

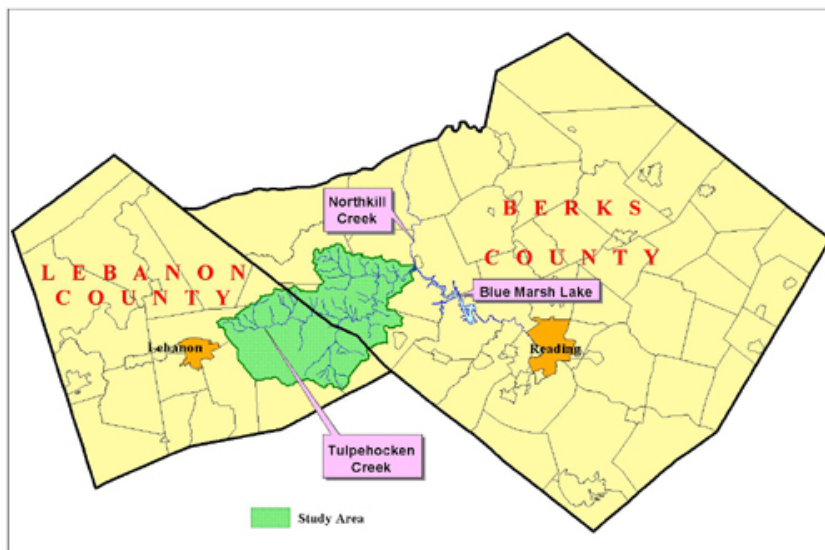
# *Tulpehocken Greenway Feasibility Study*

## EXECUTIVE SUMMARY

Between the City of Lebanon in Lebanon County and Blue Marsh Lake in Berks County lies a special place: the upper reach of the Tulpehocken Creek. The tree-lined stream meanders through prime farmland and green pastures, beside rolling hills and wooded slopes, and traversing some of the best preserved Pennsylvania German heritage areas in the state. Two non-profit conservancy groups, the Lebanon Valley Conservancy and Berks County Conservancy, have decided to take action in protecting these natural, agricultural, and historic treasures. The Tulpehocken Greenway Feasibility Study proposes a network of greenways – linear corridors of open space – to conserve and protect the area’s streams, woodlands, and farmland. The study also investigates potential recreation trails – both land and water-based. After securing a grant from the Pennsylvania Department of Conservation and Natural Resources, the two conservancies worked with a 24-person steering committee and a planning consultant to develop this study. Input was also received at four public meetings, ten key person interviews, and through a survey questionnaire sent to all landowners along this portion of the Tulpehocken Creek. What follows is a summary of the feasibility study and its findings.

