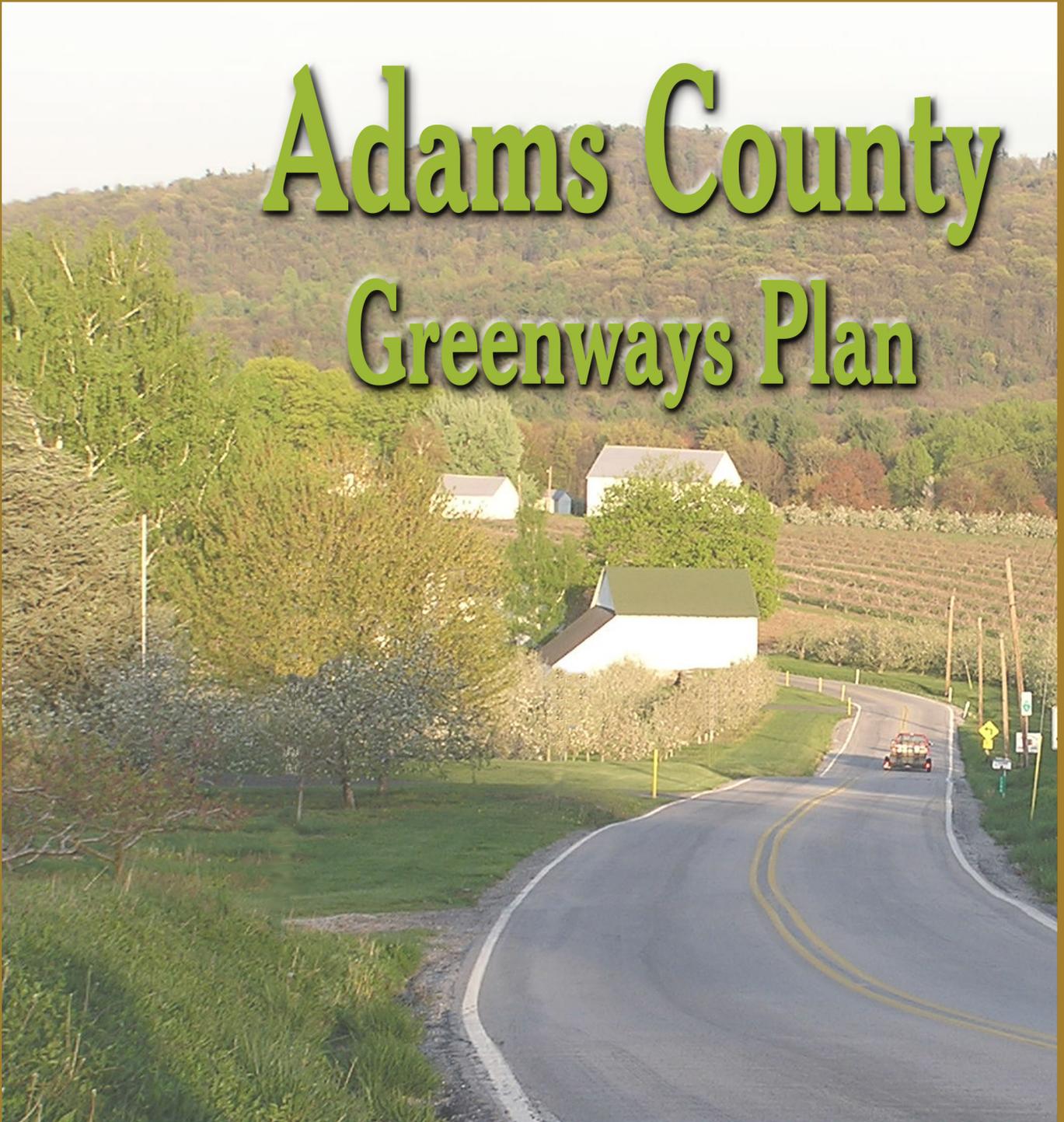


Adams County Greenways Plan



The Adams County Greenways Plan

Adams County Office of
Planning and Development

Consultants

Urban Research and Development Corporation
Bethlehem, PA
in association with

Rails-to-Trails Conservancy
Camp Hill, PA

Herbert, Rowland, & Grubic, Inc.
Gettysburg, PA

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**The *Adams County Greenways Plan* was adopted by the
Adams County Commissioners on 3 February 2010.**

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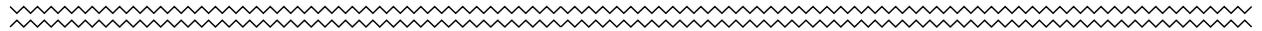
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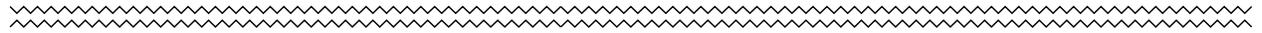
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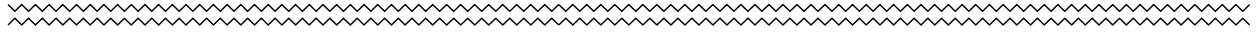
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EXECUTIVE SUMMARY

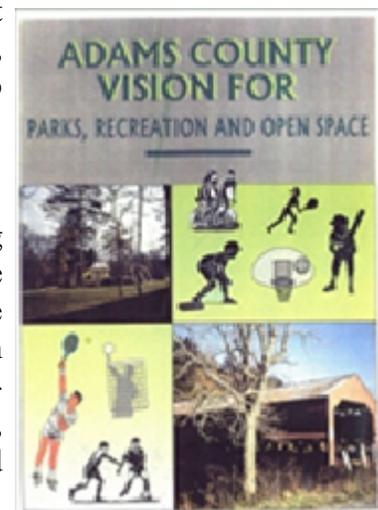
Greenway . . . The word is almost a self-description, evoking images of meadows, forests, streams, and wildlife. The word “greenway” is a combination of England’s “greenbelt” and famed New York City architect Frederick Law Olmsted’s “parkway” and is defined as:

“1. A linear open space established along either a natural corridor, such as a riverfront, stream valley, or ridgeline, or overland along a railroad right-of-way converted to recreational use, a canal, scenic road, or other route. 2. Any natural or landscaped course for pedestrian or bicycle passage. 3. An open-space connector linking parks, nature reserves, cultural features, or historic sites with each other and with populated areas. 4. Locally, certain strip or linear parks designated as a parkway or greenbelt.”¹

Adams County began planning the development of a countywide greenway system in the adopted 1991 county comprehensive plan. The comprehensive plan mapped and defined a permanent network of open space. The plan defined a widespread pattern of parks, forests, game lands, protected environmental features, permanent open space, and conservation areas to be preserved as the backbone of a permanent open space system.

The plan encouraged identifying areas that are inappropriate for development and areas that are already protected or publicly owned in order to develop an interconnected system of greenways. The plan also set policy urging the county’s involvement in supporting conservation-oriented public and private efforts to acquire development rights adjacent to state forest and game lands, to assist in the purchase of conservation easements, and to support open space planning and financing mechanisms to develop a countywide greenways network.

Adams County also defined a greenway in its *Vision for Parks, Recreation, and Open Space* as corridors of open space providing exceptional opportunities for environmental preservation, wildlife habitat, and, in selected instances, recreation, education, and a sense of place within communities. The county is fortunate to have an abundant amount of open space resources, including extensive farmlands, forests, woodlands, stream valleys, unique ridgelines, wetlands, and waterways. Throughout the last decade, the county has worked



¹ Little, Charles, *Greenways for America*, The Johns Hopkins University Press, Baltimore and London, 1995, p. 1

to protect special resources through the development of plans that address natural and cultural resources such as:

- *Adams County Comprehensive Plan*
- *Adams County Vision for Parks, Recreation, and Open Space Plan*
- *Adams County Green Ribbon Commission Report*
- *Adams County Water Supply and Wellhead Protection Plan*
- *Adams County Natural Areas Inventory*
- *Monocacy River Watershed Stormwater Management Plan*
- *Conewago Creek River Conservation Plan*

A survey conducted by the Adams County Office of Planning and Development (ACOPD) in May 2003 further illustrates the demand for greenways. In response to a question asking respondents to rank the adequacy of various community facilities and services, “hike, bike, walking trails” was ranked as one of the three least adequate services by every group of respondents.² Furthermore, in response to another question asking to identify the three most important concerns for Adams County, frequent replies among the ten respondent groups included:

- Preserve farmland.
- Preserve important landscapes.
- Lifestyle.

The county has supported efforts to protect natural and cultural resources by sponsoring programs, initiatives, and agencies, such as the Adams County Conservation District, the Penn State Cooperative Extension office, the Green Ribbon Commission, the Green Space Grant Program, and the Land Conservancy of Adams County. Each of the above plans and programs has identified the need to develop parks and recreation areas, preserve agricultural and open space land, and protect the county’s natural and cultural resources.

To further protect, manage, and enhance the county’s natural resources, the Adams County Office of Planning and Development (ACOPD) has completed the *Adams County Greenways Plan* as an important component of an updated county comprehensive plan. One goal of the greenways plan is to provide a vision and approach for establishing a comprehensive countywide greenway network that will protect Adams County’s natural and cultural resources for generations.

² Survey responses were tabulated for the following respondent groups:

- | | | |
|----------------------------------|------------------------------|----------------------------------|
| • Adams County citizens (random) | • borough elected officials | • economic development officials |
| • Adams Co. Planning Commission | • township elected officials | • school board members |
| • borough planning commission | • conservation groups | |
| • township planning commission | • human service agencies | |

BENEFITS OF GREENWAYS

“Greenways” are described in many ways and serve many functions. *Pennsylvania Greenways – An Action Plan for Creating Connections*, a statewide strategic plan published by the Pennsylvania Department of Conservation and Natural Resources, defines greenways as:

“Linear corridors of open space that vary greatly in scale; from narrow ribbons of green that run through urban, suburban, and rural areas; to wider corridors that incorporate diverse natural, cultural, and scenic features. They can incorporate both public and private property, and can be land-or water-based. They may follow old railways, canals, or ridge tops, or they may follow stream corridors, shorelines, or wetlands, and include water trails for non-motorized craft. Some greenways are recreational corridors or scenic byways that may accommodate motorized and non-motorized vehicles. Others function almost exclusively for environmental protection and are not designed for human passage.”

Wherever greenways are established, surrounding municipalities experience a number of benefits, depending on the type and location of the corridor. *Pennsylvania Greenways – An Action Plan for Creating Connections* lists eleven potential benefits that may result from greenway development:

1. Protection of Natural Resources
2. Protection of Water Resources
3. Stewardship of Pennsylvania’s Rural and Farmland Legacy
4. Conservation of Historic and Cultural Resources
5. Conservation of Scenic Resources
6. Fostering of Public Recreation, Health, and Fitness
7. Creation of Educational Opportunities
8. Support of Economic Prosperity
9. Promotion of Sustainable Development and Sound Land Use
10. Provision of Alternative Transportation
11. Building Partnerships

Examples of potential greenway benefits in Adams County include protection for wildlife habitat and, in certain instances, habitat for threatened or endangered species identified in the Natural Areas Inventory. Establishing buffers along rivers, streams, lakes, and reservoirs may have multiple advantages, such as habitat protection, flood control, and drinking water protection; all goals consistent with objectives established in the *Adams County Water Supply and Wellhead Protection Plan*. Corridors linking areas of farmland and open space help to preserve the rural landscape and way of life, goals promoted by the Agriculture Land Preservation Program.

