Stream Commons and into Allenwood Village and update the Lycoming County feasibility study.
- (2) Once feasibility is determined, work with partners to secure funding for engineering design work and create framework for trail maintenance and management.
- (3) Complete final engineering.
- (4) Secure funding for construction.
- (5) Construct trail.

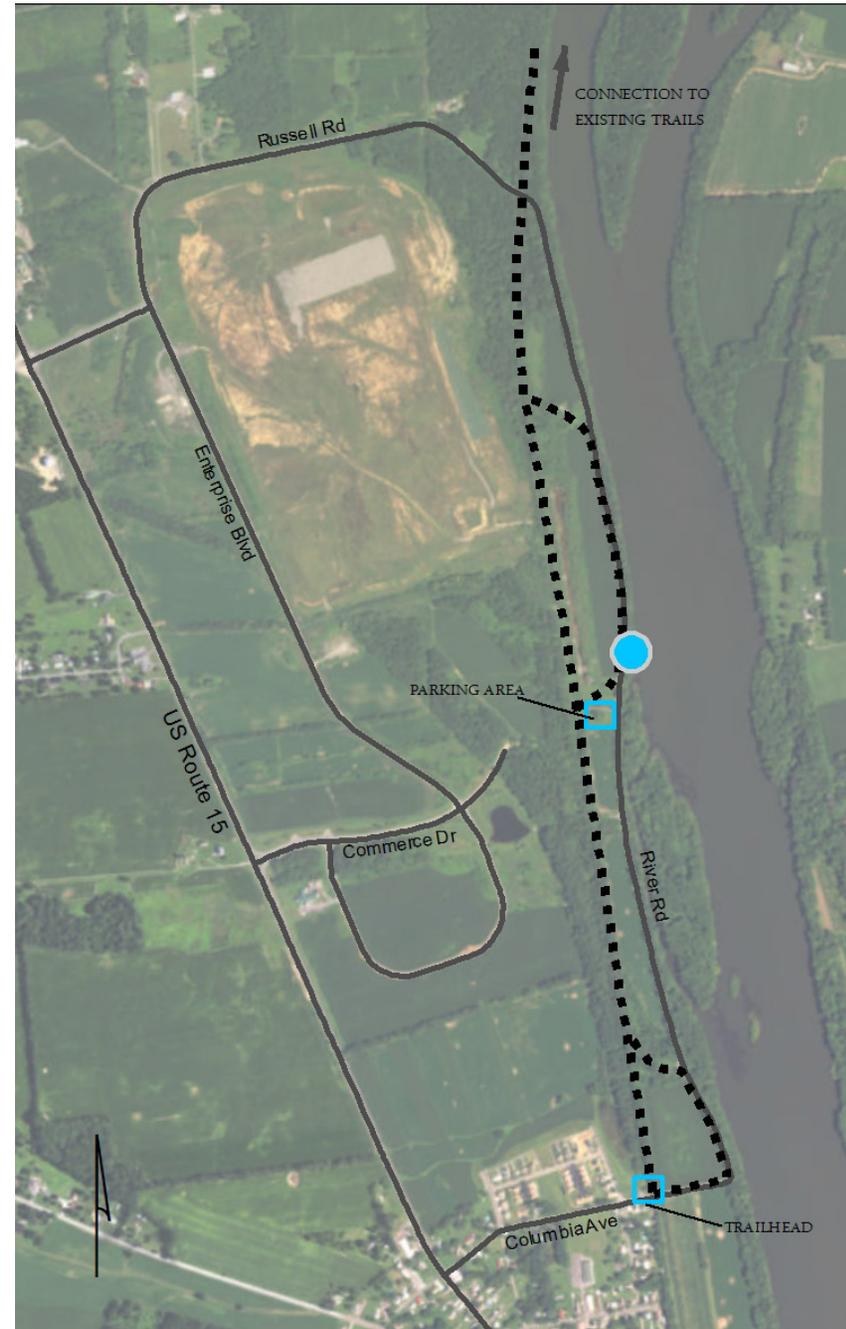
Cost Estimate:

Feasibility Study (Union County portion): \$12,500

Engineering Design: \$100,000

Construction: \$250,000 (Union County segment)

Figure 3. Allenwood to Montgomery Greenway and Trail



Great Stream Commons River Access

Project: Develop a formalized canoe and kayak access to the West Branch Susquehanna River at Great Stream Commons. See Figure 4.