### **The Study Area**

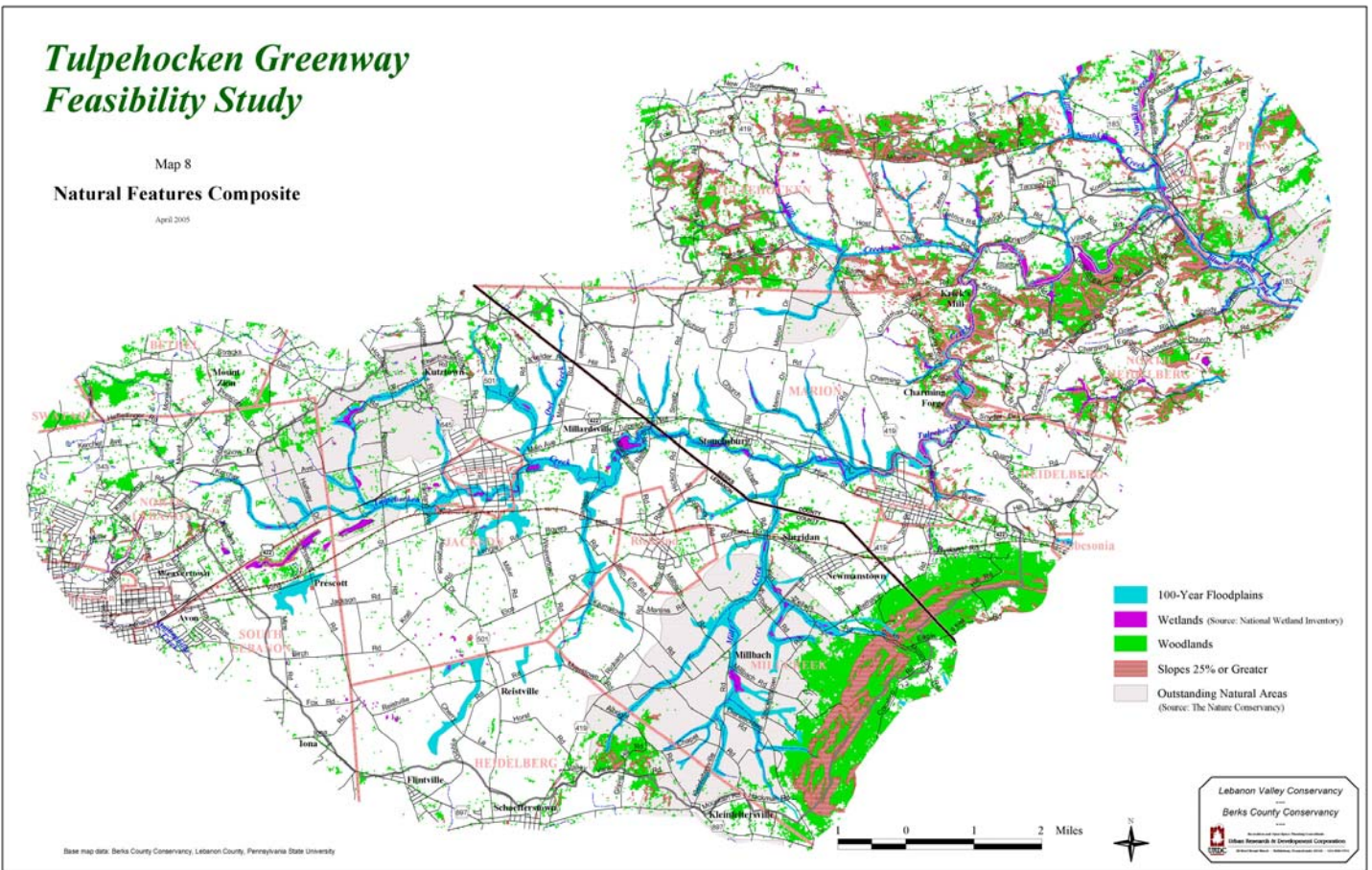
The focus of the Tulpehocken Greenway Feasibility Study is the watershed of the Tulpehocken Creek upstream from its confluence with Northkill Creek. This area, stretching from the eastern fringe of the City of Lebanon to the upper reach of Blue Marsh Lake, contains 89 square miles, and all or part of 13 municipalities in Berks and Lebanon Counties. The Tulpehocken Creek meanders 24 miles through this region, gaining water from numerous tributary streams, including two larger streams with the shared name Mill Creek. Along the northern and southern fringes of the study area are two prominent ridgelines, Summer Mountain and South Mountain, respectively. The Study Area lies within a half-hour drive of both Reading and Harrisburg, placing significant development pressure on an area that is primarily rural today.



*This project was financed in part by a grant from the Growing Greener Fund, Community Conservation Partnerships Program under the administration of the Department of Conservation and Natural Resources, Bureau of Recreation and Conservation.*

## Existing Conditions

The upper reach of the Tulpehocken Creek enjoys abundant natural splendor. Over 90 miles of streams meander through this watershed area, many of them surrounded by significant floodplain forest, wetlands, and steep slopes. These contiguous areas of in-tact riparian buffer allow for the filtering of runoff impurities, shading of the stream to maintain appropriate temperatures for aquatic life, and linear habitat for wildlife. Particularly large areas of wetland and floodplain can be found along reaches of the Tulpehocken in Berks County, near Blue Marsh Lake. The Study Area also contains sizable areas of upland forest along its major ridgelines. South Mountain, the largest of these ridges, provides woodland habitat and serves as a highly-visible backdrop due to its topographic prominence. The Nature Conservancy has identified nine “outstanding natural areas” within the Study Area which are home to endangered, threatened, or rare species of plants and animals. Important natural features are mapped below.



The Tulpehocken area has a rich history that certainly rivals any other rural historic area in Pennsylvania. Nearly 300 years of European settlement have resulted in a landscape reminiscent of Palatine Germany where many area settlers originated. 18<sup>th</sup> Century farmsteads, churches, and schoolhouses dot the landscape, while compact villages contain rows of colonial townhouses. Along the Tulpehocken Creek lie remnants of the once-bustling Union Canal. The canal carried mule-drawn freight boats between the Susquehanna and Schuylkill Rivers in the 19<sup>th</sup> Century. While much of the canal is difficult to discern today, many of the mills that fed the canal economy are still in tact, converted into homes.