Many greenway benefits are interrelated and work together to enhance the quality of life in the region. For example, providing transportation alternatives leads to better health and fitness opportunities as identified in the *Adams County Vision for Parks, Recreation, and Open Space*. Similarly,

~~~~~

conserving historic and cultural resources supports economic prosperity by attracting visitors from inside and outside the county.

## GOAL AND OBJECTIVES

Greenways can range from narrow strips of land only a few feet wide used to connect preserved parcels with a small trail or footpath to large, forested or harvested landscapes thousands of acres in size with no public access. The primary goal of the *Adams County Greenways Plan* is ***to enhance existing and future communities in Adams County by preserving and, where appropriate, developing various types of greenways***. The major objectives of the plan that will help to move toward the goal of land conservation are to:

1. Preserve and enhance the visual character of Adams County's landscapes.
2. Improve the quality of life for residents and the visitor experience for tourists.
3. Protect water quality and quantity in Adams County.
4. Protect important habitat areas and preserve migration paths for wildlife.
5. Create a network of natural and historic features throughout the county that serves as an educational tool for the public.
6. Enhance recreational and exercise opportunities in appropriate settings.
7. Provide opportunities for nonmotorized transportation links, connections, and pathways in appropriate settings.

## CURRENT CONDITIONS

The plan begins with an evaluation of Adams County unique environmental, cultural, and community features to determine a greenway system that will protect and enhance future growth. A greenway system is a valuable tool that can help to unify and preserve the land and heritage of Adams County in a partnership of both public and private resources. Elements evaluated in the plan to develop a unified greenway system included:

- ***Regional setting*** — the location of Gettysburg and Adams County that played a significant part in the history of the area and is now relevant to the growth pressures the county is experiencing
- ***Cultural and historic sites*** — the sites that remind both a nation and a county of the past as well as the schools, shopping areas, and other sites that are a part of life today
- ***Scenic resources*** — the agricultural and upland areas that offer breathtaking scenery and vignettes of everyday life, including the historic and economically significant Fruitbelt

- 
- ***Natural features*** — the physiography, steep slopes, major landforms, woodlands, and water features that comprise the land of Adams County
  - ***Man-made corridors*** — roads and rights-of-way for railroads, pipelines, and transmission lines that connect the many other features of the county
  - ***Parks and recreation sites*** — places where people enjoy leisure pursuits, including athletics, picnicking, and education
  - ***Open space*** — undeveloped land that provides visual buffers and helps to create the character of Adams County

## ADAMS COUNTY GREENWAYS PLAN

The plan is comprised of the greenway maps and an action program. The proposed greenway system includes:

- ***Significant Riparian Greenways (Map 3.1)*** — greenways intended to preserve land along waterways and, in some cases, offer recreational opportunities. Riparian greenways are divided into three categories:
  - *Active*: Trails are strongly recommended whenever opportunities for public access arise.
  - *Accessible*: Public access is only available at selected points, often for specific activities, such as fishing.
  - *Passive*: Limited or no public access is provided.

The plan recognizes the difficulty of developing greenways when most of the land is owned by many different private parties. However, trails, fishing access, and other public elements are important parts of both the recreation and educational component of greenways, and the plan identifies all three types of riparian greenways to encourage cooperation in developing the greenway system. For instance, informal fishing access points are already available along many of the stream sections identified as accessible greenways, such as along the Conewago Creek.

- ***Significant Landscapes and Green Spaces (Map 3.2)*** — greenways comprised of unique land that is either preserved or deserves preservation, including:
  - Fruitbelt
  - South Mountain
  - South Mountain faces, including Raven Rock Mountain, Jacks Mountain, the Front Range, Big Hill, the Narrows, and Bear Mountain



- Federal historic sites, including the Gettysburg Battlefield National Historic District and Eisenhower National Historic Site
- Unique green spaces, including Buchanan Valley, Round Hill, the Standardbred Horse Farms area, Conewago vistas, and the state game lands
- **Potential Trail Corridors (Maps 3.4 and 3.5)** — greenway linkages, including:
  - Scenic and historic roadways
  - Railroad corridors, both active and abandoned
  - Auto tours
  - Scenic byways and viewsheds
  - Bike routes, both currently designated and proposed, including many on low-volume local roads
  - Existing and proposed trails

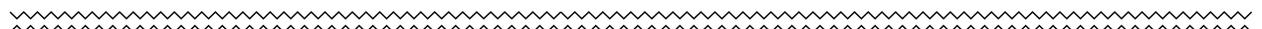
## IMPLEMENTATION

The greenway system proposed can only be realized with the commitment of county and local stakeholders. A network of greenways is not created overnight. Greenway networks are created piece-by-piece, often a parcel at a time. The process takes years—even decades. Segments that can be achieved with few obstacles should be undertaken first to establish a record of success and build momentum for the plan. The *Adams County Greenways Plan* stresses cooperation between many entities interested in greenways: landowners, government agencies, land preservation and recreation organizations, and the general public.

No single organization in Adams County has the capacity or expertise to undertake the greenways effort single-handedly. Implementation of the greenways plan will require leadership at the county level to develop strong partnerships with local municipalities and key organizations, both public and private. Therefore, the plan provides a framework that focuses attention on bringing the appropriate county agencies and nonprofit organizations together, to work with municipal representatives and residents, and to provide technical assistance, where needed.

The Adams County greenway implementation strategy includes seven elements:

- **Action Program** — The action program (Table 4.1) includes recommendations to fulfill the vision presented in the plan. Each action includes a priority, in the form of a time frame, and the entity(ies) responsible for fulfilling the recommended action.
- **Pilot Projects** — The plan identifies key implementation projects that will advance the development of a countywide greenways system. Pilot projects include a potential county demonstration project and regional projects based on the recommendations of previous county plans and input from members of the greenway plan steering committee.



- 
- ***Land Preservation Techniques*** — The plan includes information on various land preservation techniques, including many that do not require any public sector involvement:
  - ***Costs and Funding*** — Examples of costs for greenway projects in other areas and the information on funding for greenways is also included in the implementation section. The information includes a list of state and federal funding programs (Table 4.3).
  - ***Stakeholders*** — Many entities are interested in the functions greenways serve and have a vital role to play in greenway development, from individual landowners to large government agencies to nonprofit agencies. The discussion of stakeholders explains the mission and role of the parties in land preservation in Adams County and discusses ways the parties can be more effective working together than working alone.
  - ***Management Options*** — A final section presents information on potential options for managing the greenways effort in Adams County. The section discusses the strengths and weaknesses of various options and provides examples of each alternative currently operating in Pennsylvania.
  - ***Potential Program Structure*** — The implementation strategy concludes with a discussion of a potential structure for administering an Adams County greenways effort. National and global events that have occurred during the preparation of the *Adams County Greenways Plan* have significantly altered the financial and human resource capabilities of local governments. Nevertheless, the potential program structure is included for the county’s consideration at a time when conditions

## MAJOR RECOMMENDATIONS

Major recommendations of the plan include:

1. Officially adopt the *Adams County Greenways Plan* as part of the *Adams County Comprehensive Plan*.
2. In line with the recommendation of the Green Ribbon Commission and the *Adams County Vision for Parks, Recreation, and Open Space* establish a standing Adams County Open Space, Greenways, and Recreation Advisory Forum
3. Establish a county open space, greenway, and recreation program to strengthen educational and technical assistance to municipalities regarding the benefits of greenways, recreation, and land preservation, and to implement the recommendation of the *Adams County Greenways Plan*.
4. Continue to move forward with the recommendations of the Green Ribbon Commission and the *Adams County Vision for Parks, Recreation, and Open Space* to investigate a finance mechanism



that can leverage state and federal funding opportunities to encourage municipal planning, development, and preservation of land for open space, greenways, and recreation.

5. Implement a "Springboard / Pilot" project, such as the Hanover to Gettysburg Trail, connecting the county's most urbanized areas to the county's central hub, to gather interest and increase public awareness of greenways.
6. Prepare local and regional greenway plans that specifically identify potential greenway corridors unique to the various regions of Adams County based on the countywide conceptual greenways framework provided in the *Adams County Greenways Plan* and that further the state's greenways vision and support/supplement the *Adams County Comprehensive Plan*.
7. Establish a county open space, greenway, and recreation forum with local municipalities to address open space priorities, develop regional greenways, expand recreation opportunities, respond to conservation priorities, and discuss issues of mutual significance.
8. Work to amend zoning, subdivision, and land development ordinances to protect greenways and to require the dedication of open space along greenway corridors, streams, steep slopes, and other environmentally sensitive features.
9. Work with Adams County Water Resource Advisory Committee to protect greenway elements that relate to water supply and water quality in Adams County.
10. Work with appropriate county agencies to update flood protection plans and ordinances.



## INTRODUCTION

**Greenway.** . . . The word is almost a self-description, evoking images of meadows, forests, streams, and wildlife. The word “greenway” is a combination of England’s “greenbelt” and famed New York City architect Frederick Law Olmsted’s “parkway” and is defined as:

*“1. A linear open space established along either a natural corridor, such as a riverfront, stream valley, or ridgeline, or overland along a railroad right-of-way converted to recreational use, a canal, scenic road, or other route. 2. Any natural or landscaped course for pedestrian or bicycle passage. 3. An open-space connector linking parks, nature reserves, cultural features, or historic sites with each other and with populated areas. 4. Locally, certain strip or linear parks designated as a parkway or greenbelt.”<sup>3</sup>*

### Greenway Types and Functions

Greenways perform many different functions, as identified by the Pennsylvania Department of Conservation and Natural Resources (Figure 1.1). The diverse geography, natural features, and settlement patterns of Adams County create the need for various types of greenways in different parts of the county.

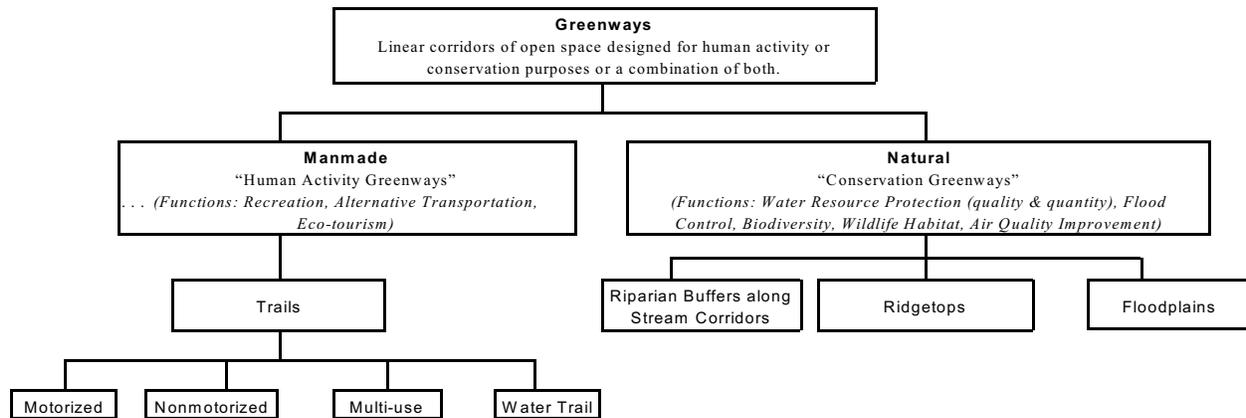
Greenways also differ by general setting. Five broad categories of settings illustrate different greenway environments:

- “Mega-greenways” — Large-scale greenways that span longer distances and are significant on a statewide basis. Examples in Adams County include:
  - *South Mountain Conservation Landscape Initiative*: the Blue Ridge section of the Appalachian Mountains unique to Adams, Cumberland, Franklin, and York Counties
  - *Journey Through Hallowed Ground*: the 38<sup>th</sup>, and most historic, National Heritage Area in the nation following U.S. 15 from Monticello, VA to Gettysburg, PA
  - *Pennsylvania Highlands*: 1.4-million-acre region of the Eastern Appalachian Mountains ranging from Adams County to Northampton County
  - *Grand History Trail*: a loop trail proposal that would provide off-street trail linkages between Gettysburg and other points in Adams County with existing and proposed trail links in Baltimore, Washington DC, and other points in York County and Maryland

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<sup>3</sup> Little, Charles, *Greenways for America*, The Johns Hopkins University Press, Baltimore and London, 1995, p. 1

Figure 1.1  
Greenway Types



Source: PA Department of Conservation and Natural Resources (DCNR), available at:  
<http://www.pagreenways.org/greenwaysnetworks-types.htm>

- Rural — Rural greenways often help preserve natural features, such as open meadows, agricultural land, forests, or riparian corridors. Land for rural greenways is often available through Best Management Practices and other land preservation techniques.
- Suburban — Greenways in a suburban environment often connect residential developments to activity centers, such as schools, parks and recreation areas, employment centers, and downtowns. Suburban greenways can also encourage nonmotorized trips between neighborhoods and provide a pleasant recreational amenity within larger developments.
- Urban — Urban greenways provide pedestrian connections throughout a downtown or heavily developed area, Urban greenways also encompass streetscape improvements (such as trees, plantings, sidewalk widening, and cultural and historical markers) to provide pleasant and educational pedestrian paths for residents and visitors. The boroughs, some villages, and developed areas of Adams County are appropriate locations for urban greenways.

Greenways are so varied in characteristics as to resist classification, despite attempts to the contrary. Charles Little, while acknowledging the difficulty of categorization, observed “...five major project types:

1. *Urban riverside greenways, usually created as part of (or instead of) a redevelopment program along neglected, often run-down city waterfronts.*
2. *Recreational greenways, featuring paths and trails of various kinds, often of relatively long distance, based on natural corridors as well as canals, abandoned railbeds...and other public rights-of-way.*

- 
3. *Ecologically significant natural corridors, usually along rivers and streams and (less often) ridgelines, to provide for wildlife migration and “species interchange,” nature study, and hiking.*
  4. *Scenic and historic routes, usually along a road or highway (or, less often, a waterway), the most representative of them making an effort to provide pedestrian access along the route or at least places to alight from the car.*
  5. *Comprehensive greenway systems or networks, usually based on natural landforms such as valleys and ridges but sometimes simply an opportunistic assemblage of greenways and open spaces of various kinds to create an alternative municipal or regional green infrastructure.”<sup>4</sup>*

## GREENWAY BENEFITS

Interviews, meetings, and other information-gathering activities for the *Adams County Greenways Plan* identified the following benefits related to greenways in the county, some of which also illustrate the need for greenways as both a recreation element in the county and a vehicle for land preservation.

- *Quality of life* — The environmental, health, recreational, biodiversity, and other benefits of greenways increase the quality of life in community. Virtually every greenway can provide some measure of benefit to the community, and most greenways provide several such measures.<sup>5</sup>
- *Increased and diversified tourism* — Public-access greenways can be a tourist attraction that can draw visitors from a wide area, depending on the type of greenway and the extent of trail offerings, such as fish and boat access points, scenic roadway designations, or cultural/historic markers within urban greenways. For example:
  - The East Coast Greenway (ECG, [www.greenway.org](http://www.greenway.org)) is a planned, 2,950-mile trail that is approximately 21 percent complete and will eventually connect all major cities along the East Coast from Calais, ME to Key West, FL.
  - The Falling Spring Greenway in neighboring Franklin County is dedicated to preserving the Falling Spring Branch—well-known for high quality trout fishing. The greenway has no trails but does provide access to the Falling Spring Branch through the cooperation of landowners and the efforts of the nonprofit Falling Spring Greenway, Inc.

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<sup>4</sup> Ibid., pp. 4–5

<sup>5</sup> For more information, the reader is referred to [www.pagreenways.org](http://www.pagreenways.org).

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- The Appalachian Trail, which can also be considered a type of greenway, draws hikers from all over the United States. The trail runs from Maine to Georgia, through neighboring Franklin County, and passes within a few feet of the county line in Michaux State Forest.
  - In York County, the Heritage Rail Trail County Park is a 21.1-mile trail stretching southward from the First Continental Courthouse in York through several boroughs connecting to Maryland's Northern Central Railroad Trail, which extends for 20 miles into the Hunt Valley area near Ashland, MD.

The trail is being extended by approximately 5.0 miles northward from York to John Rudy County Park. The first section of the extension was opened to the public in summer 2007. The York County Rail Trail Authority estimated that 300,000 people used the Heritage Rail Trail County Park in 2004, and usage has reportedly increased from 2004 to the present. Furthermore, a 2007 study found a significant economic impact by trail users.<sup>6</sup>



Fig. 1.2  
York County Rail Trail

In some cases, the greenway itself can be a destination—without an extensive trail network and with limited, well-defined public access points—offering opportunities for bird-watching and wild-life-viewing. Greenways might also be the thread used to tie together other historic and/or cultural stories in Adams County, such as the Underground Railroad, or the creation of the Fruit Belt Agricultural District.

- *Recreation-related spending*— Active greenways can also increase recreation-related spending, which can provide a significant boost to the local economy. The *Western Maryland Rail Trail Economic Impact Study* indicated that the mean spending for a WMRT user in 2002 was approximately \$13 per visit. The corresponding mean spending per user in 2006 was approximately \$16 per visit.<sup>7</sup>
- *Reduced future flooding potential* — Many greenways are located adjacent to waterways and provide natural areas for overflow in times of flooding, which helps to minimize flood damage. At a time when development proposals are increasing, particularly in the eastern and southern parts of the county, greenways are one tool that developers and local officials can use to reduce the potential for future flood damage.

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<sup>6</sup> According to *Heritage Rail Trail County Park 2007 User Survey and Economic Impact Analysis* (November 2007), 89.6% of trail users cited trail use as influencing a purchase of hard goods (average cost: \$367.77), and 79.1% of trail users cited trail use as influencing a purchase of soft goods (average cost: \$12.86).

<sup>7</sup> Urban Research and Development Corporation (URDC), September 2002 (revised December 2002), p. 13, updated 2006

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- *Health benefits* — Public-access greenways provide an environment for people to walk, hike, jog, or bicycle while enjoying the experience of nature or simply a time of solitude and meditative contemplation, all of which contribute to physical and emotional health. Selected greenway segments include fitness equipment along the trail to incorporate into trail use. Studies have shown a direct link between increased use of nonmotorized trails (hiking/biking/ walking) and decreased public health expenditures.<sup>8</sup> Other evidence suggests that nature contact enhances emotional, cognitive and values-related development in children.<sup>9</sup>
  - *Preservation of natural, historic, or scenic features* — Most greenways contain natural, historic, or scenic features that add to the visual character of the community or are a part of the area’s history. As development pressure increases, greenways become an attractive use for the land that provides many benefits for current and future residents and helps to preserve valuable community resources on both public and private land.
  - *Protection of water resources* — Greenways also help to preserve water resources by providing a vegetation buffer between streams and developed areas. Together with Best Management Practices, greenways help to control and purify stormwater runoff and to reduce soil erosion. Greenways can also help to conserve water supply and enhance water quality. Greenways and associated open spaces also provide recharge areas for groundwater aquifers, which are critical to drinking water supplies, especially in times of drought. Water resources are especially important in Adams because no major streams or rivers flow into the county.
  - *Environmental education* — Access to nature through greenways can inspire school classes, nonprofit organizations, and the general public to learn about and care for the environment. Greenways can also provide both basic and advanced research opportunities for plant and wild-life research.
  - *Alternative transportation* — In view of the rising cost of gasoline and other fuels, greenways with trails can also provide an alternative form of transportation between activity centers. In areas where greenways and trails have become an established part of the community, bicyclists, walkers, and runners/joggers often use greenway trails to travel between home, work, school, shops, parks, and other destinations, rather than relying on roads and cars.

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<sup>8</sup> See, for instance, Wang PhD, Guijing, Macera PhD, Caroline A., Scudder-Soucie MEd, Barbara, Schmid PhD, Tom, Pratt MD, MPH, Michael, and Buchner, MD, MPH, David; *Cost-Benefit Analysis of Physical Activity Using Bike/ Pedestrian Trails*; Journal: Health Promotion Practice; April 2005 Vol. 6, No. 2, 174–179

<sup>9</sup> Frumkin, Howard (2003). *Healthy Places: Exploring the Evidence*. American Journal of Public Health, 93 (9).

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- *Potential increased property value*— Studies have documented the increased property value that comes from being located near or adjacent to parks, open space, and greenways.<sup>10</sup> Greenways provide nearby recreation facilities and a knowledge that land preservation is an important value in the community. No studies have found a negative economic effect of greenways on adjacent property. In the vast majority of cases, proximity to a greenway has a positive economic effect on property value. (In a rare few cases, the greenway will have no effect on property value.)

## THE ADAMS COUNTY GREENWAYS PLAN

The *Adams County Greenways Plan* responds to a Pennsylvania executive order to plan and implement a statewide network of open space corridors and state guidelines for each county to prepare individual greenway plans by the end of 2007. The plan also follows the recommendation of the *Adams County Vision for Parks, Recreation, and Open Space*, which calls on the county to identify and promote opportunities for greenway conservation. Additionally, the greenways plan is part of the updated *Adams County Comprehensive Plan*, which will guide the future growth and preservation of the county in the first part of the 21<sup>st</sup> century.

More importantly, the *Adams County Greenways Plan* is being prepared at a critical development “crossroads” for the county. Whereas the past three centuries of European settlement brought a more-or-less orderly growth pattern of compact towns and expansive farmland and open space, today’s regional growth pressures are consuming the county’s undeveloped land in a more random fashion. Development pressure has increased significantly as interstate highways and the relative costs of living have made the county very accessible to the Baltimore/Washington metropolitan area.

Various levels of planning, zoning, and environmental regulations protect county resources to different degrees and with varying degrees of success. Unfortunately, many natural, scenic, and historic amenities in Adams County do not receive enough protection from the threat of development.

In response, the greenways plan serves as an “umbrella” that focuses protection efforts on the most valuable resources of the county, particularly those that are geographically linear in nature. In

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<sup>10</sup> See, for example:

- U. S. Department of the Interior, National Park Service, *Economic Impacts of Protecting Rivers, Trails, and Greenway Corridors*, 1995, 4<sup>th</sup> edition (revised), available at: <http://www.nps.gov/pwro/rtca/econindx.htm>
- Nicholls, Sarah, and Crompton, John L., “*The Impact of Greenways on Property Values: Evidence from Austin, Texas*”, *Journal of Leisure Research*, 3<sup>rd</sup> Quarter, 2005. available at: [http://findarticles.com/p/articles/mi\\_qa3702/is\\_200507/ai\\_n14799204](http://findarticles.com/p/articles/mi_qa3702/is_200507/ai_n14799204)
- Nicholls, PhD, Sarah, “*Measuring the Impact of Parks on Property Values*”, *National Recreation and Park Association*, March 2004, available at: <http://www.nrpa.org/content/default.aspx?documentId=1013>

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addition, the plan offers a blueprint for new trail and road-based recreation and transportation opportunities to meet the needs of a growing population.

The primary purpose of the *Adams County Greenways Plan* is to identify linear corridors of land and water that would best serve the public and the environment as protected open space. Additionally, the greenways plan identifies corridors that could potentially host trails for public recreation, wildlife viewing, lessons in history, and alternative transportation. The desired end result is a system of links and nodes composed of:

- Protected, healthy, streamside and ridgeline habitat corridors.
- Scenic belts of farmland and orchards.
- Additional protection and interpretation of the county's many historic sites.
- A connected network of trails and on-road routes that offer residents and tourists better access to the treasures of Adams County.

The *Adams County Greenways Plan* will be an asset to many stakeholders throughout Adams County. County and state governments will use the plan as part of efforts to develop larger scale greenway systems. Municipal leaders, conservation groups, landowners, and developers will use the plan to help make decisions that will maintain and enhance the high quality of life for county residents. Residents themselves will use the plan to find and explore the historic and cultural riches of the county and to urge elected officials to make improvements for the sake of current and future generations.

Goals and Objectives

The primary goal of the *Adams County Greenways Plan* is ***to enhance existing and future communities in Adams County by preserving and, where appropriate, developing various types of greenways***. The major objectives of the plan that will help to move toward the goal of land conservation include:

1. Preserve and enhance the visual character of Adams County's landscapes.
2. Improve the quality of life for residents and the visitor experience for tourists.
3. Protect water quality and quantity in Adams County.
4. Protect important habitat areas and preserve migration paths for wildlife.
5. Create a network of natural and historic features throughout the county that serves as an educational tool for the public.
6. Enhance recreational and exercise opportunities in appropriate settings.
7. Provide opportunities for nonmotorized transportation links, connections, and pathways in appropriate settings.

Plan Organization

The *Adams County Greenways Plan* includes four sections:

- ***Introduction*** — The introduction lays the foundation for the plan by explaining the concept of greenways, including the types, functions, and benefits of greenways. The section briefly presents the goals and objectives for the plan. The introduction also includes information on the organization of the plan as a guide for the reader. The chapter describes the purpose and information included in each section of the plan. The introduction also includes information on the process of developing the plan, including the roles of the Adams County Office of Planning and Development, the consulting team, and the greenways steering committee.