Municipalities: Gregg Township

Potential Partners: Northcentral Pennsylvania Conservancy, PA Department of Conservation and Natural Resources, Union County, and Warrior Run Community Corporation

Delivery Steps:

- (1) Reopen discussions with Northcentral Pennsylvania Conservancy and Warrior Run Community Corporation.
- (2) Determine final location for the access point.
- (3) Finalize the ownership, management, and maintenance arrangement and execute it accordingly.
- (4) Complete site design and engineering.
- (5) Construct the river access and amenities (i.e. parking).

Cost Estimate:

Site Design: \$10,000

Construction: \$50,000

Figure 4. Artist's Rendering of Access to Susquehanna River at Great Stream Commons



Riparian Buffer Installation on Agriculturally Impaired Stream

Project: Install ¼ mile riparian buffer on an agriculturally impaired stream segment in a visible location. See Figures 5 and 6

Municipalities: Multiple

Potential Partners: Buffalo Creek Watershed Alliance, Lower Penns Creek Watershed Association, landowners, Natural Resource Conservation Service, Merrill W. Linn Conservancy, Northcentral Pennsylvania Conservancy, PA Department of Environmental Protection, PA Fish and Boat Commission, PA Game Commission, Union County Conservation District and US Fish and Wildlife Service.

Delivery Steps:

- (1) Partner organizations identify cooperating landowner on agriculturally impaired stream segment
- (2) Negotiate terms and execute riparian buffer agreement, easement, etc.
- (3) Design riparian buffer including livestock exclusionary fencing, stream crossings, and other treatments.
- (4) Secure project funding.
- (5) Install riparian buffer and monitor.

Cost Estimate:

Buffer Permanent Easement: \$19,500

Buffer Planting: \$7,500

Miscellaneous: \$2,500

Figure 5. Before Riparian Buffer



Figure 6. Artist's Rendering After Riparian Buffer



Urban Stream Restoration and Greenway Development

Project: Restore urban stream segment to natural conditions with a riparian buffer

Municipalities: East Buffalo Township and Lewisburg Borough

Potential Partners: Buffalo Valley Recreation Authority, East Buffalo Township, Lewisburg Borough, Northcentral Pennsylvania Conservancy, PA Department of Conservation and Natural Resources, PA Department of Environmental Protection, PA Fish and Boat Commission, PA Game Commission, Union County Conservation District, and US Fish and Wildlife Service.

Delivery Steps:

- (1) Identify and select candidate stream segment(s).
- (2) Conduct restoration planning, design and permitting.
- (3) Secure project funding.
- (4) Construct stream restoration project and monitor.

Cost Estimate:

Planning & Design: \$10,000

Construction: \$100,000

Develop Conservation Marketing Materials

Project: Implement a comprehensive and effective conservation marketing program of multi-media materials and messaging for distribution to attorneys, agricultural landowners, general public, homeowners, local governments, and schools about the value and benefits of conservation measures such as easements, riparian buffers, habitat improvement, and other best management practices.

Municipalities: All

Potential Partners: Bucknell University Center for Sustainability and the Environment, Conservation Union, Buffalo Creek Watershed Alliance, Merrill W. Linn Conservancy, Lower Penns Creek Watershed Association, public and private schools, and Union County Conservation District.

Delivery Steps:

- (1) Organize a core group of partners to oversee development of the marketing initiative.
- (2) Identify target audiences, key focus areas, and desired outcomes.
- (3) Engage a team of marketing and outreach professionals to assist with developing conservation education and marketing options.
- (4) Select a preferred marketing approach.
- (5) Work with marketing consultants to finalize materials, production, and distribution.
- (6) Monitor and measure effectiveness of messaging.

Cost Estimate:

Consultant: \$5,000

Marketing Materials: \$20,000

Notes

- ¹ PA DCED Governor's Center for Local Government Services. https://palocalgovtraining.org/retained/factsheets/AgZoning-LandUse_2013.pdf
- ² The \$50 million cost estimate includes \$12 million for preserving 5,000 acres of the 17,000 acres of priority agricultural land. Another \$30 million would be required to protect the 12,000 acre balance. Similarly riparian buffer installation is included only for priority impaired stream reaches. To completely implement riparian buffer goals would necessitate an additional \$15 million.
- ³ Knoch, Carl and Tom Sexton. *Maintenance Practices and Costs of Rail Trails*. 2015 Rail to Trails Conservancy.
- ⁴ National Recreation and Parks Association 2015 Field Report. http://www.nrpa.org/uploadedFiles/PageBuilder_Proragis/Content/common_elements/FieldReport.pdf
- ⁵ LandVote. Trust for Public Land. <https://tpl.quickbase.com/db/bbqna2qct?a=dbpage&pageID=8>
- ⁶ Trust for Public Land. Pennsylvania's Return on Investment in the Keystone Recreation, Park, and Conservation Fund. 2013. <http://cloud.tpl.org/pubs/benefits-pa-keystone-roi-report.pdf>
- ⁷ 2012 United States Census of Agriculture. USDA National Agricultural Statistics Service. http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Pennsylvania/st42_2_001_001.pdf
- ⁸ Oswald, Kinnaman, Burkhart, Nicholson. *Buffalo Valley Rail Trail 2012 User Survey and Economic Impact Analysis*. Knoch, Carl and Patricia Tomes. Rails to Trails Conservancy. *Pine Creek Rail Trail 2006 User Survey and Economic Impact Analysis*. <http://www.railstotrails.org/resourcehandler.ashx?id=3487>
- ⁹ Colorado State University. 2013. <http://www.parjustlisted.com/neighborhoods-with-protected-open-space-bringing-higher-sale-prices-study-finds/> Nichols, Sarah & Compton, John. Michigan State University and Texas A&M University. The Impact of Greenways on Property Values: Evidence from Austin Texas. 2005. http://agrifecdn.tamu.edu/cromptonrpts/files/2011/06/4_2_7.pdf
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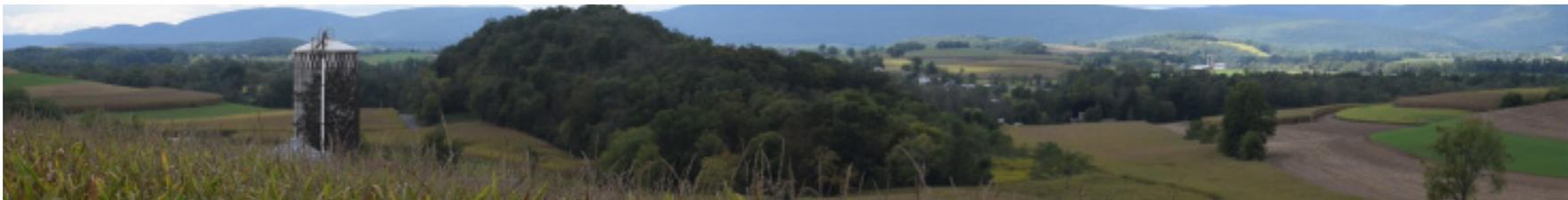


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Page 68 – *Union County Vista*. 2015. Union County Planning Department.

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Page 69 – *West Buffalo Township Vista*. 2015. Union County Planning Department.

Page 73 – *Laurel Run Activity Complex Sign*. 2008. Union County Planning Department.

Page 80 – *Sand Bridge State Park, Union County*. 2015. Union County Planning Department.

Page 81 – *Mixed-Use Building in New Berlin*. 2015. Union County Planning Department.

Page 82 – *Rock Structure at Kidsburg*. 2008. Union County Planning Department.

Page 83 – *Spruce Run Sign*. 2008. Union County Planning Department.

Page 84 – *Butterfly 2*. 2008. Union County Planning Department.



Appendix



Prior Planning Efforts

A considerable number of planning efforts specific to, or related to, greenways and open space have been completed within the last 10 years. The most relevant are highlighted here with a description of the significant aspects of each that most directly affect greenway and open space planning and development.

Bucknell River Access Report

This report was completed by five students of Bucknell University as part of a Geography course / Community Service project in the Spring of 2013 and was presented to the Borough and the Lewisburg Neighborhoods Corporation (LNC).

The Bucknell River access report recommends the following actions to improve community connections and access to the Susquehanna River:

- Connect Riverwoods to the greater Lewisburg community with a trail or connecting sidewalks along River Road, including pedestrian access across the St. Anthony Street Bridge.
- The report lists Soldier's Park as a location to establish a formalized landing and launch for the river. Safety improvements to the St. George Street launch are also recommended.
- The report further identifies the untapped potential of the RiverWalk and several small parks along the riverbank as important locations to view and enjoy the River. Connections to these areas and to other local trails is recommended.

Bull Run Neighborhood Plan (BRNP)

The BRNP recommendation for a greenway has improvements for pedestrian circulation, habitat corridor, and utilizing the north-south rail corridor for a rail-with-trail passage. The plan calls for a connection to the Buffalo Valley Rail Trail (BVRT). The Borough of Lewisburg has secured funding for creating a master plan of the open space in the neighborhood.