Land use in the Study Area remains primarily agricultural or rural, as it has for the past three centuries. However, development pressure is feeding a suburbanization trend. Many new residents hold jobs in Reading, Lebanon, and as far away as Harrisburg, but are choosing to live in new subdivisions here. In addition, industrial and commercial zoning along Route 422 and the Lebanon Valley Railroad is promoting continued growth in that corridor, which also contains the Tulpehocken Creek. As a result, planning challenges lie ahead, where new economic growth and housing must be met with conservation of natural resources.

Recreation and open space resources within the Study Area range from small, athletically-oriented neighborhood parks to the vast expanse of the Blue Marsh Lake National Recreation Area. The area also includes several state-owned fishing and hunting lands, and a number of privately-owned recreation areas for golf, quarry scuba diving, and other sports. Publicly-accessible trails do not exist within the Study Area, but just outside the area are the Blue Marsh Lake Trail and Lebanon Valley Rail Trail, both open to hikers as well as bikers. Farmland preservation has been very successful in the Study Area, with nearly 8,000 acres permanently preserved in agricultural conservation easements. Farmland preservation efforts have been much more active in Berks County.

### **Demand for Greenways**

Several indicators tell of a national, state, and local demand for greenways: corridors intended for conservation as well as ones designated for recreation. Key person interviews and landowner surveys conducted as part of this study all indicated a desire to preserve the rural character of the Tulpehocken area. This sentiment is heightened by the increased development being seen in the Study Area. In Jackson Township, Lebanon County, the number of housing units increased by 23% between 1990 and 2000. Similar growth continues today in Jackson and other area municipalities. Establishing “green infrastructure” before additional development occurs will help ensure the protection of important natural resources. Pennsylvania’s Recreation Plan for 2004-2008 reports heavy participation in greenway-related activities, including walking for pleasure, bicycling, and visiting natural areas. In various municipalities and counties in the Commonwealth, voters are supporting open space bond initiatives, whereby their taxes are increased to fund open space preservation.

Greenways are increasing quality of life and stimulating economic growth nationwide. Communities with ample open space and recreation opportunities draw residents and businesses while maintaining their current populace. Studies have shown that properties adjacent to greenways and other preserved open space have higher market value, and usually sell quicker than “landlocked” properties. Publicly-accessible greenways can draw visitors from outside the area, and with them comes the local sales tax generated from tourist spending. In the long-term, recreation-oriented greenways offer the exercise opportunities that can help maintain a healthy populace with lower health care costs.



*In general, local residents have a desire to preserve the rural character of their community.*



## Greenway Issues

Issues related to greenways in the Tulpehocken area involve natural resources, cultural resources such as historic sites and farmland, recreation, community planning, and implementation. This study describes those issues, which were gathered from the steering committee who helped mold this plan, questionnaires sent to creek-side landowners, key person interviews, and four public meetings. Greenway-related issues in the Study Area are considered as opportunities or threats, as listed in the table below.