- ***Current Conditions*** — The second chapter presents background information on the following topics regarding Adams County:
 - Regional Setting
 - History
 - Cultural and Historic Features
 - Scenic Resources
 - Land Use/Population
 - Natural Features
 - Man-Made Corridors
 - Recreation and Open Space Sites
 - Planning Framework
- ***Vision for Adams County Greenways*** — The proposed greenway system itself is presented in chapter 4. The system is composed of various types of greenways presented on a series of maps and described in the chapter. The chapter also includes recommendations on :
- ***Implementation*** — The implementation chapter includes recommendations for actions to fulfill the plan vision presented in the previous chapter. The chapter also includes information on the following topics to assist in implementation:
 - Land preservation techniques
 - Cost estimates
 - Funding
 - Organizational framework

PLAN DEVELOPMENT

The *Adams County Greenways Plan* was developed by the Adams County Commissioners through the Adams County Office of Planning and Development (ACOPD). The *Adams County Vision for Parks, Recreation, and Open Space* recommended the development of a greenway system in the county,¹¹ and the combination of increasing development pressure in the county, increasing interest

¹¹ Urban Research and Development Corporation, et al, for the Adams County Commissioners, December 1997, p. 2–33

in the greenway concept statewide and nationwide, and available funding made the timing right for a greenway study in Adams County. The county retained the consulting team headed by Urban Research and Development Corporation (Bethlehem, PA), assisted by Herbert, Rowland, & Grubic (Gettysburg, PA) and the Rails-to-Trails Conservancy (Camp Hill, PA). In addition, the county formed a steering committee to meet regularly with the county and consultant, exchange and discuss ideas, monitor progress, and help advise during the planning process.

The steering committee met eight times during the course of the project:

- 12 January 2006
- 9 February 2006
- 15 June 2006
- 17 August 2006
- 22 January 2007
- 23 March 2007
- 23 August 2007
- 27 November 2007

The steering committee provided valuable input to the project, including:

- Resources and research for background information.
- Review of the consultant's findings and documentation.
- Ideas and direction for questions posed by the staff and consultant.
- A forum for discussion throughout the planning process.

In addition, the lead consultant (URDC) had several workshop meetings with county staff, and the entire consulting team had two half-day workshops with county staff. The staff and consultants also collaborated to conduct two days of interviews/focus groups, the results of which are summarized in Appendix A of the *Adams County Greenways Plan*.

The plan also offered two sets of public meetings for comment from the general public. Adams County is large, and the issues vary in different parts of the county. Therefore, each of the two times a public meeting was desired, the meeting was offered at three different times in three different locations: the first time when the background information was completed and plan ideas were being formulated, and the second time after the draft plan was available for public comment:

- 11 October 2006 in Gettysburg
- 26 October 2006 in Fairfield
- 1 November 2006 in East Berlin
- 31 January 2008 in Straban Township
- 5 February 2008 in Arendtsville
- 21 February 2008 in New Oxford

Key points expressed during the public meetings included:

- Attendees expressed support for the greenway concept and environmental conservation in general.
- The county should recognize a strong feeling about property rights among landowners. The greenway process should be a cooperative process, with participating landowners doing so.



Public education will play a strong role. Eminent domain should not be used for greenway development.

- The greenway concept is closely related to the idea of water quality, which is especially important in Adams County.



CURRENT CONDITIONS

Many conditions influence the potential for locating greenways in Adams County. The *Adams County Greenways Plan* begins by examining some of the more influential conditions that help define areas suitable for greenway development. Topics include:

- Regional setting
- History
- Cultural and historic features
- Scenic resources
- Land use/population
- Natural features
- Man-made corridors
- Recreation and open space sites
- Planning framework

REGIONAL SETTING

Adams County is located in south-central Pennsylvania, along the Mason-Dixon Line that separates Pennsylvania from Maryland (Map 2.1). The county's northern border lies 20 miles southwest of the state capitol building in Harrisburg. Adams County is a 45-mile drive from downtown Baltimore, Maryland, and 60 miles from the Washington, D.C. beltway (I-95/495). Two major, limited-access highways intersect in Adams County: U.S. 15 connects Harrisburg to the north with Frederick, Maryland to the south. U. S. 30, also known as The Lincoln Highway, spans the county east-west.

Thirty-four municipalities compose Adams County, the most well-known being Gettysburg Borough, the county seat and center of the famous 1863 Civil War battle of the same name. Adams County stretches 26 miles from west to east, 24 miles north to south, and contains 520 square miles.

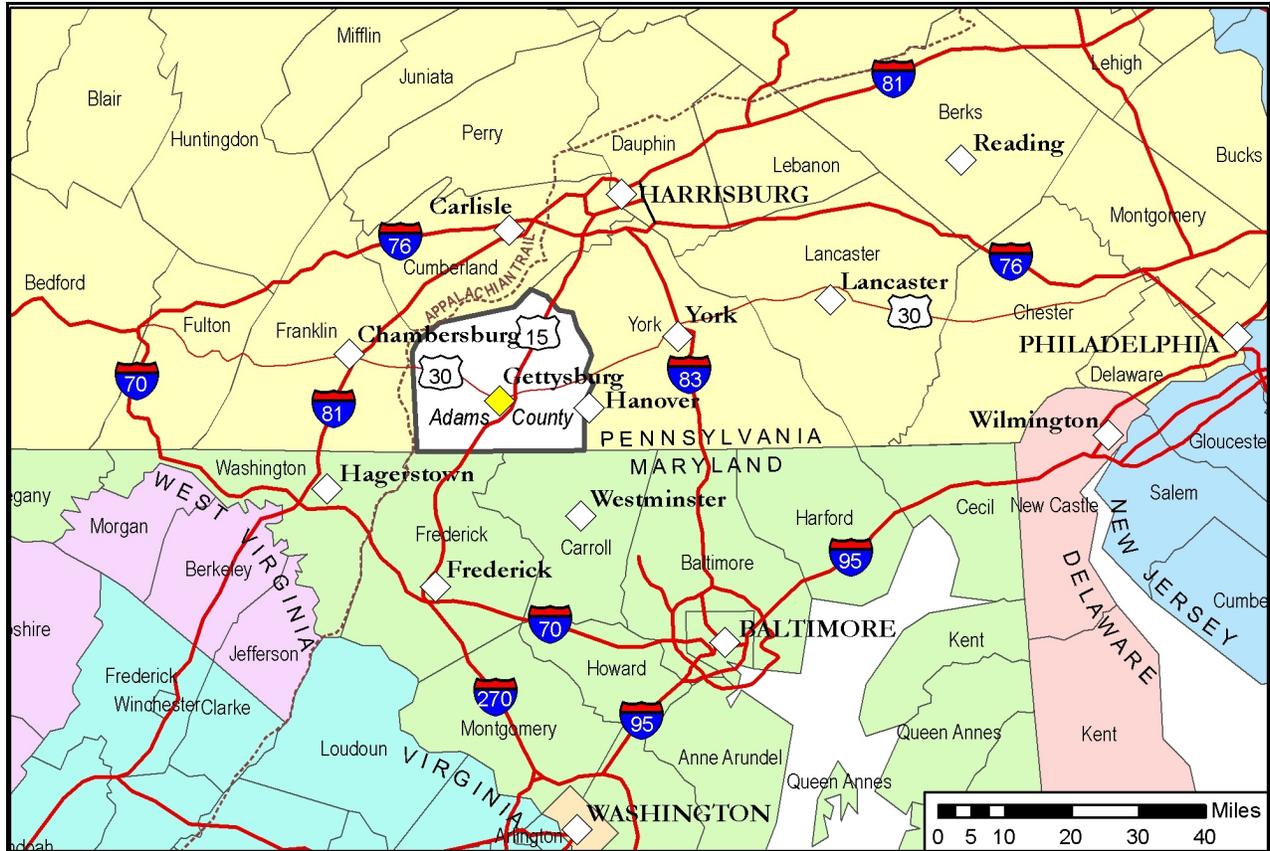
Geologically, Adams County is in the Piedmont Province, a wide belt of rolling hills that serves as a transition between the Eastern Coastal Plain and the Appalachian Mountains. The county's western flank is formed by South Mountain, the northernmost extent of the rugged Blue Ridge Mountains. The Appalachian Trail sits atop South Mountain's 2,000-foot-high ridges, just to the west of Adams County. The 40 inches of average precipitation that fall on Adams County flow into numerous meandering creeks that eventually drain into either the Susquehanna or Potomac Rivers.

HISTORY

Adams County history is defined by the famous Battle of Gettysburg, the turning point of the American Civil War. Yet the county has so much more to offer students of history than a singular event. A cursory look can only scratch the surface and will not do justice to any one period, but can only provide the reader with a general concept of the county's rich past.



Map 2.1
Regional Location



Source: URDC, 2006

Indian and Pre-European Settlement

Adams County was once the domain of the Lenape people, commonly referred to as the Delaware Indians by 18th-century colonists. The Lenape were a subset of the larger Algonquin tribe that inhabited the Mid-Atlantic Region. In the pre-European period, a great majority of the land which now comprises Adams County was dense forest. To supplement small-scale agriculture and hunting, Native Americans in what is now Adams County possessed a valuable commodity for trade: the rhyolite stone found on South Mountain. Ideal for tools and arrowheads, the Lenape mined, sculpted, and traded rhyolite from a site in the Snaggy Ridge area of South Mountain.¹²

¹² John Milner Associates, et al, *Adams County Comprehensive Plan*, 1991.



European Settlement

European settlement of south-central Pennsylvania began in the 18th century, in response to the Penn family's 1718 purchase of all land between South Mountain and the Susquehanna River. The Penn acquisition from the Lenape tribe augmented the original British land grant awarded to William Penn in 1681. The Penn's new western territory was officially part of Chester County, followed by Lancaster County in 1729, and York County in 1749.¹³ Germans and Scotch-Irish led the overland migration to the fertile Gettysburg Plain from eastern ports in the 1730s. British Catholic settlers also arrived from the south, fulfilling an earlier grant to Cecilius Calvert, Lord Baltimore, by the king of England in 1632.

The exact boundary between Calvert's Maryland territory and Penn's namesake, Pennsylvania, soon became a contested issue. Tension between settlers of the two colonies was amplified by religious differences, with the Catholics of Maryland and Protestants of Pennsylvania often echoing major arguments taking place in Europe at the time. Descendants of Penn and Calvert found it necessary to pursue a major boundary agreement and land survey and, in 1763, hired renowned surveyors Charles Mason and Jeremiah Dixon to perform the arduous east-west boundary survey. By 1768, the Pennsylvania-Maryland border was established, ending decades of sometimes violent animosity between settlers. Today, the line continues to bear the name Mason-Dixon in tribute to the hard work of the two surveyors.



Figure 4Fig. 2.1 — Historic Pondtown Mill Bridge
(see Table 2.1)

Violence also came to the area in the form of Indian raids. Some Lenape people, in reaction to European settlement, captured and massacred white settlers, especially in the vicinity of South Mountain. The mountain did, however, lessen the frequency of raids by natives, who were largely based in the Cumberland Valley to the west and north.¹⁴ Indian raids peaked from 1755 to 1764, the period known as the French and Indian War. (Battles between the British and French in Pennsylvania were largely limited to the Pittsburgh and Erie regions.)

In the 1770s, news of the events which led to the American Revolution were often slow to reach what was then York County and still the western frontier of the colonies. Even then, growing animosity toward the British throne was present at community gatherings. When the actual fighting of the Revolution began, York County eagerly sent companies of men to fight the British. Most troops from the area fought in the battles that took place in Eastern Pennsylvania and New Jersey.

¹³ Loose, John Ward Willson. *History of Lancaster County*. <http://www.lancasterhistory.org>, 2003.

¹⁴ History of Cumberland and Adams Counties. Warner, Beers & Co., 1886. <http://www.rootsweb.com>

One volunteer company, however, organized in York and marched southwestward through Hanover, Littlestown, Taneytown (MD), and Frederick (MD) for service in southern battles. Among the 800 marching men was James Gettys, who would later establish a noteworthy town along Marsh Creek.¹⁵ American independence would soon be won.

The 19th century began with the carving of a new county out of the larger York County, named after the second President of the United States, John Adams. In the same year, the 1800 U.S. Census counted 13,172 residents in the newly formed Adams County. In the period of the 19th century before the Civil War, settlers and farmers transformed Adams County into the agricultural landscape that largely exists today. Grain was the original cash crop, processed at streamside grist mills that, in 1858, numbered as many as forty¹⁶. The gradual decline in milling in the late 19th century gave way to other forms of agriculture, including dairy farming and the fruit farming that gave part of the northwestern portion of the county its “Fruit Belt” nickname. The 19th century also saw the growth of many villages and boroughs. In fact, only eight of Adams County’s villages or boroughs were established prior to 1800, and very few (including Carroll Valley) were established in the 20th century.

The Battle of Gettysburg



Figure 5 Fig. 2.2 — View from Little Round Top to the west, showing the statue of Major General Gouverneur K. Warren of the Union Army; The entire Gettysburg battlefield is now part of the Gettysburg Battlefield National Historic District.

In June 1863, the third year of the Civil War, General Robert E. Lee’s Army of Northern Virginia advanced into Pennsylvania, emboldened by several victories over Union armies in Virginia (Fig. 2.2). Lee’s army raided Adams County stores and farms for desperately needed food and supplies. The Union Army engaged the Confederates on July 1st approaching Gettysburg from Cashtown. The first day of battle, in the fields north and northwest of Gettysburg, brought a Confederate victory and a Union retreat to areas south of the borough. The second day of battle was the deadliest, as Union and Confederate battled for control of a ‘U’-shaped arrangement of key geographic features

including Culp’s Hill, Cemetery Hill, Cemetery Ridge, Little Round Top, and Big Round Top, all located south of Gettysburg Borough. On the third day, the Union army secured control of Culp’s Hill, firmly establishing a solid line of Union troops along the high ground. Confederate attempts to break the center of the line failed, as did an attempt to drive into the Federal rear in the East

¹⁵ History of Cumberland and Adams Counties. Warner, Beers & Co., 1886. <http://www.rootsweb.com>

¹⁶ *Adams County Comprehensive Plan*, op. cit.

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Cavalry field east of Gettysburg. General Lee and the Confederate troops retreated to Virginia, defeated. The three days of fighting left more than 51,000 soldiers dead, wounded, or missing. The Soldiers National Cemetery became the final resting place of many, and the dedication of the cemetery at Gettysburg in November 1863 was the occasion for President Lincoln's famous Gettysburg Address.

Adams County took decades to recover from the fierce battle. The county economy remained largely agricultural, while major industries grew in neighboring counties. The year 1889 saw the completion of the Western Maryland Railroad, which today still passes through Fairfield, Gettysburg, and New Oxford boroughs. Western portions of the railroad were built on the grade of the Tapeworm Railroad, an earlier attempt by Senator Thaddeus Stevens to link his iron mines on South Mountain to Philadelphia markets. Likewise, the segment from Gettysburg to Hanover had been built in 1858, and was used by President Lincoln in 1863 when he traveled to Gettysburg to give his famous address.

## **20<sup>th</sup> Century and Beyond**

In the 20<sup>th</sup> century, with automobiles available to more and more residents of Adams County, paved highways soon outnumbered railroads. The Lincoln Highway, U.S. 30, became the principal east-west highway of Pennsylvania, connecting Philadelphia with Pittsburgh and points beyond. Restaurants, hotels, and service stations took advantage of the ever increasing traffic. While the completion of the Pennsylvania Turnpike in 1945 usurped the role of the Lincoln Highway as the state's primary east-west artery, U.S. 30 continues to be the primary east-west thoroughfare of Adams County. U.S. 15, the main north-south route in the county, was moved from colonial-era roads onto a newly constructed, four-lane expressway in the 1970s. Adams County motorists could now reach Harrisburg in less than a half hour and could reach Baltimore or Washington, D.C. in slightly more than one hour.