BVRT - Final Section Feasibility Study

This report was prepared by the Buffalo Valley Recreation Authority (BVRA) with assistance from its consultant and Bucknell University. The three main objectives outlined include the following:

1. Connect the BVRT across US Route 15 and through the Borough of Lewisburg;
2. Establish a trail spur to Market Street in Lewisburg; and
3. Rehabilitate and reuse the historic railroad bridge across the Susquehanna and link to the proposed Route 405 greenway in Northumberland County.

Item #2 above, along with an extension of the BVRT between 8th and 5th Streets, was constructed in 2015. The remaining objectives have not been met.

Centre County Greenway Plan

The Centre County Greenway Plan recommends a trail connection, using the former Lewisburg and Tyrone railroad corridor, through Penns Valley from Centre Hall to Weikert in Union County. This would be connected to the Mid State and Cherry Run Trails which also use a portion of this corridor. Strategic goals of this trail would be to link to the Buffalo Valley Rail Trail (BVRT) as well as to a new spur trail that would head north past the Bald Eagle State Forest office, Laurelton Center, R.B. Winter State Park and finish at the McCall Dam State Park. Centre County is in the process of completing a feasibility study on the 26-mile Penns Valley Rail trail project.



The Comprehensive Plan for the US 15 South Planning Area

This plan specifically recommends Gregg Township participate in a scenic resources inventory, including the prioritization of scenic resource protection efforts (pg. 3-25). This is inclusive in Strategy #9, which includes Gregg Township in the development of a greenways plan (pg. 3-30, 9c).

The plan supports the completion of the Susquehanna Greenway and cites it as a critical priority (pg. 4-9, 2c). Key strategic actions cited in this plan for greenways and open space include the following (pg. 9-15):

1. Revise zoning to guide development to desired growth areas.
2. Identify farmland that should be permanently preserved for agricultural use.
3. Support the development of the Susquehanna Greenway.
4. Promote enrollment in forest conservation programs, e.g. Forest Legacy Program, Clean and Green – Forest Reserve Program.
5. Improve access to the Susquehanna River, including visual access, boat access, fishing access, etc.

Lewisburg Area Comprehensive Park, Recreation Open Space and Greenway Plan

The plan has the following goals and objectives (in brief):

1. Establish a premiere system of parks, recreation facilities and trails through the community. The plan also called for:
 - Linking existing parks/facilities via multi-use trails;
 - Accommodating older residents;
 - Completing master plans for existing and new parks;
 - Providing visual and pedestrian access to the river; and
 - Acquiring 3 acres of parkland in Lewisburg Borough, 37 acres in Kelly Township and 65 acres in East Buffalo Township by 2020.
2. Conserve the natural resources and scenic beauty
 - Conserve natural resource lands through various protection and

acquisition techniques including zoning, TDRs, official maps, overlays, education, easements by land trust, etc.

- Coordinate with other municipalities and organizations (such as the Susquehanna Greenway Partnership) to promote education on creating and conserving greenway.

Cultivating Community: A Plan for Union County's Future

The Union County Comprehensive Plan and three multi-municipal plans have many greenway and open space recommendations.

Some of the recommendations highlighted in the text include the preservation of important Natural Heritage Inventory sites, such as Mohn Mill Ponds, Shikellamy Bluffs, Halfway Run, and Penns Creek, implementation of the Susquehanna Greenway, completion of the BVRT, and agricultural land preservation. Several specific implementation actions as detailed in Part III of the plan are listed here.

Furthermore, the Plan calls for the establishment of accessible public parks to meet the requirements of today and the projected growth in population out to 2050 and the establishment of a recreational trail network throughout the county.

For the Central Planning Area, municipalities should consider the establishment of a regional park/open space and the expansion and maintenance of existing local parks.

Actions listed for the Eastern Planning Area also cite the need for cooperation to meet the recreational needs of an ever-expanding population. The completion of the BVRT is noted as well as participation in the Susquehanna Greenway project. The recommended actions also address the greying of our community by calling for easy access and Special Use Parks to address older Union County citizens, both now and in the future.