Summary of Greenway Issues

<b>Issue Topic</b>	<b>Opportunities</b>	<b>Constraints</b>
<i>Natural Resources</i>	<ol style="list-style-type: none"> <li>1. Abundant natural features</li> <li>2. Existing areas of protected green space</li> <li>3. Positive conservation attitudes and practices</li> </ol>	<ol style="list-style-type: none"> <li>1. Agricultural pollution and sedimentation</li> <li>2. Impervious surface pollution (parking lots, roads, etc.)</li> <li>3. Sedimentation from new development</li> <li>4. Lack of riparian buffers (streamside vegetation)</li> <li>5. Loss of wildlife habitat</li> <li>6. Sinkhole threat posed by carbonate geology</li> </ol>
<i>Cultural Resources</i>	<ol style="list-style-type: none"> <li>1. Substantial amount of historic resources</li> <li>2. Active historic preservation and ID efforts</li> <li>3. Existing historic districts and zoning overlays</li> <li>4. Interpretive efforts through tours, literature</li> <li>5. Families maintaining agricultural lifestyle</li> </ol>	<ol style="list-style-type: none"> <li>1. Deterioration and demolition of historic buildings</li> <li>2. Disappearance of the Union Canal</li> <li>3. Conversion of farms to development</li> </ol>
<i>Recreation</i>	<ol style="list-style-type: none"> <li>1. Possibility of creating trail linkages</li> <li>2. Need for additional recreation and open space</li> <li>3. Local enthusiasm toward recreation trails</li> <li>4. Possibility of stream-based recreation</li> </ol>	<ol style="list-style-type: none"> <li>1. The unfeasibility of recreation trails in the Study Area</li> <li>2. Possible misuse of future trails (theft, vandalism, etc.)</li> <li>3. Auto/bike/pedestrian conflicts on narrow roads</li> </ol>
<i>Community Planning</i>	<ol style="list-style-type: none"> <li>1. Much land remains in undeveloped state</li> <li>2. Active farmland preservation efforts</li> <li>3. Several regional planning efforts occurring now</li> <li>4. Several municipalities with sound planning policies</li> </ol>	<ol style="list-style-type: none"> <li>1. Development pressure from surrounding areas</li> <li>2. Undeveloped land for sale in development zones</li> <li>3. Development zoning along Tulpehocken Creek</li> <li>4. Some municipalities with deficient/outdated planning</li> <li>5. Areas of “checkerboard” mix of farms and houses</li> </ol>
<i>Implementation</i>	<ol style="list-style-type: none"> <li>1. Many landowners willing to pursue conservation</li> <li>2. Conservation groups serve as greenway advocates</li> <li>3. Many groups able to volunteer for projects</li> <li>4. Possibility of engaging Plain Sect families</li> </ol>	<ol style="list-style-type: none"> <li>1. Difficulties in advocating conservation</li> <li>2. Landowner concerns over privacy</li> <li>3. Landowner concerns about liability in injury/death</li> </ol>

## **Greenway Development and Protection Options**

After careful consideration of all collected background information, five different greenway schemes were developed, each to their fullest possibility. The five different greenway scenarios are described below:

### **Scenario A: Natural Resource Conservation Greenways**

- Protecting existing natural features along streams and ridgelines through municipal ordinance and regulation. Along streams, these features include the 100-year floodplain and any adjacent wetlands, bottomland forest, or steep slopes. Along ridgelines, the greenways include contiguous belts of upland forest.
- Enhancing riparian areas with trees, ground cover plants, and stabilization measures such as rip-rap.
- Pursuing riparian conservation easements in key areas.

### **Scenario B: Land Preservation Greenbelts**

- Preserving contiguous, wide belts of farmland along streams, and belts of woodland along ridges. This would be accomplished through agricultural and other conservation easements, as well as planning and zoning provisions.
- The designated greenbelts narrow near boroughs and villages to leave room for future development.

### **Scenario C: Land-Based Trails**

- Establishing an interconnected system of trails throughout the Study Area, following stream valleys, ridgelines, and utility corridors.
- Trails vary from narrow, European-style walking paths and Appalachian Trail-like hiking trails, to paved multiple-use trails for bicyclists, in-line skaters and joggers.