New accessibility brought an era of rapid growth to Adams County. In the 1970s, the county population increased by 20%, the largest decade increase recorded in Adams County since the decennial census began. Similar rates of growth have taken place in succeeding decades. Much of the population increase and land consumption has been the result of in-migration from the Baltimore/Washington metropolitan area and, to a lesser extent, the Harrisburg region. In Maryland, real estate prices have soared while strict planning regulations have made development more challenging. As a result, many developers and home buyers have migrated into south-central Pennsylvania. Some newcomers to Adams County have retained jobs in Maryland, Washington, D.C., and Virginia, sacrificing short commutes for less expensive, more rural residences.

In the 21<sup>st</sup> century, with unprecedented development taking place in Adams County, many residents and local leaders want to retain the natural, agricultural, and historical resources that have always given the county a special character. The *Adams County Greenways Plan* joins several other

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planning initiatives underway that aim to protect important resources while still allowing for responsible development and economic growth throughout the county.

## **CULTURAL AND HISTORIC FEATURES**

One of the primary benefits of a greenway system is to showcase important cultural and historic sites, particularly along steams and historic roadway corridors. Greenways can also connect nodes of human activity and settlement and can include road-based touring routes as parts of a system that allows residents and visitors to experience Adams County’s rich cultural heritage and history. In other settings, passive types of linear greenways may visually connect historic sites and communities, thereby preserving vital elements of Adams County’s distinctive rural landscapes.

Greenways can also link sites that are important to everyday life, such as schools, residential areas, and shopping areas. A complete inventory of Adams County’s cultural and historic resources is beyond the scope of the *Adams County Greenways Plan*. However, the following section lists and maps the county’s most notable historic features and modern day hubs of activity.

### **National Register of Historic Places**

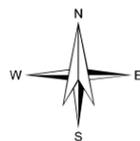
The National Register of Historic Places (NRHP) is an inventory of buildings, sites, structures, objects and districts that are significant to American history and culture. The NRHP coordinates public and private efforts to identify and protect significant sites. The NRHP was authorized by the National Historic Preservation Act of 1966 and is administered by the National Park Service. Properties are initially reviewed on a statewide basis, then may be “deemed eligible” for inclusion in the NRHP by the State Historic Preservation Office (SHPO). After some additional research and documentation, properties that are “deemed eligible” may become formally listed on the NRHP.

In accordance with Section 106 of the National Historic Preservation Act, impacts on sites that are both listed and deemed eligible must be carefully reviewed in the event that a federally funded or licensed project is proposed nearby. Within sites or districts listed in the NRHP, owners of income-producing properties that contribute to the historic character of the resource are eligible for federal income tax credits for property restorations. The program is voluntary. Inclusion of a site or district in the NRHP does not mandate compliance with federal preservation standards for privately financed projects. In order for a property owner to use the tax credit, the SHPO must certify that proposed restoration work meets federal historic preservation standards.

As of 2006, the NRHP contains 29 sites and districts in Adams County (Map 2.2, Table 2.1). In addition, 81 sites in the county have been deemed eligible for listing in the register. Historic sites often provide significant nodes in a greenway network, helping to present the area’s history and cul-

12,500 0 12,500 Feet

1 inch equals 12500 ft.  
GIS data provided by Adams County Department of Planning & Development, 2005.



# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania

## Historic Features

### MAP 2.2

- National Register Sites**
  1. Abbott, John, House
  2. Conewago Chapel
  3. Black Horse Tavern
  4. Bridge over Marsh Creek
  5. Eisenhower National Historic Site
  6. Sachs Covered Bridge
  7. Fairfield Inn
  8. Carbaugh Run Rhyolite Quarry Archaeological Site
  9. Adams County Courthouse
  10. Dobbin House
  11. Gettysburg Armory
  12. Lutheran Theological Seminary - Old Dorm
  13. Pennsylvania Hall at Gettysburg College
  14. Sheads House
  15. Jack's Mountain Covered Bridge
  16. Lower Marsh Creek Presbyterian Church
  17. Heikes Covered Bridge
  18. Pondtown Mill Bridge
  19. Zeigler, John, Farmhouse
  20. Cline's Church of the United Brethren in Christ
  21. Spangler/Benner Farm
  22. John's Burnt Mill Bridge
  23. Great Conewago Presbyterian Church
  24. Wirts House
- National Register Districts**
  25. Gettysburg National Military Park & Historic District
  26. Rock Creek / White Run Union Hospital Complex
  27. East Berlin Historic District
  28. Fairfield Historic District
  29. Hunterstown Historic District
- Other Significant Historic Places**
  30. Round Barn
  31. Yellow Hill Cemetery
  32. Menallen Quaker Church
  33. McAllister Mill
  34. Wright House
  35. Latimore Quaker Church
  36. Caledonia
- Early Land Grants**
- 19th Century Turnpikes**
- Colonial Settlement Roads**
- Abandoned Railroads**
- Lincoln Highway Heritage Corridor**
- Journey Through Hallowed Ground Corridor**

NOTE: Historic Fruitbelt shown on Map 12.

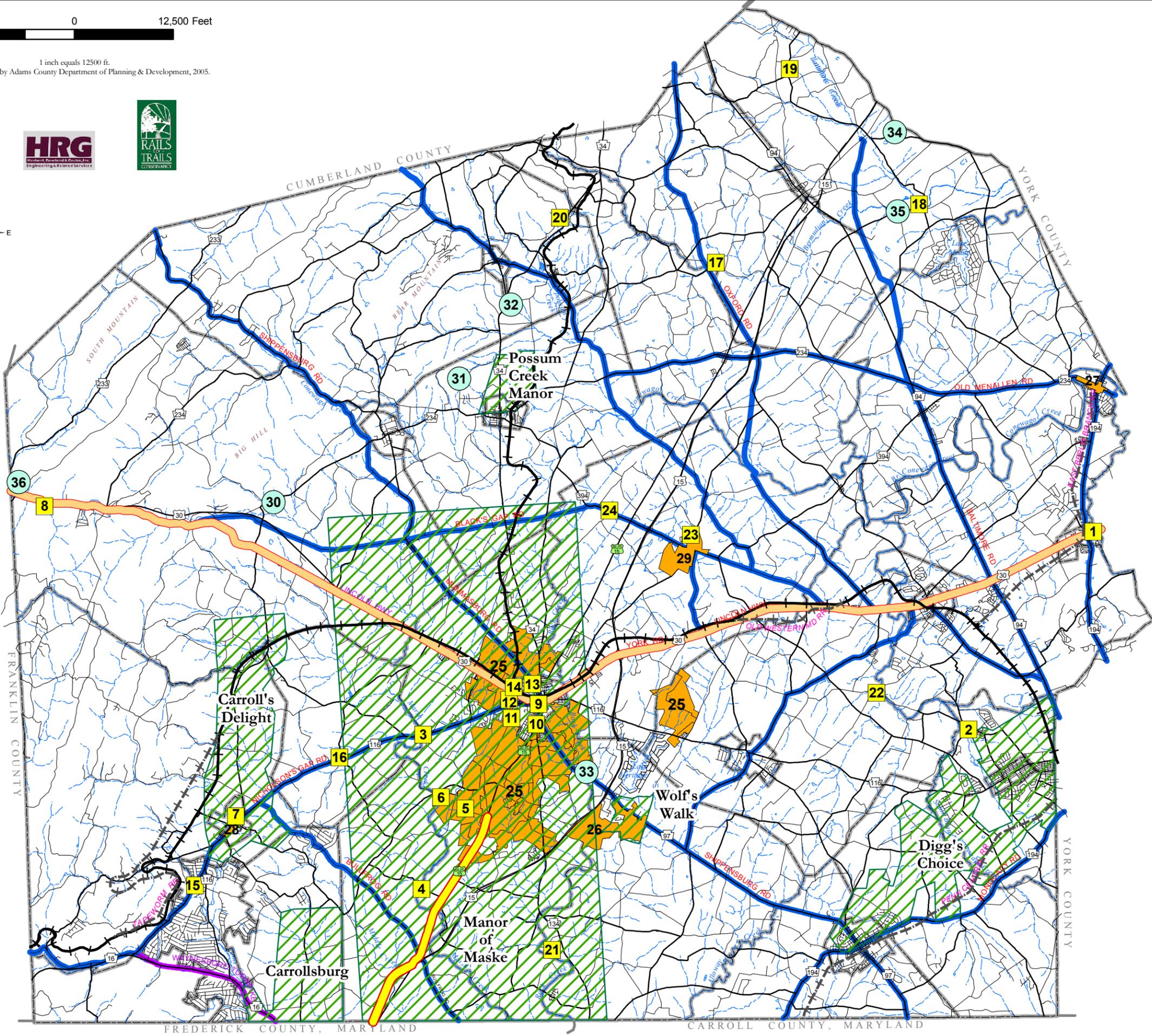


Table 2.1  
**Sites and Districts Listed on the National Register of Historic Places**

| Map #              | Property Name                                                         | Location                                        | Municipality                                                    |
|--------------------|-----------------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------|
| Historic Sites     |                                                                       |                                                 |                                                                 |
| 1                  | Abbott, John, House                                                   | E. King St. / Country Club Rd.                  | Abbottstown Borough                                             |
| 2                  | Conewago Chapel                                                       | 3 miles northwest of Hanover                    | Conewago Township                                               |
| 3                  | Black Horse Tavern                                                    | Fairfield Rd. Rte. 116                          | Cumberland Township                                             |
| 4                  | Bridge over Marsh Creek                                               | L.R. 01002                                      | Cumberland Township                                             |
| 5                  | Eisenhower National Historic Site                                     | 200 Eisenhower Farm Lane                        | Cumberland Township                                             |
| 6                  | Sachs Covered Bridge                                                  | Water Works Rd. T-326                           | Cumberland Twp., Freedom Twp.                                   |
| 7                  | Fairfield Inn                                                         | Main Street                                     | Fairfield Borough                                               |
| 8                  | Carbaugh Run Rhyolite Quarry Site                                     |                                                 | Franklin Township                                               |
| 9                  | Adams County Courthouse                                               | Baltimore Street                                | Gettysburg Borough                                              |
| 10                 | Dobbin House                                                          | 89 Steinwehr Drive                              | Gettysburg Borough                                              |
| 11                 | Gettysburg Armory                                                     | 315 W. Confederate Avenue                       | Gettysburg Borough                                              |
| 12                 | Lutheran Theological Seminary – Old Dorm                              | 111 N. West Confederate Ave.<br>Seminary Bldg.  | Gettysburg Borough                                              |
| 13                 | Pennsylvania Hall, Gettysburg College                                 | Gettysburg College Campus                       | Gettysburg Borough                                              |
| 14                 | Sheads House                                                          | 331 Buford Avenue                               | Gettysburg Borough                                              |
| 15                 | Jack's Mountain Covered Bridge                                        | L.R. 01053                                      | Hamiltonban Township                                            |
| 16                 | Lower Marsh Ck. Presbyterian Church                                   | L.R. 01002                                      | Highland Township                                               |
| 17                 | Heikes Covered Bridge                                                 | T-585                                           | Huntington Township                                             |
| 18                 | Pondtown Mill Bridge (Fig. 2.1)                                       | L.R. 01009                                      | Latimore Township                                               |
| 19                 | Zeigler, John, Farmhouse                                              | 1281 Mountain Road                              | Latimore Township                                               |
| 20                 | Cline's Church of the United Brethren in Christ                       | Cline's Church Road T-394                       | Menallen Township                                               |
| 21                 | Spangler/Benner Farm                                                  | 230 Benner Road                                 | Mount Joy Township                                              |
| 22                 | John's Burnt Mill Bridge                                              | T-428                                           | Mount Pleasant Township                                         |
| 23                 | Great Conewago Presbyterian Church                                    | Red Bridge Road L.R. 01005<br>(Hunterstown)     | Straban Township                                                |
| 24                 | Wirts House                                                           | 798 Shrivvers Corner Road                       | Straban Township                                                |
| Historic Districts |                                                                       |                                                 |                                                                 |
| 25                 | Gettysburg Natl. Military Pk. & Gettysburg Battlefield Historic Dist. |                                                 | Cumberland Twp., Gettysburg Bo.,<br>Highland Twp., Straban Twp. |
| 26                 | Rock Creek/White Run Union Hospital Complex                           | Baltimore Pike, Goulden Road, White Church Road | Cumberland Township, Mount Joy Township                         |
| 27                 | East Berlin Historic District                                         | King St., South & North Ave.,<br>Locust Street  | East Berlin Borough                                             |
| 28                 | Fairfield Historic District                                           | Landis Dr., Steelman St,<br>Wortz Dr            | Fairfield Borough                                               |
| 29                 | Hunterstown Historic District                                         | PA 394 & Granite Station Road (Hunterstown)     | Straban Township                                                |

Source: Pennsylvania Historical and Museum Commission, 2006

ture, which, in the case of Adams County, is significant. In addition to the obvious contribution of the 29 listed sites, some of the 81 eligible sites for possible inclusion in the greenway network are:

- Northern Adams County Fruit Belt
- Cashtown Historic District
- McKnightstown/Flohrs Church Historic District
- Deardorff Mill Complex
- Pleasant Grove School
- Gettysburg Tile Works

## Historic Land Grants

The earliest European settlements in Adams County were commonly the result of land grants from British royalty. Most famously, land in what is now Adams County was awarded to William Penn, a Protestant (Quaker), and Cecil Calvert, a Catholic. The extent of the two land grants conflicted in the vicinity of 39 degrees, 43 minutes north latitude, eventually requiring the surveying of the Mason-Dixon Line between Pennsylvania and Maryland. Particular grants and manors from colonial-era Adams County include the following:

- Carroll's Delight (Fig. 2.3), centered along present-day Carroll's Tract Road between Fairfield Borough and the village of Ortanna.
- Carrolsburg, constituting much of present-day Liberty Township along Tract Road.
- Digg's Choice, a series of large tracts on the north side of present-day PA 194 between Littlestown and McSherrystown.
- Manor of Maske, a large Penn family grant composing most of present-day Freedom and Cumberland Townships.
- Possum Creek Manor, approximately one square mile along the north edge of Biglerville.



**Fig. 2.3 — Carroll's Delight;** One of the original land grants from British royalty, the picturesque valley is a classic example of a landscape greenway in private ownership.

---