REF. NO.	ACTION
CW-1	Assist municipalities with developing and applying appropriate model regulations (e.g., conservation zoning, conservation subdivision design, TDRs) to preserve natural resources and agricultural lands.
CW-3	Increase the number of conservation easements held in the County through marketing, education, and donated easements.
CW-5	Develop a comprehensive waterways strategy for Union County (e.g, partnerships with local watershed organizations, riparian buffer protection using native vegetation along waterways, stream and water quality ordinances, best practice stormwater ordinances, partnerships with farmers, etc.).
CW-8	Increase and diversify funding for the County's PACE program to meet the short-term (\$7 million/10,000 acres by 2010) and long-term (40,000 acres by 2020) goals.
CW-9	Direct new development away from agricultural land to and into designated Primary and Secondary growth areas and limit extension of public water, sewer and other infrastructure to discourage development. Direct rural development into the designated Rural Development Areas.
CW-11	Develop model agricultural preservation zoning ordinances and encourage municipal adoption in agricultural areas. Offer technical assistance and grants to reimburse local expenses associated with drafting or amending local ordinances.
CW-62	Integrate preparation of a new greenways plan and updated Natural Heritage Area Inventory into development of the overall green infrastructure plan. Include a trail/bikeway network (walking/hiking trails, off-road bike paths, on-road bike lanes, etc.) that provides alternatives to vehicular travel.

Lewisburg River Launch Report/Presentation

This presentation was completed by LNC intern Jesse Lewis in 2013 and expanded by Andrew Ciotola and Samantha Pearson.

This report cites the inadequacy of the current St George St. boat launch and suggests improving the launch and/or establishing a new launch site at Wolfe Field, St. Anthony St., Soldiers Park or Mariah's Garden.

None of the recommendations in this presentation have been implemented.

Lower West Branch Susquehanna River Conservation Plan (LWBSRCP)

The LWBSRCP identifies the important habitat located in the Appalachian shale cliffs in and near the Shikellamy State park in Union Township (pg. 50). The Northcentral Pennsylvania Conservancy's Plan recognizes the need to work with PennDOT to coordinate trail and greenway work with highway and improvement construction schedules (pg.155).

The Plan supports a connection of the river and the BVRT (pg. 148) and calls for the creation/expansion of the Lewisburg river walk, possibly along active rail corridors, to provide riparian buffer enhancements, invasive species control and habitat protection (pg. 162).

For direct access to the River, this plan recommends a "soft launch" (non-motorized) boat launch in Winfield and Lewisburg as well as an access point for watercraft on the Great Stream Commons property at Allenwood (pg. 168).

The above recommendations have not been implemented.



Lycoming County Greenway Plan

The Lycoming County Greenway plan supports the completion of the Susquehanna [Greenway] Trail along the West Branch of the river to the Union County line. This would connect to Williamsport and eventually the Pine Creek Trail and is the “number one trail priority” in Lycoming County (pg. 8-18).

An additional trail priority is the “Southern Lycoming Loop” trail connecting Union County to Elimsport and Route 880 (pg. 11). Neither of these trail connections have been completed.

Lycoming County also recognizes the importance of protecting the Mohn Mill Ponds that straddle the Lycoming/Union County lines. This woodland buffer is essential to maintain the community quality and resident rare species. (pg. 7-26)

Northumberland County Greenways and Open Space Plan

A portion of the Warrior Run Pathways Project runs through Union County in White Deer Township and Allenwood. A segment is more specifically called the West Branch Trail Concept and consists of a 4.5 mile loop trail connecting Dewart and Watsontown Borough in Northumberland County with the villages of Allenwood and White Deer in Union County.

Furthermore a second portion of the project is the Warrior Run Touring Route, a “network of lesser traveled roads that provide opportunities for shared routes for pedestrians, runners and bicyclists” covering 77. 3 miles in Lycoming, Montour, Northumberland and Union Counties. Specifically in Union County is the Allenwood River Ride of 4.0 miles.

While not in Union County, the plans for a trail/greenway along State Route 405 in Northumberland County could connect to the BVRT.

These loops and connections are still incomplete.

SEDA- COG Metropolitan Planning Organization, Long Range Transportation Plan (LRTP)

The Susquehanna Greenway and a County Non-Motorized Network Master Plan are needs supported by the SEDA-COG Metropolitan Planning Organization (MPO) LRTP (pgs. 66-67). The MPO has not advanced any greenway implementation projects or the non-motorized network plan on the Transportation Improvement Plan (TIP).

Susquehanna Greenway Plan

The Susquehanna Greenway Plan calls for many linkages between the river/ riverfront and Union County. These links include waypoints and points of interest within the County as well as links to trails and routes across the county and beyond.