### **Scenario D: Water Trail**

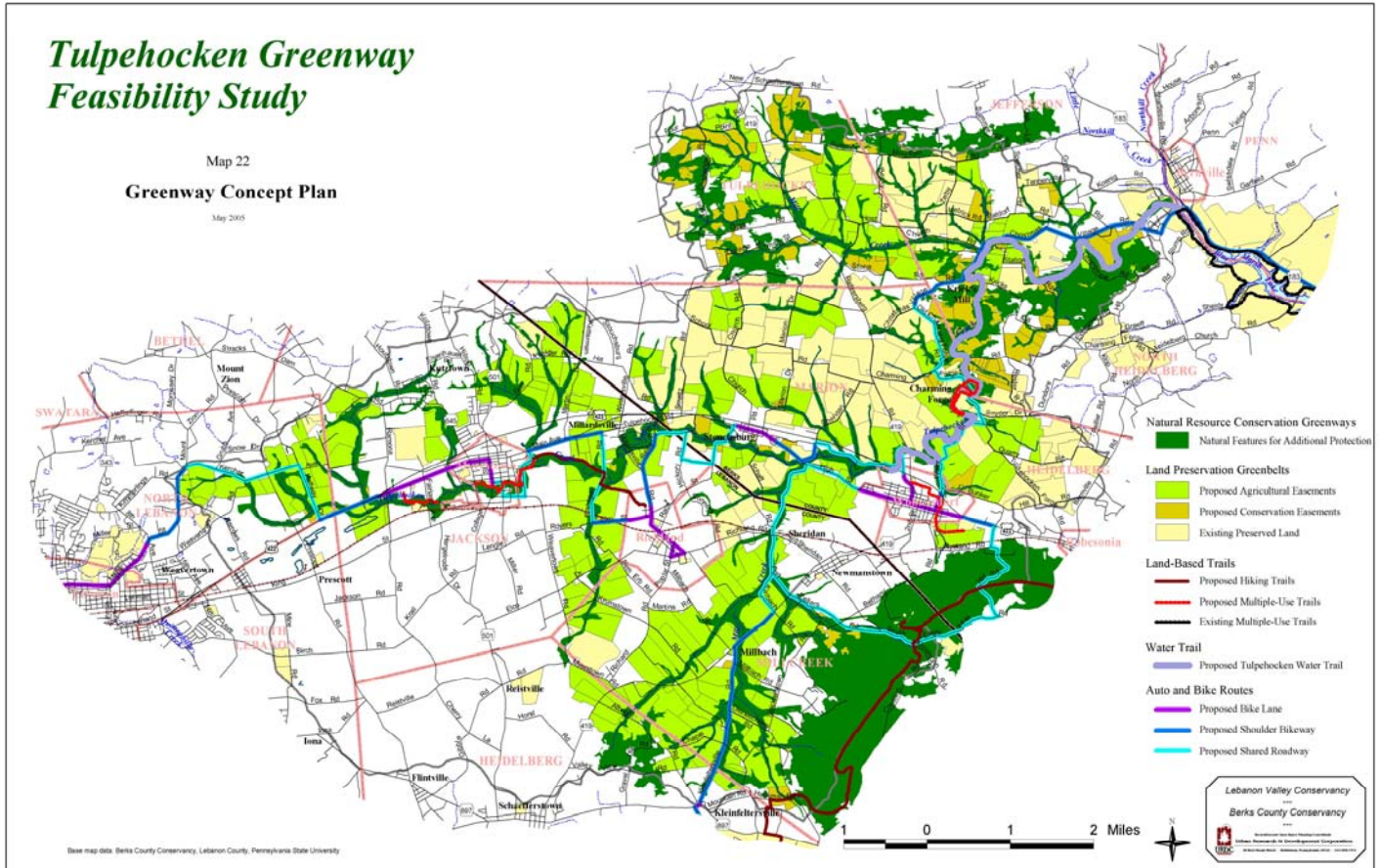
- Designating an 11-mile stretch of the Tulpehocken Creek between Womelsdorf and Blue Marsh Lake in Berks County as a water trail.
- The water trail is accompanied by designated parking and stream access sites, a guide map, and signage on nearby roadways. Maintenance is undertaken by a private club.

### **Scenario E: Auto and Bike Routes**

- Designating certain existing roads as touring routes for cars and bicycles. The routes highlight many of the area's historic and natural sites. The primary touring route follows the course of the Tulpehocken Creek.
- Routes are indicated and described on a guide map. On the ground, directional signs guide tourists, while interpretive signs and historical markers describe points of interest.
- On high traffic routes, bicycle lanes are added for the visibility and safety of bicyclists.

## Greenway Concept Plan

The five above greenway scenarios were combined into a singular greenway concept, including all elements associated with Scenarios A and D. Scenario B (Greenbelts) was reduced slightly to conform to current zoning. Scenario C (Land-Based Trails) was scaled back to only include six trails in areas where landowners are supportive of trail development on their property. Scenario E (Auto and Bike Routes) was reduced from six original touring routes to three final routes. The combination of these five greenway ideas is displayed in the map below.



Additional elements of the Greenway Concept Plan include the following:

- Extension of the Tulpehocken Creek Historic District into Lebanon County.
- Restoring a portion of the Union Canal within the Study Area, including the towpath, to serve as a historic site and recreation asset.
- Collaborating with entities outside the Study Area to extend all five greenway types beyond the boundaries of this plan. This includes conservation greenways that connect to Blue Mountain and the Schuylkill River, farmland greenbelts that wrap around villages throughout Berks and Lebanon Counties, trails that connect to the Appalachian and Horse-shoe Trails, extension of the Tulpehocken Water Trail to the Schuylkill River Water Trail, and touring routes that follow the remainder of the Tulpehocken Creek and Union Canal corridor. Along with four other nearby heritage-based greenways, the Tulpehocken Greenway could also become part of a statewide greenway based upon historic canals from Pittsburgh to Philadelphia.