## Historic Linear Features

The *Adams County Comprehensive Plan* of 1990 identifies linear features that played important roles in the history and development of what is now Adams County. Among the key linear features are the area's oldest roads and settlement paths as well as routes traveled by soldiers in the Battle of Gettysburg. Historic traces can and should become an integral part of the countywide greenway network. Major linear historic features include several different types of roads, as discussed below.

- Colonial Era Roads

- *Black's Gap Road* (1747), from Cashtown, through Hunterstown, to New Oxford. Currently Hilltown Road, Goldenville Road, PA 394, and Swift Run Road.
- *Nicholson's Gap Road* (1748), from Gettysburg, through Fairfield, to Monterey Gap. Currently PA 116, Jacks Mountain Road, and Old Waynesboro Road.
- *Monocacy Road* (1740), from Hanover, through Littlestown, to Taneytown, MD. Currently PA 194.
- *Shippensburg Road* (1770), from Menallen Township, through Gettysburg, to Littlestown. Currently Shippensburg Road, PA 234, Winding Road, Mummasburg Road, and PA 97.
- *Oxford Road* (1754), from Huntington Township to Mount Pleasant Township. Currently Oxford Road, Red Bridge Road, Beaver Run Road, and Brickcrafters Road.
- *Baltimore Road* (1770), from Deardorff's Mill in Latimore Township, to Hanover. Currently Baltimore Road and PA 94.
- *Old Menallen Road* (1750), from Biglerville to East Berlin. Currently PA 234.

- 19<sup>th</sup> Century Turnpikes

- *Gettysburg-Chambersburg Turnpike*, present-day US 30
- *Gettysburg-York Turnpike*, present-day US 30
- *Gettysburg-Baltimore Turnpike*, present-day PA 97
- *Carlisle-Baltimore Turnpike*, present-day PA 94
- *Waynesboro Turnpike*, present-day PA 16
- *Mummasburg Turnpike*, present-day Mummasburg Road.
- *Hanover Turnpike*, present-day PA 194

- Old Railroad Alignments

- *Tapeworm Railroad*, along Jacks Mountain and Toms Creek in Hamiltonban Township
- *Western Maryland Railroad*, where portions south of US 30 were relocated to the current alignment north of US 30 in Straban Township.

- *Penn Central Railroad*, paralleling Route 194 from Taneytown, MD to Hanover, PA. (Fig. 2.4)
- *East Berlin Branch*, between East Berlin and New Oxford boroughs.

- 20<sup>th</sup> Century Roads

- *Lincoln Highway*, present-day US 30 and old US 30. Before the Pennsylvania Turnpike was completed in 1945, Lincoln Highway was the primary east-west travel route through the state. The road from Adams County through Westmoreland County is now designated as one of Pennsylvania's 12 heritage parks, paying particular attention to the gas stations, taverns, hotels, and roadhouses of the early automobile era. Abbottstown serves as the eastern gateway to the Lincoln Highway Heritage Corridor ([www.lhhc.org](http://www.lhhc.org)), and the corridor includes at least 10 significant sites within Adams County.<sup>17</sup>



**Figure 7** Fig. 2.4 — Portion of the abandoned and dismantled former Penn Central Railroad right-of-way between Littlestown and McSherrystown; Former railroad rights-of-way are commonly reused as trails within portions of greenway alignments.

The management plan for the LHHHC identifies a five-mile section of the highway from east of McKnightstown through Cashtown to the top of South Mountain as one of the least altered, most significant sections of the original road. At the end of World War I, the military was very interested in the quality and availability of roads for troop movements. In 1919, the U.S. Army mobilized a transcontinental convoy to test the efficiency of American roads for national defense. The convoy used the Lincoln Highway for most of the trip from Washington, D. C. to San Francisco. Among the soldiers in the convoy was a young officer who had served at Camp Colt in Gettysburg—Dwight D. Eisenhower—who was so affected by his journey that, when he became President of the United States, he supported and eventually was able to sign the authorization for the Interstate highway system.<sup>18</sup>

- Other Historic Routes

- *Routes used by Civil War Troops*. Outside the confines of the Gettysburg battlefields, the most significant movement of troops occurred along what is now the Lincoln Highway. Confederates used the route for several days traveling between Cashtown and Gettysburg and were first engaged by Union troops along the road. Throughout the Gettysburg campaign, troops also used other roads leading into Gettysburg, including Carlisle,

<sup>17</sup> Information on the Adams County sites can be found at <http://www.lhhc.org/museum/adams.asp#>.

<sup>18</sup> National Park Service, U. S. Department of the Interior, *Lincoln Highway Special Resource Study / Environmental Assessment*, May 2004, p. 34, available at: <http://planning.nps.gov/document/lihisrsea.pdf>



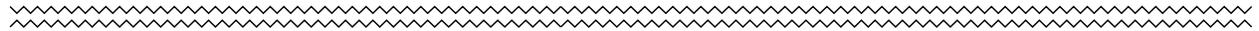
- Harrisburg, Taneytown, Hanover, Baltimore, and Emmitsburg Roads. After the Battle of Gettysburg, General Lee and his troops retreated southwestward through Adams County. At the small community of Blue Ridge Summit, near Monterey Gap, Lee encountered additional Union resistance, leading to the fierce but relatively unknown Battle of Monterey. Following the battles, many of the war-injured were put on trains at Gettysburg or near Hospital Woods (now Straban Township) to return home. Tracks were south of present-day U. S. 30, near Guldens Station. Today, the Pennsylvania Department of Community and Economic Development (DCED) is helping Pennsylvanians understand the importance of many of the roads in and around Gettysburg and other areas through its *Civil War Trails* initiative.
- *1863 Lanes*. The National Park Service’s general management plan, as well as the *North Gettysburg Trail Plan*, has identified horse-and-carriage thoroughfares used during the time of the Battle of Gettysburg. The routes, used for both civilian and military purposes, could provide the basis for a localized greenway network.
  - *Underground Railroad*. Adams County contains homes, churches and other buildings which offered shelter for those escaping the horrors of slavery in the South. From the late 1700s through the Civil War, escapees generally followed the Harrisburg Road and Monocacy Road northward out of Maryland. In Adams County, former slaves typically moved eastward toward Philadelphia, where jobs were plentiful and more progressive attitudes prevailed. Some, however, chose to settle in Adams County. The Yellow Hill Cemetery in Butler Township was one of the most significant African-American cemeteries in south-central Pennsylvania before most of the bodies were reinterred.. Other important Underground Railroad sites in Adams County include McAllister’s Mill, Menallen Friends Meeting House, and the Wright Homestead in Quaker Valley.
  - *Journey Through Hallowed Ground*. The U. S. Congress has designated a stretch of the Piedmont region between Monticello, VA and Gettysburg as the Journey Through Hallowed Ground National Heritage Area (JTHGNHA) due to its richness of historic, cultural and scenic features. In Adams County, U. S. Business Route 15, sometimes referred to as the Blue-Gray Highway, serves as the central spine of the JTHG (Fig. 2.5). The nonprofit group that oversees the effort hopes to increase heritage tourism, land conservation, “smart growth” planning, and scenic road provisions along the corridor.

Congress concluded that the region holds more American history than any other region in the country, including:

- Nine Presidential homes:
 

|                                           |                          |
|-------------------------------------------|--------------------------|
| * Ash Lawn-Highland and Oak Hill (Monroe) | * Monticello (Jefferson) |
| * Kennedy’s country home                  | * Montpelier (Madison)   |
| * Camp Hoover                             | * Pine Knot (Roosevelt)  |
| * Eisenhower National Historic Site       | * Camp David             |
| * Montebello (Taylor)                     |                          |





- 73 National Historic Districts
- The largest collection of Civil War Battlefields
- Significant sites from the French and Indian War, the Revolutionary War, and the War of 1812
- 15 historic Main Street communities
- Numerous scenic roads, rivers and landscapes

The Journey Through Hallowed Ground Partnership is a public-private partnership working collaboratively with local, regional, and national partners to provide opportunities for interpretive historic, heritage education, and recreational programs that celebrate the American heritage found in the JTHG region. The NHA designation is a national honor that will expand opportunities for economic development, particularly in the heritage tourism industry, and for educational programs for all ages. The JTHG resource map includes many historic sites throughout Adams County, such as the Adams County Winery, Cashtown Inn, Arendtsville, the Fruitbelt, and the Round Barn.

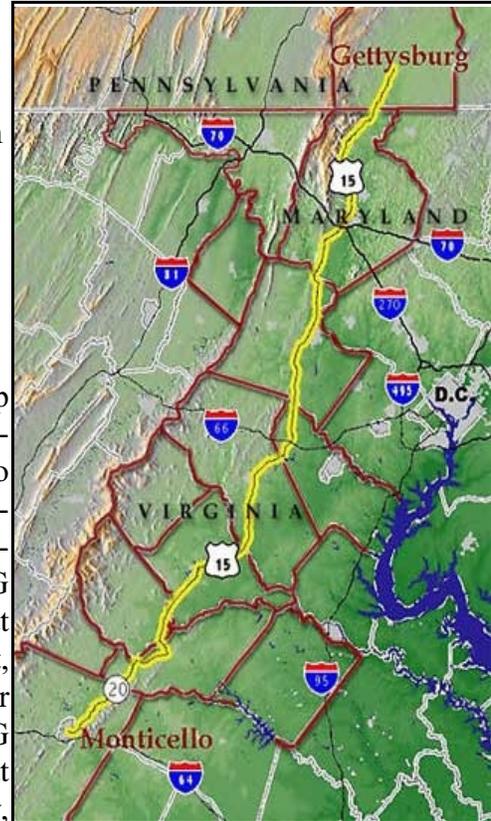


Fig. 2.5 — The Journey Through Hallowed Ground

• Central Place Theory and the Thirteen Spokes

The Gettysburg area is also often cited as a classic example of Central Place Theory. Developed by German geographer Walter Christaller, Central Place Theory attempts to explain the size and spacing of human settlements. Although many factors must be considered in analyzing the location of each village or city, Christaller began his work by looking at settlements only as markets for goods and services.

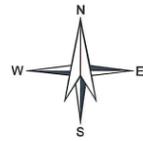
Using Christaller’s simple economic model, Gettysburg developed as a classic central place, and small villages grew all around the borough. Roads connected each village to Gettysburg, a little less than one-half day’s wagon ride away, making a trip to town a full day and still allow a bit of time to accomplish one’s business. The resulting development pattern is still evident today, resembling 13 spokes on a wheel emanating from Gettysburg (Map 2.3):

- |                                           |                                         |
|-------------------------------------------|-----------------------------------------|
| — PA 34 to Biglerville                    | — PA 134 to Barlow                      |
| — Table Rock Road to Table Rock           | — U. S. Business Route 15 to Fairplay   |
| — U. S. Business Route 15 to Heidlersburg | — Millerstown Road/Pumping Station Road |
| — Hunterstown Road to Hunterstown         | — PA 116 to Fairfield                   |
| — U.S. 30 to New Oxford                   | — U.S. 30 to McKnightstown              |
| — PA 116 to Bonneauville                  | — Mummasburg Road to Mummasburg         |
| — PA 97 to Two Taverns                    |                                         |



12,500 0 12,500 Feet

1 inch equals 12500 ft.  
GIS data provided by Adams County Department of Planning & Development, 2005.



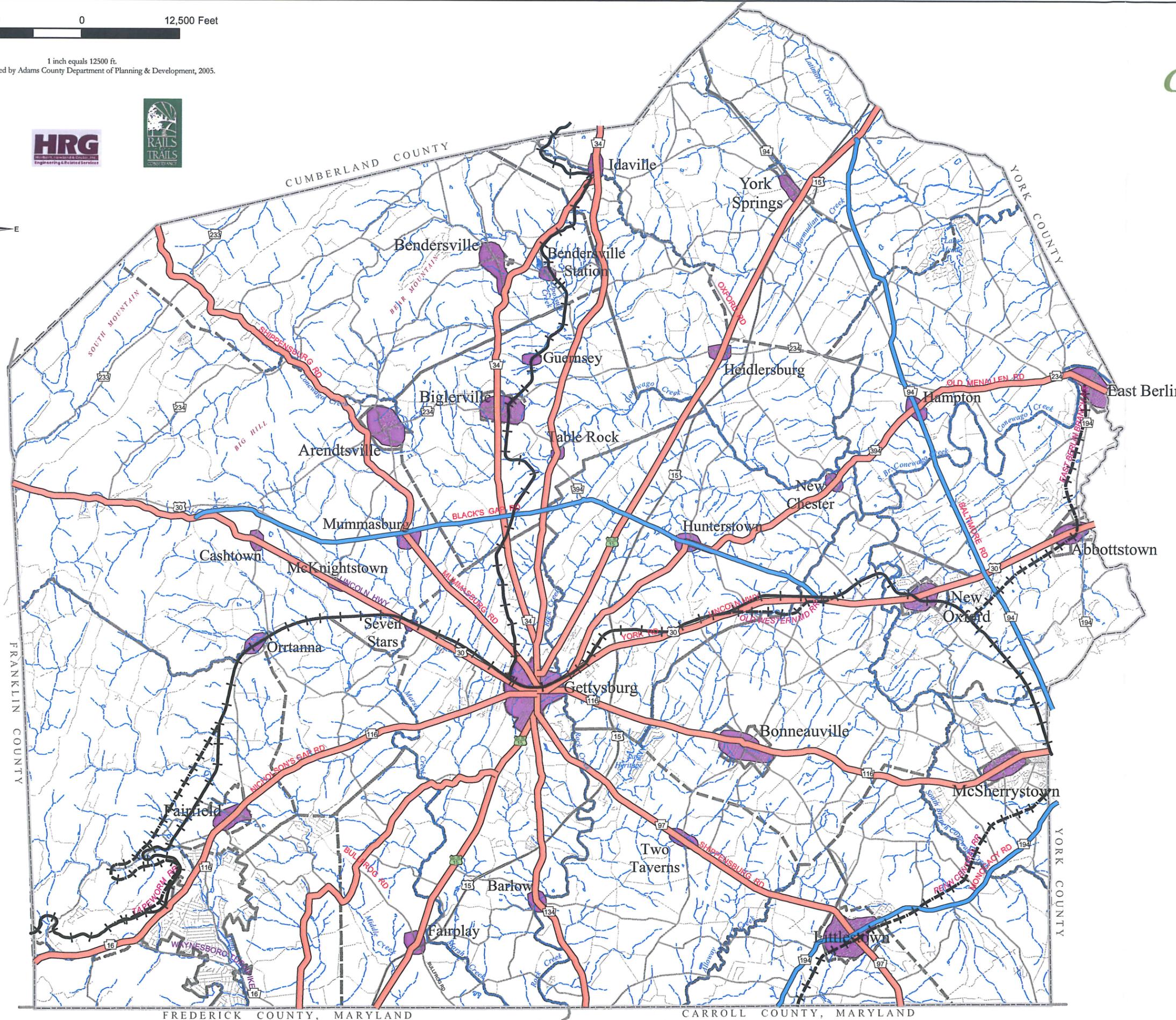
# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania

## 13 Spokes, Central Place

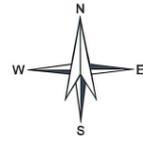
### MAP 2.3

-  Historic Roadways (13 spokes)
-  Other Historic Roads
-  Villages



12,500 0 12,500 Feet

1 inch equals 12500 ft.  
GIS data provided by Adams County Department of Planning & Development, 2005.



# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania

## Cultural Facilities

### MAP 2.4

#### Schools & Colleges

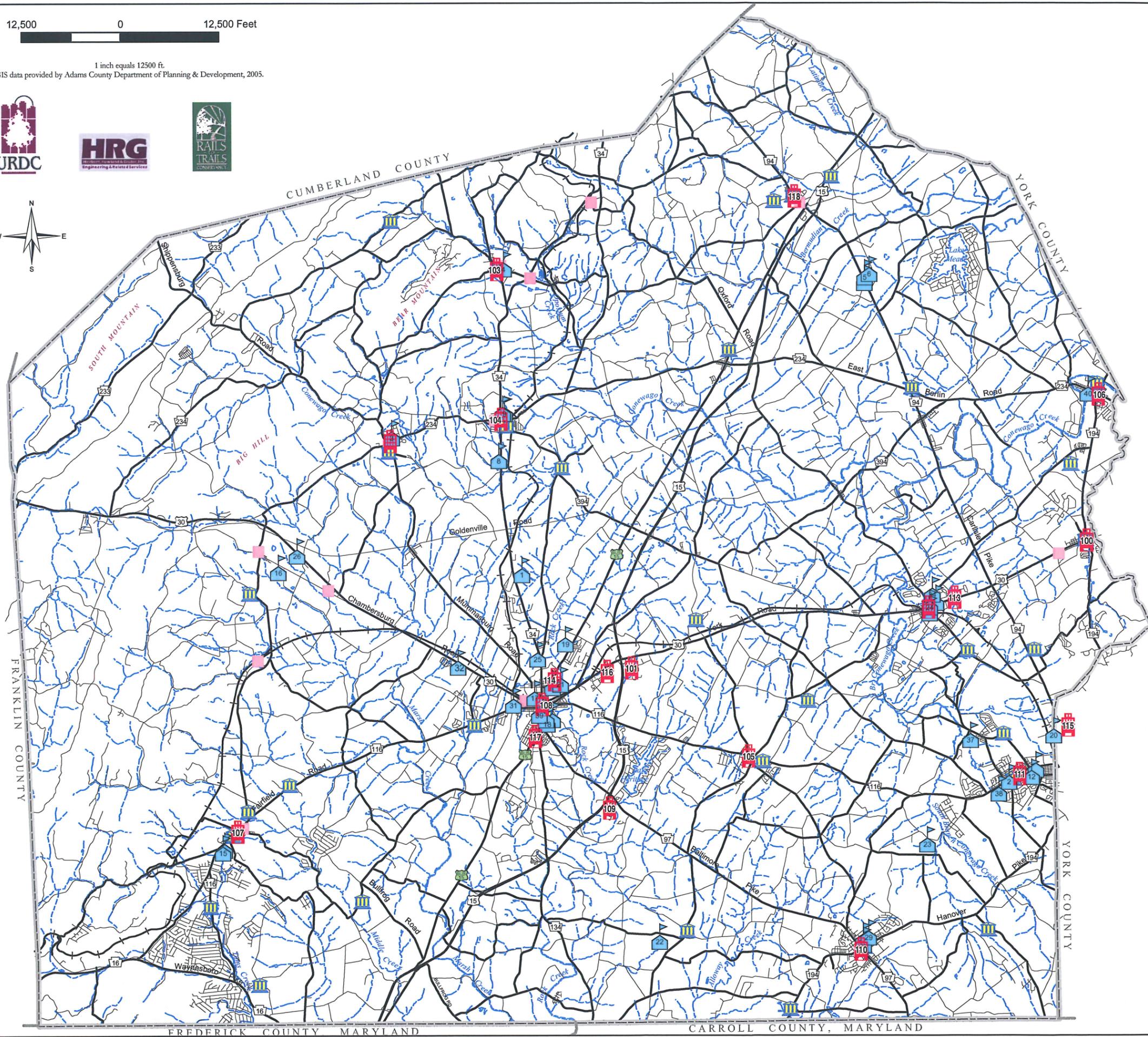
- |                                         |                                          |
|-----------------------------------------|------------------------------------------|
| 1. Adams County Christian Academy       | 21. Harrisburg Area Community College    |
| 2. Annunciation School                  | 22. Hoffman Homes                        |
| 3. Arendtsville Elementary School       | 23. Hostetters Meeting House             |
| 4. Bendersville Elementary School       | 24. Immaculate Conception School         |
| 5. Bermudian Springs Elementary School  | 25. James Getty Elementary School        |
| 6. Bermudian Springs High School        | 26. Jesus Is Lord Christian Academy      |
| 7. Bermudian Springs Middle School      | 27. Kefauver Elementary School           |
| 8. Biglerville Elementary School        | 28. Lincoln Elementary School            |
| 9. Biglerville High School              | 29. Littlestown High School              |
| 10. Biglerville Middle School           | 30. Littlestown Middle School            |
| 11. Conewago Township Elementary School | 31. Lutheran Theological Seminary        |
| 12. DeLone Catholic High School         | 32. Manito Day Treatment Service         |
| 13. Eisenhower Elementary School        | 33. New Oxford Elementary School         |
| 14. Fairfield Elementary School         | 34. New Oxford Junior/Senior High School |
| 15. Fairfield High School               | 35. Oxford Christian Academy             |
| 16. Franklin Township Elementary School | 36. Rolling Acres Elementary School      |
| 17. Gettysburg College                  | 37. Sacred Heart School                  |
| 18. Gettysburg Middle School            | 38. St. Joseph Academy Preschool         |
| 19. Gettysburg High School              | 39. St. Francis Elementary School        |
| 20. Hanover Mennonite School            | 40. Zwingli United Church of Christ      |

#### Shopping Destinations

- 100. Abbottstown Business District
- 101. Adams Commerce Center
- 102. Arendtsville Business District
- 103. Bendersville Business District
- 104. Biglerville Business District
- 105. Bonneauville Business District
- 106. East Berlin Business District
- 107. Fairfield Business District
- 108. Gettysburg Business District
- 109. Gettysburg Village Factory Stores
- 110. Littlestown Business District
- 111. McSherrystown Business District
- 112. New Oxford Business District
- 113. New Oxford Shopping Center
- 114. North Gettysburg Shopping Center
- 115. North Hanover Mall (York Co.)
- 116. Peebles Festival Shopping Center & US 30 East strip
- 117. Steinwehr Avenue strip
- 118. York Springs Business District

#### Municipal Buildings

#### Post Offices



12,500 0 12,500 Feet

1 inch equals 12500 ft.  
GIS data provided by Adams County Department of Planning & Development, 2005.

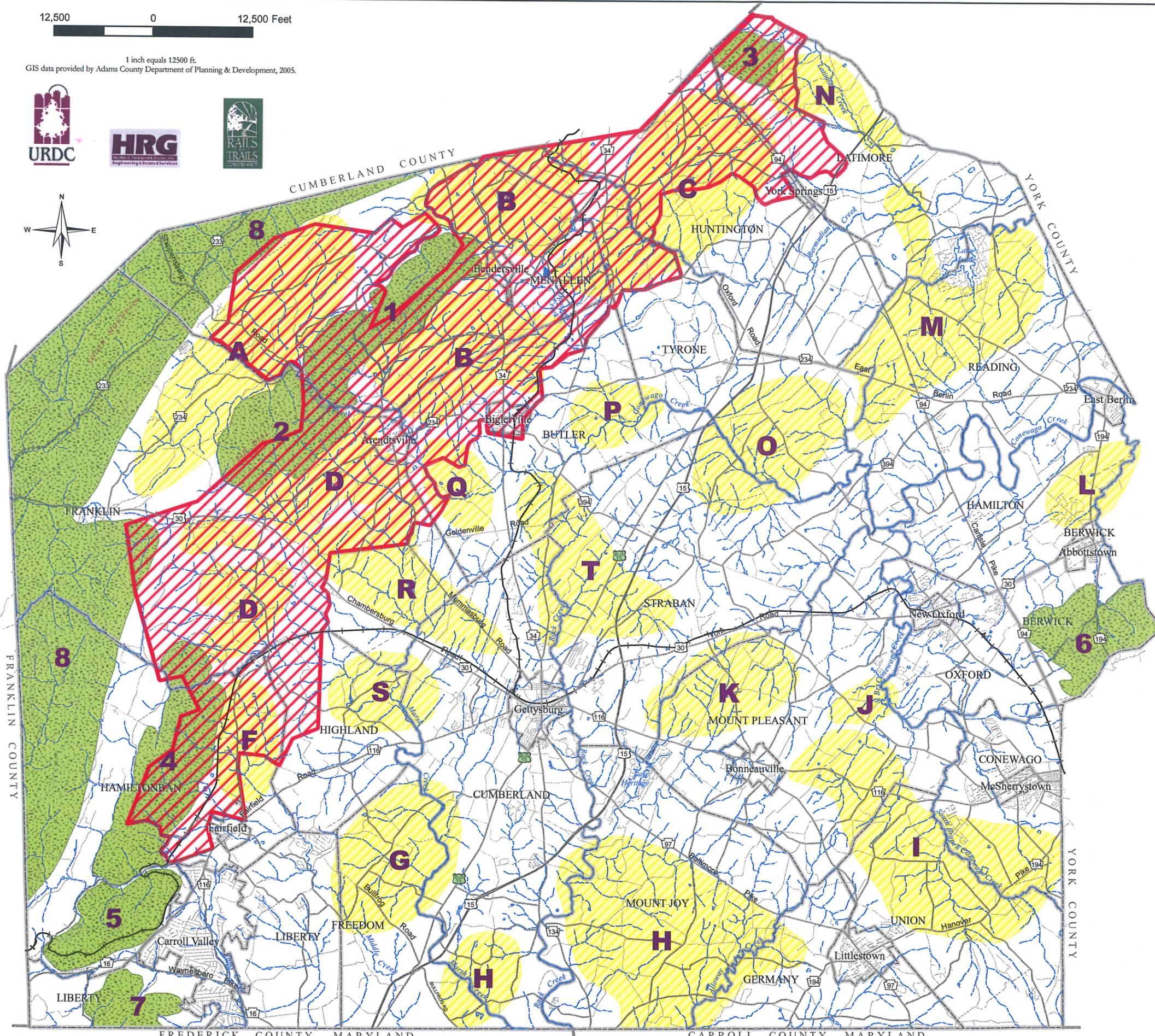


# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania

## Scenic Resources

### MAP 2.5



#### Agricultural Landscape Areas

- A. Buchanan Valley / High Mountain District
- B. Northern Fruitbelt
- C. Northeast Fruitbelt
- D. Central Fruitbelt
- E. Cashtown Pass / High Elevation Fruitbelt
- F. Carroll's Delight Valley
- G. Marsh Creek Lowlands
- H. Mason-Dixon Farmland Districts
- I. Standardbred Horse Farms
- J. Storm's Store / Stone Bridge Historic Area
- K. East Cavalry Agricultural Area
- L. Abbottstown / East Berlin Buffer Area
- M. Lake Meade Watershed Area
- N. Latimore Valley
- O. Red Bridge Farming District
- P. Bender's Church Area
- Q. Zeigler Mill / West Butler Farming Area
- R. Mummasburg Road Corridor
- S. Knoxlyn Scenic Area
- T. Upper Rock Creek Open Space Area