Over a dozen waypoints are recommended in the eastern portion of the County including locations in downtown Lewisburg, Kelly, East Buffalo and Union Townships. Hufnagle Park, Packwood House, and Little Mexico Campground are just a few examples.

The Plan also notes the need to connect to the river via access points such as a Lewisburg Access (yet to be determined) the Maria Quant Memorial Garden and a proposed access point in Great Stream Commons.

The plan lists various linkages to the Greenway corridor. Links that are extant include the BVRT, Bike Route V on SR 192, White Deer Ridge Trail and the White Deer Hole Creek Conservation Corridor. Proposed linkages are the Lewisburg to Milton RiverWalk, the Buffalo Creek Conservation Corridor, the White Deer Creek Conservation Corridor and bike pedestrian access along SR 44 and the Central Susquehanna Valley Throughway (CSVT).

While aspects of the Susquehanna Greenway have been completed, these are all outside of Union County.



Union County Natural Areas Inventory

The Union County Natural Areas Inventory (UCNAI) was completed in 1993 and updated in 2000, and then again by DCNR in 2015. Contained in the original report were 21 locations that were recommended for protection and ranked in priority. The top ranked properties are Mohn Mill Ponds and Shikellamy Bluffs which have been mentioned in several other plans. Ranked second are Halfway Run Ponds and Penns Creek at White Mountain. All core habitats and supporting landscapes can be viewed on the Pennsylvania Natural Heritage Program Map Explorer at: <https://conservationexplorer.dcnr.pa.gov/content/map>.

West Branch Water Trail Stewardship Plan

The West Branch Water Trail Stewardship Plan, developed by the Northcentral Pennsylvania Conservancy, identifies a soft boat launch in Gregg Township and Lewisburg Borough. These correspond with the proposed launch in Great Stream Commons and the existing St. George Street launch in Lewisburg Borough. Recommendations for improvements to these two locations include infrastructure upgrades for stability, ADA access, signage and control of the invasive plant Japanese knotweed.

One additional river access point is identified in the plan, to be removed. The River Edge Campground access should be listed as private and restricted to residents/clients of the campground and not as a public access point. The plan notes a possible new access being established as part of the CSVT project.

None of the recommendations from this plan have been implemented in Union County.

Buffalo Creek Watershed Plan

The Buffalo Creek Watershed Alliance developed a comprehensive watershed restoration plan and has been working with landowners, the PA DEP, and the County Conservation District to improve water quality through

public education, physical improvements, and other means. A high priority noted in the plan is establishing forested riparian buffers, particularly on stream reaches that are designated as impaired on the State and Federal 303.d list. Currently there are 53 miles of listed impaired streams in the county, the majority of which the source of impairment is agricultural related. Most of this plan has not been implemented due to difficulty identifying volunteer landowner participants.

Lewisburg to Mifflinburg Trail Feasibility Study

This planning effort was led by the Union County Planning Commission and determined that a traditional rail to trail on the former West Shore Railroad, Inc. corridor from Lewisburg to Mifflinburg would be feasible and recommended developing a multi-use trail.

The recommendations of this planning effort were completed with the construction of the first phase of the Buffalo Valley Rail Trail (BVRT) in 2011.

Riverwoods Greenway Conceptual Plan

The Susquehanna Greenway Partnership, on behalf of the Lewisburg Area Recreation Authority (now BVRA) and Albright Care Services prepared a conceptual plan for expanded recreational opportunities and habitat restoration on the lands at Riverwoods along Buffalo Creek by the AYSO Soccer Fields and along the West Branch Susquehanna River. This included a riverfront loop trail that was over a mile in length. An easement agreement was executed between the property owner and LARA and a grant was secured from the PA DCNR; however, the project never materialized as energy and financial resources were shifted to address the acquisition, design, and development of the Buffalo Valley Rail Trail.



Previous Public Participation

Comprehensive Planning

During the development of the county comprehensive plan, *Cultivating Community: A Plan for Union County's Future from 2007 through 2009*, and three concurrent multi-municipal plans there was an extensive public involvement component. Various techniques such as focus groups, stakeholder interviews, meetings in a box, a random household survey, project website, school student survey, community interviews, open houses, municipal officials meetings, public meetings, and plan advisory teams were used among other methods to solicit input. This public involvement is what informed and shaped the plan and its goals and recommendations including the primary and secondary growth areas and future land use which is aimed at maintaining a large percentage of the county as forest and agricultural lands.