## **Implementation Plan**

The feasibility study concludes with an action-oriented Implementation Plan. The first section, the Action Program, calls out specific actions which will advance the ideas in this study to reality. The Action Program is in tabular format, and designates a time frame (short range, medium range, long range, or continuous) and responsible parties for actualizing each recommendation. Major recommendations from the Action Program include the following:

- Berks County Conservancy and Lebanon Valley Conservancy adopt/endorse study.
- Maintain, formalize, and invite others into the Tulpehocken Greenway Committee.
- Work with municipalities to amend planning and zoning documents to further protect the natural features which compose the conservation greenways.
- Educate the general public, especially creek-side landowners, on the benefits of riparian buffers and other conservation practices.
- Approach landowners about possibly donating or selling riparian easements.
- Strengthen “agricultural” zoning to further protect the land preservation greenbelts.
- Encourage further participation in the county farmland preservation programs.
- Consider developing ADA-accessible, multiple-use trails in Jackson Township, Myerstown Borough, Womelsdorf Borough, and at Charming Forge.
- Consider developing a walking path between Myerstown and Richland, and a hiking trail called the “Highlands Trail” on the crest of South Mountain.
- Create a group whose role is to establish and maintain a Tulpehocken Water Trail.
- Work with Pennsylvania Department of Conservation and Natural Resources, Pennsylvania Fish and Boat Commission, and the Schuylkill River Greenway Association in developing the Tulpehocken Water Trail.
- Work with municipalities and PennDOT to establish auto and bike touring routes, complete with signage and guide maps.
- Extend the Tulpehocken Creek Historic District into Lebanon County.
- Use this feasibility study as a local policy guide for larger planning efforts, such as countywide comprehensive plans.

The Implementation Plan also lists and describes various techniques for preserving or acquiring land for the purposes of a greenway. Among the prescribed “tools” are the following:

- Environmental provisions in zoning ordinances and subdivision and land development ordinances
- The Official Map, as authorized by the Pennsylvania Municipalities Planning Code
- Conservation easements
- Mandatory dedication or preservation of environmentally-sensitive lands in new developments
- Low-impact development techniques, such as infill, cluster, and brownfield redevelopment
- Land donations
- Fee simple acquisition of land from willing landowners

Financial feasibility is another component of the Implementation Plan. This includes a cost estimate of greenway-related items, from conservation easements (\$0-2,100 per acre, plus \$3,000-5,000 per easement in administrative costs) to paved multi-use trails (\$200,000 to 400,000 per mile for trail and support facilities). The cost estimate also includes accessory items such as signs (\$150-3,000) and parking spaces (\$600-1,000 each). The study then lists 47 different sources of funding for greenway implementation. These include federal grants (TEA-21, Land and Water Conservation Fund, Natural Resource Conservation Service programs, Forest Legacy, and others), Commonwealth grants (Growing Greener, Community Conservation Partnerships, Home Town Streets / Safe Routes to School, Keystone Historic Preservation Fund and more), county programs such as farmland preservation, local initiatives including open space bonds and the standard pay-as-you-go approach, and many more.

Finally, the Implementation Plan provides an *Organizational Framework* for proceeding with greenway actions. Many groups and individuals must work together to make greenways a reality. Important stakeholders include the following:

- Conservation and recreation-related non-profit groups, especially the Lebanon Valley Conservancy and Berks County Conservancy
- Landowners along the greenway corridors, including developers
- The 13 municipal governments of the Study Area
- County agencies and departments, including planning, farmland preservation, and conservation districts.
- State agencies, including DCNR, Fish & Boat, PHMC, PennDOT, DEP, and DCED
- Federal agencies (Army Corps of Engineers, Delaware Basin Commission, EPA)
- Historical societies
- Local businesses, corporations, and chambers of commerce



## **What's Next?**

With the Tulpehocken Greenway Feasibility Study now complete, the Lebanon Valley and Berks County Conservancies will proceed with projects recommended in the study, as their resources allow. This may include landowner outreach programs for stream-side landowners, meetings with municipal officials to advocate ordinance review, pursuing a master plan for a recommended trail segment, or a number of other options listed in the study. The conservancies will also encourage other groups and entities to pursue the recommendations of this study. Conservancy members and others who participated in this project know that the time is now to work together in protecting the rural character of the Tulpehocken.