#### Scenic Upland Areas

- 1. Bear Mountain
- 2. Big Hill / The Narrows of the Conewago
- 3. Fickels Hill
- 4. Front Range
- 5. Jacks Mountain
- 6. Pigeon Hills
- 7. Raven Rock Mountain
- 8. South Mountain

#### Historic Fruitbelt Boundary

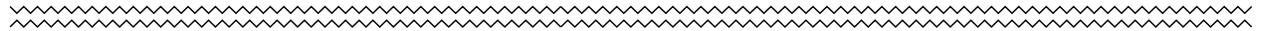
NOTE: In addition to the scenic resources presented on Map 12, the *Adams County Comprehensive Plan*, discusses the possibility of US 15 and the scenic railroad from Gettysburg north into Cumberland County evolving into future scenic corridors.

## Cultural Features

Cultural features are the sites of human activity. Activity hubs today include schools, shopping destinations, municipal buildings, and post offices (Map 2.4, Tables 2.2 and 2.3).

Table 2.2  
Adams County Schools

| Map # | Site Name                           | Municipality         | School Type       |
|-------|-------------------------------------|----------------------|-------------------|
| 1     | Adams County Christian Academy      | Cumberland Township  | Private—Religious |
| 2     | Annunciation School                 | McSherrystown        | Private—Religious |
| 3     | Arendtsville Elementary School      | Arendtsville         | Public            |
| 4     | Bendersville Elementary School      | Bendersville         | Public            |
| 5     | Bermudian Springs Elementary School | Huntington Township  | Public            |
| 6     | Bermudian Springs High School       | Huntington Township  | Public            |
| 7     | Bermudian Springs Middle School     | Huntington Township  | Public            |
| 8     | Biglerville Elementary School       | Butler Township      | Public            |
| 9     | Biglerville High School             | Biglerville          | Public            |
| 10    | Biglerville Middle School           | Biglerville          | Public            |
| 11    | Conewago Township Elementary School | Conewago Township    | Public            |
| 12    | DeLone Catholic High School         | McSherrystown        | Private—Religious |
| 13    | Eisenhower Elementary School        | Cumberland Township  | Public            |
| 14    | Fairfield Elementary School         | Hamiltonban Township | Public            |
| 15    | Fairfield High School               | Hamiltonban Township | Public            |
| 16    | Franklin Township Elementary School | Franklin Township    | Public            |
| 17    | Gettysburg College                  | Gettysburg           | Private           |
| 18    | Gettysburg Area Middle School       | Gettysburg           | Public            |
| 19    | Gettysburg Area High School         | Straban Township     | Public            |
| 20    | Hanover Mennonite School            | Conewago Township    | Private—Religious |
| 21    | Harrisburg Area Community College   | Cumberland Township  | Public            |
| 22    | Hoffman Homes                       | Mount Joy Township   | Private           |
| 23    | Hostetters Meeting House            | Union Township       | Private—Religious |
| 24    | Immaculate Conception School        | New Oxford           | Private—Religious |
| 25    | James Getty Elementary School       | Cumberland Township  | Public            |
| 26    | Jesus Is Lord Christian Academy     | Franklin Township    | Private—Religious |
| 27    | Keefauver Elementary School         | Gettysburg           | Public            |
| 28    | Lincoln Elementary School           | Gettysburg           | Public            |
| 29    | Littlestown High School             | Littlestown          | Public            |
| 30    | Littlestown Middle School           | Littlestown          | Public            |
| 31    | Lutheran Theological Seminary       | Gettysburg           | Private—Religious |
| 32    | Manito Day Treatment Service        | Cumberland Township  | Private           |
| 33    | New Oxford Elementary School        | New Oxford           | Public            |
| 34    | New Oxford Middle & High Schools    | New Oxford           | Public            |
| 35    | Oxford Christian Academy            | New Oxford           | Private—Religious |
| 36    | Rolling Acres Elementary School     | Littlestown          | Public            |



| Map # | Site Name                       | Municipality      | School Type       |
|-------|---------------------------------|-------------------|-------------------|
| 37    | Sacred Heart School             | Conewago Township | Private—Religious |
| 38    | St. Joseph Academy Preschool    | McSherrystown     | Private—Religious |
| 39    | St. Francis Elementary School   | Gettysburg        | Private—Religious |
| 40    | Zwingli United Church of Christ | East Berlin       | Private—Religious |

Sources: Adams County Office of Planning and Development, URDC

**Table 2.3  
Major Shopping Destinations**

| Map # | Site Name                                           | Municipality         |
|-------|-----------------------------------------------------|----------------------|
| 100   | Abbottstown Business District                       | Abbottstown          |
| 101   | Adams Commerce Center                               | Straban Township     |
| 102   | Arendtsville Business District                      | Arendtsville         |
| 103   | Bendersville Business District                      | Bendersville         |
| 104   | Biglerville Business District                       | Biglerville          |
| 105   | Bonneauville Business District                      | Bonneauville         |
| 106   | East Berlin Business District                       | East Berlin          |
| 107   | Fairfield Business District                         | Fairfield            |
| 108   | Gettysburg Business District                        | Gettysburg           |
| 109   | Gettysburg Village Factory Stores                   | Mount Joy Township   |
| 110   | Littlestown Business District                       | Littlestown          |
| 111   | McSherrystown Business District                     | McSherrystown        |
| 112   | New Oxford Business District                        | New Oxford           |
| 113   | New Oxford Shopping Center                          | Oxford Township      |
| 114   | North Gettysburg Shopping Center                    | Cumberland Township  |
| 115   | North Hanover Mall                                  | Hanover, York County |
| 116   | Peebles Festival Shopping Center & US 30 East strip | Straban Township     |
| 117   | Steinwehr Avenue Tourism Corridor                   | Gettysburg           |
| 118   | York Springs Business District                      | York Springs         |

Sources: Adams County Office of Planning and Development, URDC

**Scenic Resources**

Scenic landscapes contribute much to the high quality of life enjoyed by Adams County residents. The county’s beauty helps draw thousands of visitors every year. The *Adams County Greenways Plan* identifies two specific types of landscapes that have exceptional scenic qualities: *Agricultural Landscape Areas* and *Scenic Upland Areas*. In addition, Fruit Belt has been deemed eligible for inclusion in the National Register of Historic Places with an established boundary for a historic district designation (Map 2.5). Later in the plan, some of the landscapes are recommended as targets for additional land preservation and conservation.



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## LAND USE/POPULATION

Today’s human landscape in Adams County is the result of nearly three centuries of settlement by primarily European peoples. Prior to World War II, land use in Adams County followed a European model, with dense villages surrounded by open farmland and woodland. The Gettysburg area developed as a classic model of central place theory, as discussed earlier.

The early post-World War II era saw population growth as a result of the widespread availability of the automobile. A few large, planned communities developed, such as Carroll Valley, Lake Heritage, and Lake Meade. Most other developments occurred on a scattered basis throughout the countryside or in a few relatively small developments in close proximity to Gettysburg.

Housing construction spurted again in the 1990s, largely within or in close proximity to the boroughs and a few villages in the eastern part of the county. Since 2002, a new wave of housing proposals has emerged along the US 15 corridor near Gettysburg, especially in Cumberland and Straban Townships. Northern Adams County, including sites within the Fruit Belt, have also been proposed for large-scale development.

A major contributor to recent growth is out-migration from Maryland. More restrictive development regulations and proximity to Baltimore and Washington are driving up housing costs, causing both developers and homebuyers to locate in less expensive Adams County. Many new residents maintain higher-paying jobs in Maryland, justifying long commutes with a lower cost of living.

Planning is guided at the county level by the *Adams County Comprehensive Plan* of 1990. In a true “smart growth” fashion, the plan recommends that new development take place in and around existing boroughs and villages, and that existing natural resources and farmland be conserved. While the county reviews all land development plans, the bulk of land use regulation takes place at the municipal level. Some of Adams County’s townships and boroughs have enacted locally-prepared zoning ordinances, while others use a default county ordinance. Some areas in the county, with the support of the county planning office, have cooperated in multimunicipal comprehensive planning programs, encouraged by recent changes in Pennsylvania law. Multimunicipal planning offers a more regional approach that can save local resources and, perhaps, preserve land from development in the long run.

Land cover in Adams County is predominantly “agricultural and pasture” (Map 2.6<sup>19</sup>). The information in Map 2.6 was generated from satellite imagery captured in the year 2000.

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<sup>19</sup> The information in Map 2.6 was generated from satellite imagery. Therefore, categories of “land cover” are necessarily broad. For reference, “medium-density development” would be suburban residential development patterns and densities and “high-density development” would be development patterns and densities typically found in central business districts.

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## **Agriculture**

In spite of recent growth and development pressures, the primary land use in Adams County continues to be agriculture. Northwestern Adams County, particularly Franklin and Menallen Townships, contains thousands of acres of apple and peach orchards. Known as the Fruit Belt, the area contains one of the most unique agricultural areas in Pennsylvania. In southeastern Adams County, the standardbred horse farming area is another unique farming area in the state. Remaining agricultural areas in the county are a mix of dairy farms and crop fields. As a rule, pasture land is more prevalent south of Gettysburg, while crop farming prevails north of the borough. Farming throughout the county continues a long-term transition from small, family-owned enterprises to large-scale industrial operations. Development pressure and foreign fruit-growing competition are major threats to the agricultural industry in Adams County.

Three entities are active in preserving Adams County's farmland through the sale or donation of conservation easements: the Adams County Farmland Preservation Board, the nonprofit Land Conservancy of Adams County, and the Mount Joy Township Farmland Preservation Board. Together, the three agencies have preserved over 20,000 acres of farmland in the county as of 2006.

## **Residential Uses**

As of 2000, approximately 40% of Adams County's 91,292 residents lived in boroughs, which occupy only 3% of the county's total land area. The boroughs, many of which grew from villages along the 13 spokes emanating from Gettysburg (discussed earlier), are concentrations of primarily residential land use consisting of older single-family homes, duplexes, rowhomes, and apartments. In the townships, residences include farmhouses, homes in small villages, homes lining roads, and subdivisions built since the second world war. Increasingly, residential land uses are in the form of new subdivisions built on "greenfield" sites. More than 34,000 acres in Adams County were proposed for development from 1995 through 2003, including nearly 10,000 acres of active farmland. Southeastern Adams County saw more development of residential subdivisions in the 1990s than in any other decade in the county's history to that point. Since 2000, central Adams County has become a focus of development, particularly along the Harrisburg Road corridor in Straban Township. Other areas for significant proposed residential development include western Cumberland Township, southern Liberty Township, and Germany Township.

## **Commercial Uses**

Commercial land uses in Adams County are scattered, and are typically found in and around the boroughs. Most boroughs contain basic retail and service establishments, such as gas stations and grocery stores. However, in keeping with the charm of Adams County, specialty retail stores can be found along the main streets of many boroughs throughout the county.

0 12500 25000 Feet

GIS data provided by Pennsylvania State University, 2005.



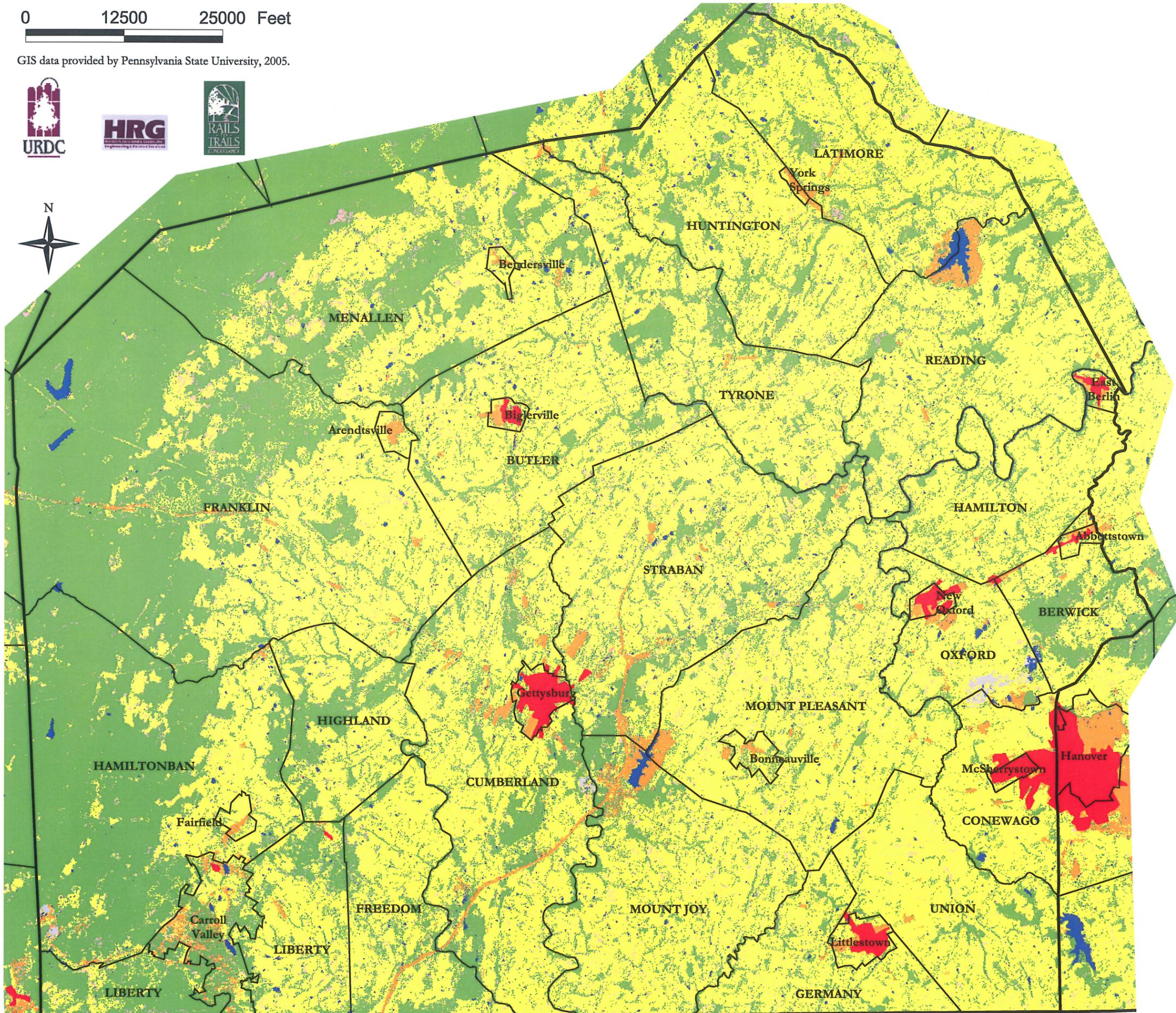
# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania

## Land Cover, Year 2000

### Map 2.6

-  Agriculture & Pasture
-  Woodland
-  Medium-Density Development
-  High-Density Development
-  Quarrying Operations
-  Water



Highway-oriented commercial areas are found at U.S. 15 interchanges and along roads leading out of Gettysburg, most notably U.S. 30 East, Harrisburg Road, and Steinwehr Avenue. Several auto-oriented shopping centers are located on the fringes of Gettysburg, McSherrystown, and New Oxford. One of the largest shopping centers is the Gettysburg Village Factory Stores and Festival Center in Mount Joy Township at the U.S. 15/PA 97 interchange.

The area targeted to be the county's primary employment center, the Adams Commerce Center (ACC), is located in the southeast quadrant of the U.S. 15/U.S. 30 interchange. Originally intended as an industrial park, the commerce center continues to fill in with major retail businesses, including car dealers and movie theaters. The newest major commercial venture in Adams County is Gateway Gettysburg, a developing hotel, dining, and entertainment complex located on a 100-acre site at the northwest corner of the ACC site ([www.gatewaygettysburg.com](http://www.gatewaygettysburg.com)).