The public participation was intended to be broad due to the comprehensiveness of what has to be addressed in such a plan. With the exception of the household survey many of the questions were intentionally open ended to encourage discussion, dialogue and sharing of ideas. While this led to participants offering opinions noting general support for open space conservation it did not typically produce feedback on detailed greenway and open space implementation. The one exception was the rail trail from Mifflinburg to Lewisburg, which was mentioned by both supporters and opponents.

For example 375 community members were interviewed and asked questions such as "What is something you like about the community? What is something you dislike about the community? What is something you would like to see changed?" This returned answers to the first question such as small town character, abundance of open space, peace and quiet, and ample recreation while growth and development, loss of farmland and open space, and increased traffic were noted as dislikes. And finally more recreation programs, preserved farms, and less growth in response to the last question.

The random survey completed by 600 households throughout the county asked respondents to rank the importance of issues facing the county, what were the most important issues to address, and what are the most important reasons for living in the county. Energy conservation, managing future growth, improved transportation, and maintaining a low tax rate were cited as the most critical issues facing the county with each having 84% or more of respondents ranking them as important. In comparison 79% felt more agricultural preservation was important, 66% for expanding parks, recreation and open space and 66% for expanding walking and biking trails. Managing future growth and more agricultural preservation were two of the top five issues participants felt were most important for Union County to address. The most important reasons for people deciding to live in the county were low crime rate, small town/rural atmosphere, appearance and county beauty, quality of education, and taxation level.

Union County Future of Agriculture Program

In parallel with the county comprehensive plan the Union County Conservation District, Union County Planning Commission and a group of volunteers known as the Future of Union County Agriculture Task Force partnered with Pennsylvania State University and the Cooperative Extension Service in an effort to obtain direct input from Union County's agricultural land owners and producers. In 2007, *Let's Talk Sessions* were held where 110 people participated in a discussion on the opportunities, challenges, and future of farming in the county. This was followed by personal interviews conducted on 72 randomly selected farms. Farmers noted rising property taxes, sprawling development, loss of neighbor farms, increase in non-farm neighbors and rising farmland prices as the main threats to their operations and livelihood.

In terms of future farming plans 41% of those interviewed intend to stop farming in the next 10 years due to age and retirement and of those 33% plan to transfer farm ownership to a relative. When asked about the sale of development rights for farmland preservation, 64% indicated they would consider it to prevent the farm from being developed, and 23% said they would even consider donating the development rights for the same purpose.



However, only 6% would sell their land for development, and 48% supported the idea of the county issuing a bond to raise money for agricultural preservation with 15% opposed and 35% unsure.

Lewisburg Area Comprehensive Park, Recreation, Open Space & Greenway Plan

During the development of this multi-municipal plan by the Lewisburg Area Recreation Authority (LARA), now Buffalo Valley Recreation Authority, residents of East Buffalo Township, Kelly Township and Lewisburg Borough were engaged through a plan advisory committee, over 25 key person interviews, focus groups and work sessions, and a direct mail survey that netted 283 responses. Findings related to greenways and open space included the following being noted as needs:

- Multi-use trails (top priority)
- Maintaining existing parks
- Riverfront park and trails
- River access points

In addition 91% of survey respondents use local parks and 70% indicated a willingness to pay \$10 (2007 dollars) more per year per person to support parks, recreation, open space and greenways. Protecting farmland was important to 88%, 90% felt protecting wildlife habitat was important, and there was strong support for river-related conservation.

SEDA-COG MPO Initiatives

Long Range Transportation Plan

The SEDA-COG Metropolitan Planning Organization (MPO) is required by the Federal Highway Administration (FHWA) and the Pennsylvania Department of Transportation (PennDOT) to develop a long-range transportation plan for the eight-county MPO region of which Union County is a member. The plan is to consider all modes of transportation including automobile, rail, freight, transit, air, and bicycle and pedestrian. For the current plan the Susquehanna Greenway, and BVRT crossing of US 15 are the only greenway and bicycle

and pedestrian projects recommended in Union County as a result of that planning process and input received.

TIP Update Process

Every two years the MPO and PennDOT prepare an update to the Transportation Improvement Plan (TIP) for the MPO region and the Commonwealth. Input was solicited in 2013 for development of the next TIP via public meetings, webinars, and an interactive website made available via PennDOT. Based on the feedback from the SEDA-COG region Northumberland and Union Counties had the most individual comments in support of walking and biking trails. For Union County 58% of all the entered comments were about biking and walking trails, the majority of which focused on extending the Buffalo Valley Rail Trail across US 15 into downtown Lewisburg and to the river. However one Winfield resident suggested a trail from Lewisburg to Winfield and two East Buffalo Township residents mentioned the need for a trail along River Road to address safety issues caused by joggers and bicyclists being in the road. A Lewisburg Borough resident also proposed that trails be developed along the West Branch Susquehanna River.

PA DCNR SCORP Survey

Every five years the Commonwealth of Pennsylvania is required to prepare a Statewide Comprehensive Outdoor Recreation Plan (SCORP) to establish future outdoor recreation goals and priorities. During 2014 the Pennsylvania State University administered a survey on behalf of the Pennsylvania Department of Conservation and Natural Resources (PA DCNR) for the purpose of gathering citizen input for the new SCORP. A total of 161 Union County residents participated in the survey and the Union County Planning Commission obtained a summary of the results from PA DCNR. Below are the highlights from the data.

- 70% stated they were satisfied with the outdoor recreation amenities in the area
- 88% indicated outdoor recreation is important in their everyday life
- Trails, natural areas, waterways, local parks, public spaces and farmland are what people value the most about the community, ranking much higher than highway commercial corridors, down-

downtowns, industrial areas, residential neighborhoods, and other public/institutional areas.

- Community or regional trails were ranked as the highest priority in terms of what the local community should invest in over the next five years followed by water access for boating and kayaking, community and regional parks, and neighborhood parks.
- The lowest support for community investment over the next five years was for motorized trails and parks, skate parks, dog parks, and team sports facilities.
- The following were the top outdoor recreation and conservation funding priorities:
 - Restore damaged rivers and streams
 - Protect wildlife and fish habitats
 - Maintain existing park and recreation areas
 - Acquire and protect open space as undeveloped land
- 73% felt providing outdoor recreation is a core function of local government
- Very few felt they could not afford to participate (3%) in outdoor recreation or had physical limitations (4%) that prevented participation.
- 52% cited inadequate funding for outdoor recreation and conservation as the biggest challenge while 21% said the lack of public and political support for outdoor recreation.

Linn Conservancy/Union County Hike

On September 27th 2014 the Merrill W. Linn Land & Waterways Conservancy in conjunction with Union County sponsored a hike at the Hook Natural Area within the Bald Eagle State Forest. The purpose was to raise awareness about natural resources and open space in the county and to provide an opportunity for participants to provide early input into the topic of greenways and open space planning. Twenty of the hikers stayed to participate in a discussion after the hike. Slightly more than half of those participants felt there is too much development in the county. The rest

thought development was about right, except for two people who believed more development is needed. The group was fairly evenly split in terms of whether or not greenway and open space resources are adequately protected today. Another interesting response was that everyone was willing to walk at least a half mile from their home to access public open space such as a greenway, park or trail and the majority were willing to walk up to a mile.

Lewisburg River Town Community Planning

In early November 2014 the Lewisburg Neighborhood Corporation and Susquehanna Greenway Partnership held a River Town Community Planning Meeting in Lewisburg Borough to engage residents concerning their relationship to and with the river. Participants were given an opportunity to note what their two favorite and two most frustrating areas were in the town. After a presentation people split into focus groups on “Community Life”, “Downtown Lewisburg”, “Built Environment”, and “Natural Environment” where they identified the top two priorities for the River Town. The major priorities related to greenway and open space planning were the following:

- Connect the Buffalo Valley Rail Trail through the borough to the river, US 15 trail crossing
- Increase pedestrian and biking infrastructure
- Enhance Soldiers and Sailors Park with river access, seating, overlook, amphitheater, picnic tables, pavilion, and interpretive signage
- Trail connections along river to Milton and Northumberland
- Have a connecting trail between all riverfront green spaces and along Buffalo Creek
- Pedestrian walkway on old railroad bridge with canoe/kayak launch area in park



Implications for County Greenway & Open Space Plan

The extensive public participation undertaken for the county and various multi-municipal comprehensive plans, along with the Future of Agriculture program, resulted in a framework for balancing conservation and future growth and development. The public has shown a strong preference for preserving large areas of open space and comprehensive plans and land use maps reflect this same public sentiment.

Based on the LARA plan and more recent input received for the SEDA-COG TIP update, the PA DCNR SCORP Survey, and Conservancy hike we can make further assumptions and generalizations about what people are interested in and hold as important. We know people value outdoor recreation and that greenways and open spaces are needed in order for people to participate in those activities. There seems to be support for greenways, trails, creating water access points, watershed restoration, and protecting more land as permanent open space.