### **Industrial Uses**

Adams County is one of few counties in the commonwealth that contains neither an interstate highway nor a major freight rail line. As a result, industrial land uses are limited and scattered. One major exception is Conewago Township, which contains a significant amount of overflow development from adjacent industrial areas in Hanover Borough, York County. The Conewago Industrial Park houses several industrial employers. The Utz Potato Chip Factory is located partially within Adams County. Oxford Township is home to the large stone quarrying operation of Vulcan Materials Company. Straban Township contains the Hunterstown Power Plant, a natural gas-fired plant operated by Reliant Energy. Smaller, locally-owned industrial operations can be found in portions of the county's boroughs. Gettysburg, for example, contains a small industrial district in its northeastern quadrant, near the Western Maryland Railroad.

### **Institutional Uses**

Institutional uses include schools, government facilities, emergency services, libraries, post offices, and churches. The county's six public school districts operate facilities throughout the county, the largest being the Gettysburg Area High School (GAHS) on Harrisburg Road in Straban Township. Two colleges are within 1–2 miles of the high school: the private Gettysburg College and a branch campus of Harrisburg Area Community College. Adams County operates several facilities in addition to its centrally-located courthouse, including the emergency services training center, adult correctional facility, and the agricultural complex. All three are located in Straban Township. The largest religious institution in the county is the Lutheran Theological Seminary, located on the western fringe of Gettysburg Borough.

### **Recreation and Open Space**

The land use category most pertinent to the *Adams County Greenways Plan* includes all public and private land associated with active or passive leisure time pursuits. The Gettysburg National Military

Park is the most recognized such land use, surrounding Gettysburg Borough with 5,990 acres of protected, memorialized green space. By size, however, the largest recreation and open space holding is Michaux State Forest, spanning the entirety of Adams County's western flank. Michaux contains over 85,000 acres of woodland in Adams, Cumberland, and Franklin Counties, and helps preserve the northernmost segment of the Blue Ridge Mountains. The third largest open space in Adams County is State Game Land #249. The game land is actually four separate tracts located in five townships, but is generally centered on the US 15/PA 234 interchange. In the private sector, Strawberry Hill Nature Preserve protects 600 acres of wooded hillsides in Hamiltonban Township. Other recreation and open space uses, such as municipal parks, golf courses, and private athletic facilities throughout the county, compose the remainder of recreation and open space land uses.

### **Undeveloped, Nonagricultural Land**

The land use categories above describe most of the land in Adams County. Some remaining patches of land are neither developed, in agriculture, nor protected as open space. Most notably, the area immediately to the east of Michaux State Forest contains large, privately owned tracts which often do not contain residences. In the other areas of Adams County, some land has remained undeveloped and unfarmed due to natural constraints including wetlands, frequent flooding, steep slopes, and rocky soil.

### **Population, Development, and the Issue of Land Conservation**

Adams County population has been increasing significantly in recent years. The cost of living in the Baltimore/Washington metropolitan area is one of the highest in the nation and is continuing to increase at a time when the federal government is decentralizing many functions. The combination of growth pressures from major cities to the south and the federal base realignment and closure (BRAC) process is likely to result in an increase in people from Maryland wishing to relocate in Adams County. Many of the new residents are likely to maintain higher paying jobs in Maryland and commute long distances in exchange for the less expensive, more rural lifestyle offered in Adams County.

During the 1990s, population in the county grew at an average rate of 1.55% per year, and the average growth rate increased from 2000–2005 to 1.79% per year (Table 2.4). The Adams County Office of Planning and Development reported that, as of fall 2006, approximately 12,000–15,000 new dwelling units were at some stage review, which would represent an increase of approximately 33–42% from the 35,831 housing units counted in the 2000 census.

12,500 0 12,500 Feet

1 inch equals 12500 ft.  
GIS data provided by Adams County Department of Planning & Development, 2005.



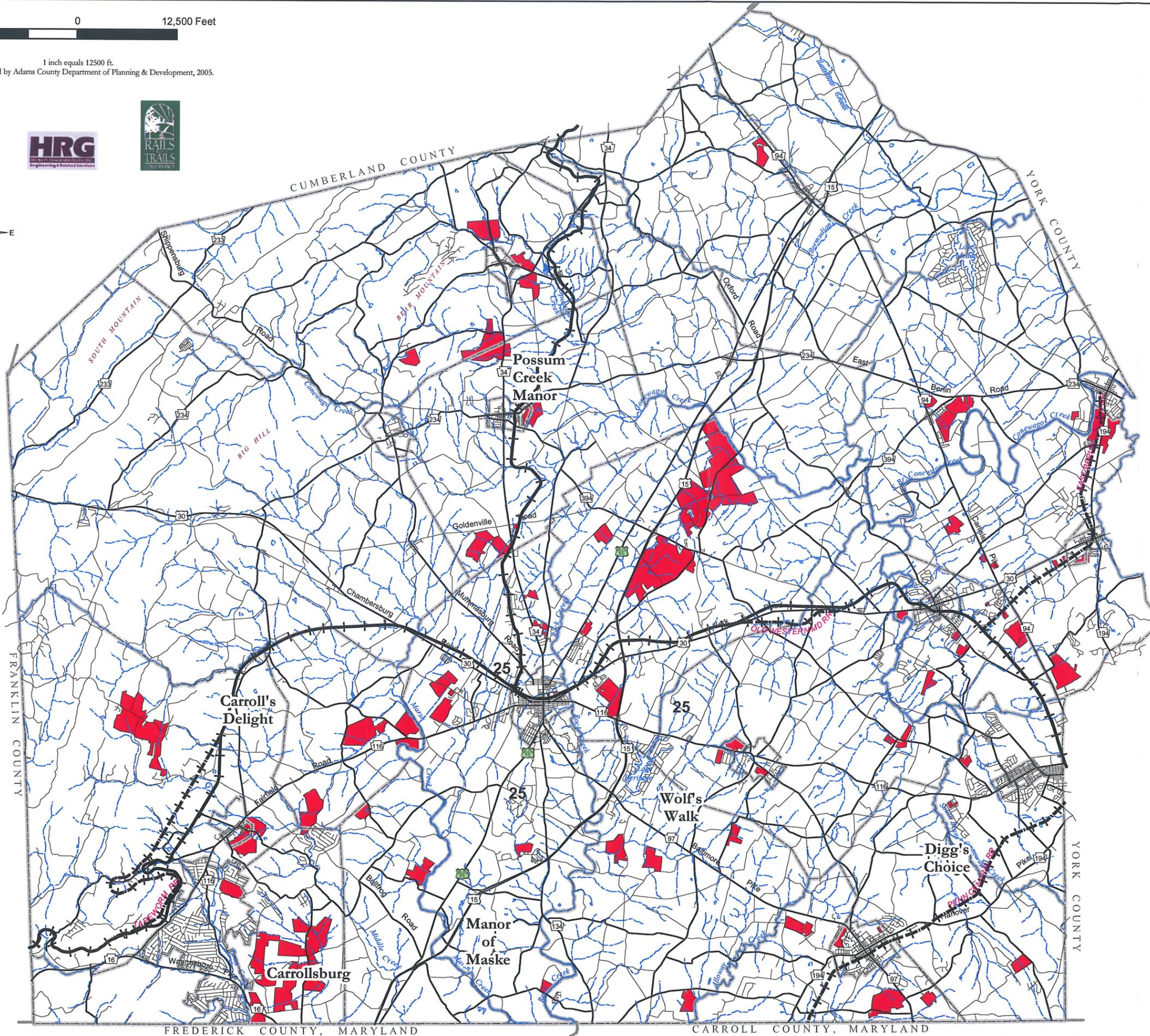
# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania

## Proposed Development

### MAP 2.7

 Proposed Development  
(June 2007)



NOTE: Historic Fruitbelt shown on Map 12.

Table 2.4  
**Adams County Population, 1970–2005**

| Year | Population | Change |         | Average Annual Percent Change |
|------|------------|--------|---------|-------------------------------|
|      |            | Number | Percent |                               |
| 1970 | 56,937     | —      | —       | —                             |
| 1980 | 68,292     | 11,355 | 19.9%   | 1.84%                         |
| 1990 | 78,274     | 9,982  | 14.6%   | 1.37%                         |
| 2000 | 91,292     | 13,018 | 16.6%   | 1.55%                         |
| 2005 | 99,749     | 8,457  | 9.3%    | 1.79%                         |
| 2006 | 102,525    | 2,776  | 2.8%    | 2.78%                         |
| 2010 | 115,150    | 12,625 | 12.3%   | 2.95%                         |
| 2020 | 154,775    | 39,625 | 34.4%   | 3.00%                         |

Sources: U. S. Census, ACOPD

The population of Adams County has grown at a steady, moderate since World War II (Fig. 2.6). Poor soil conditions for on-lot septic systems within the Gettysburg Plain help to prevent widespread unplanned residential development in many parts of the county. However, the county has recently seen strong development pressure from the Baltimore/Washington metropolitan area, principally within the U. S. 15 corridor. Proposed development in the county as of June 2007 (Map 2.7) is concentrated near the border with Frederick County, MD and along U. S. 15 outside of Gettysburg.



**Figure 2.6**— New growth has come to Adams County, increasing demand for active and passive recreational facilities, including greenways.

Recent articles and reports also indicate that several major new employment centers, which focus on research and development, government services, and technology-oriented businesses will be built in northern Maryland. Build-out of the facilities will place an added burden on Adams County to provide housing and services to a relatively young, skilled workforce, providing additional growth pressure for the county. In addition, an aging population will require more nonmotorized transportation options and increased opportunities for both active and passive recreation.<sup>20</sup>

Although population has continued to increase in recent years, the amount of available recreation land and open space has not increased in proportion to the rise in population. The county’s recreation system and needs are presented in the *Adams County Vision for Parks, Recreation, and Open*

<sup>20</sup> One example of the scale of potential recreation proposals is a curative amendment recently submitted to Cumberland Township for a “theme park” to include a major indoor/outdoor water park, hotel, and multiplex movie theater.

*Space*,<sup>21</sup> which includes a complete inventory of county active and passive recreation facilities and open space. The plan recognizes the many streams in the county identified by the PA Department of Environmental Protection as High Quality, Exceptional Value, or Wild Trout Streams.

A survey conducted by the Adams County Office of Planning and Development in May 2003 further illustrates the demand for greenways. In response to a question asking respondents to rank the adequacy of various community facilities and services, “hike, bike, walking trails” was ranked as one of the three least adequate services by every group of respondents.<sup>22</sup> Furthermore, in response to another question asking to identify the three most important concerns for Adams County, frequent replies among the ten respondent groups included:

- Preserve farmland.
- Preserve important landscapes.
- Lifestyle.

### **Natural Features**

One of the primary goals of a greenway is to protect important natural resources. The following section provides background information on several categories of natural features found within Adams County.

### **Physiography**

The physiography in Adams County is, literally, the underlying source of land use limitations or opportunities, depending on the nature of conditions and the perspective use. Adams County is made up of four physiographic areas (Map 2.8). To the west of the county is the area known as South Mountain, which is the northern extension of the Blue Ridge Mountains. The underlying geology of the Blue Ridge consists of Precambrian bedrock, primarily from Metarhyolite, Weverton, and Loudoun Formations, and metabasalt.

The primary physiographic section of the county is the Gettysburg-Newark Lowland, which runs through the center of the county. The Gettysburg-Newark Lowland consists mostly of Triassic sandstone from the Gettysburg and New Oxford Formations, but also has a large area of Jurassic bedrock known as Diabase, which is responsible for many of the rolling hills and boulder deposits that are uniquely recognizable in some areas, including the Gettysburg National Military Park.

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<sup>21</sup> Urban Research and Development Corporation, et al for the Adams County Office of Planning and Development, December 1997

<sup>22</sup> Survey responses were tabulated for the following respondent groups:

- |                                  |                              |                                  |
|----------------------------------|------------------------------|----------------------------------|
| • Adams County citizens (random) | • borough elected officials  | • economic development officials |
| • Adams Co. Planning Commission  | • township elected officials | • school board members           |
| • borough planning commission    | • conservation groups        |                                  |
| • township planning commission   | • human service agencies     |                                  |

12,500 0 12,500 Feet

1 inch equals 12500 ft.

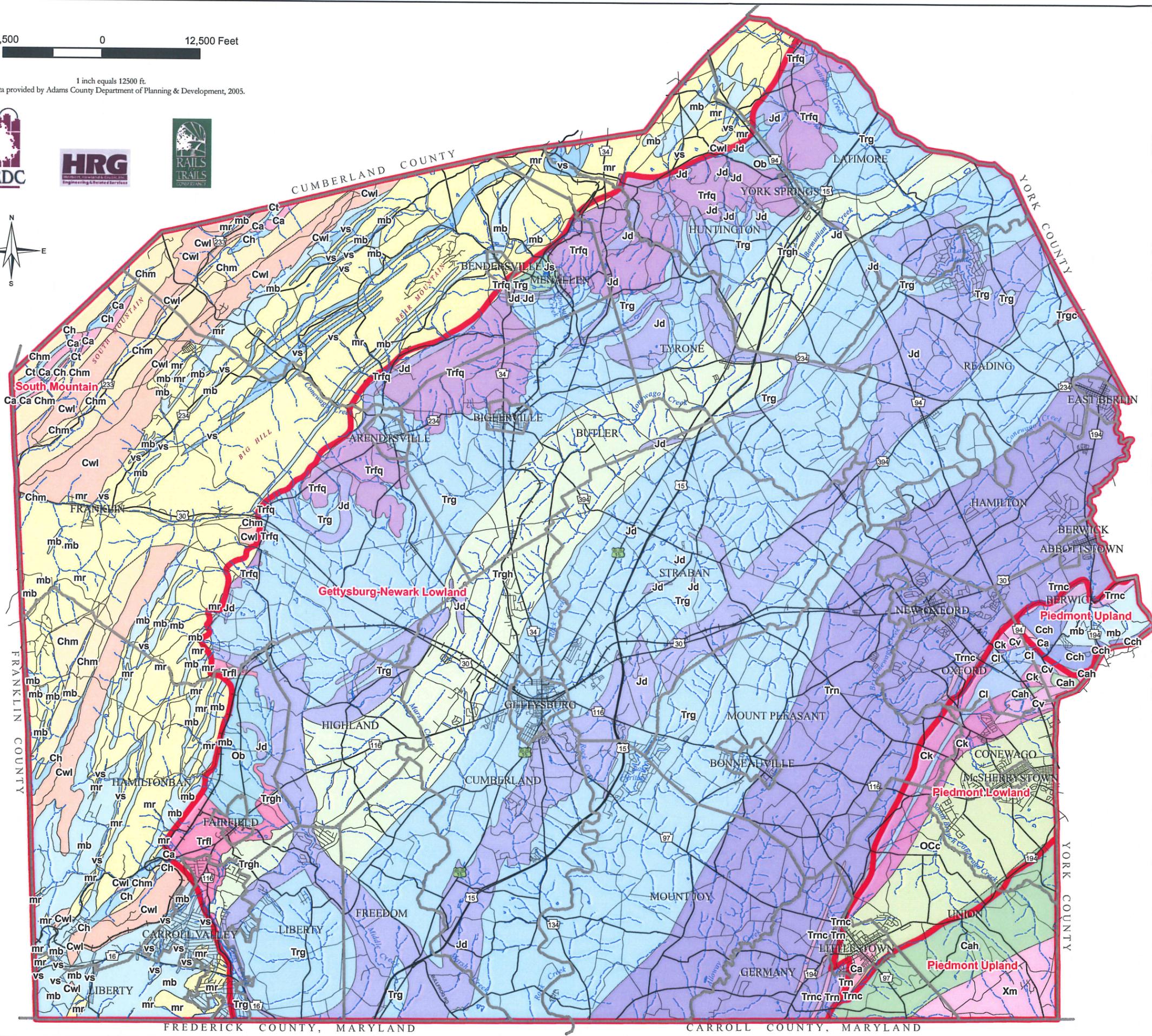
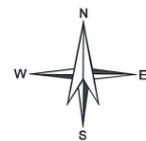
GIS data provided by Adams County Department of Planning & Development, 2005.



# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania  
Physiography

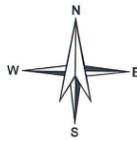
MAP 2.8



-  Physiographic Sections
- Geology**
-  Ca, Antietam Formation
-  Cah, Antietam and Harpers Formations, undivided
-  Cch, Chickies Formation
-  Ch, Harpers Formation
-  Chm, Montalto Member of Harpers Formation
-  Ck, Kinzers Formation
-  Cl, Ledger Formation
-  Ct, Tomstown Formation
-  Cv, Vintage Formation
-  Cwl, Weverton and Loudoun Formations, undivided
-  Jd, Diabase
-  Js, Sedimentary strata at Jacksonwald and Aspers
-  OCo, Conestoga Formation
-  Ob, Beekmantown Group
-  Trfl, Limestone fanglomerate
-  Trfq, Quartz fanglomerate
-  Trg, Gettysburg Formation
-  Trgc, Gettysburg conglomerate
-  Trgh, Heidlersburg Member of Gettysburg Formation
-  Trn, New Oxford Formation
-  Trnc, New Oxford conglomerate
-  Xm, Marburg Schist
-  mb, Metabasalt
-  mr, Metarhyolite
-  vs, Greenstone schist

12,500 0 12,500 Feet

1 inch equals 12500 ft.  
GIS data provided by Adams County Department of Planning & Development, 2005.



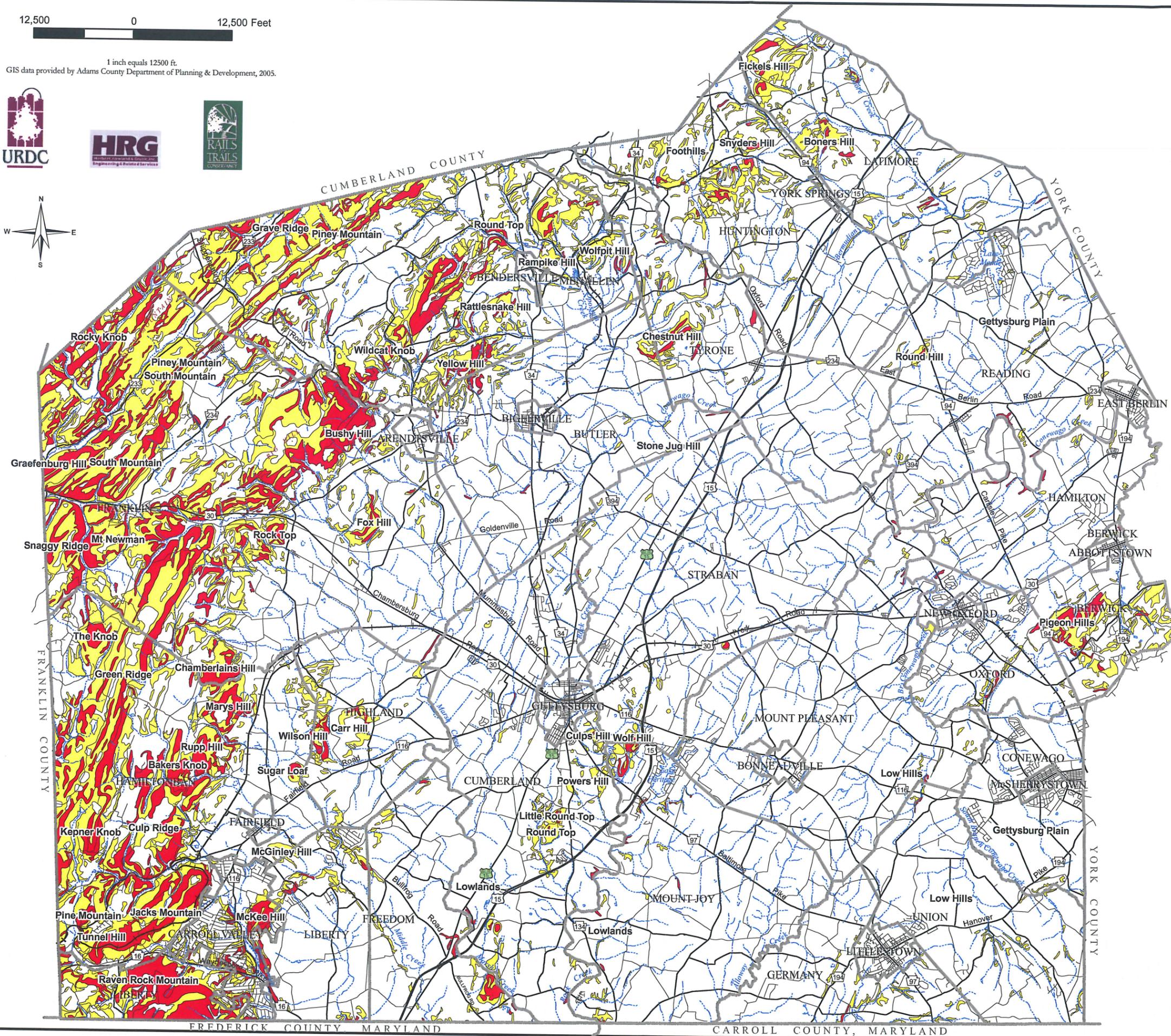
# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania

## Steep Slopes & Major Landforms

### MAP 2.9

- Steep Slopes 15-25%
- Steep Slopes >25%



The Piedmont Lowland and the Piedmont Upland are located in the southeastern portion of Adams County and consist of a relatively small area of the county compared to the other physiographic sections discussed above. The Piedmont Lowland, which is centered around McSherrystown, consists primarily of dolomite, shale, and limestone from the Conestoga, Kinzers, and Ledger Formations. The Piedmont Upland is located to the north and to the south of the Piedmont Lowland. The area to the north consists primarily of quartz and slate from the Chickies Formation and from metabasalt.

Diabase intrusions are known to have poor recharge capacity. Likewise, limestone areas in Conewago and Union Townships and McSherrystown Borough, west of Hanover, are underlain with limestone, are subject to sinkholes, and have water shortage problems. Northern areas of the county are also potentially stressed areas with water shortages due to Diabase, Metabasalt, and Metarhyolite geology. There are also a few areas of Paleozoic limestone along the eastern flank of South Mountain, the largest area of which is north of Fairfield.

### **Steep Slopes and Major Landforms**

Slopes and landforms, derived from physiography, often pose the limitations to development or offer the opportunities for land preservation discussed above. Steep slopes are slopes which are greater than 15%.<sup>23</sup> Steep slopes are primarily found in the South Mountain section of Adams County (Map 2.9). A large portion of South Mountain consists of slopes greater than 25%, which present severe limitations to development, agriculture, and forestry in that area. A few spotted areas of steep slopes are present southeast of Gettysburg Borough and in the Pigeon Hills area of Berwick Township, and a lower portion of Marsh Creek near the Maryland border. Major landforms include:

- South Mountain, including many lesser mountain tops and knobs.
- The Gettysburg Plain, predominant in the central portions of the county.
- The McSherrystown area, consisting of lowlands and a few sporadic hills.
- The Low Hills of Berwick, Oxford, Germany, and Union Townships.

Projects such as the South Mountain Conservation Landscape Initiative (CLI) recognize the value of the South Mountain area defining the boundary of the Conewago Creek and Monocacy River watersheds. South Mountain is the northernmost extension of the Blue Ridge Mountains and part of the Appalachian Mountain chain. South Mountain's east-west valleys are unique in Pennsylvania. The Pennsylvania Department of Conservation and Natural Resources, along with representatives of Adams County government, local municipal governments, and local conservation organizations such as the Land Conservancy of Adams County, are participating in the South Mountain Partnership to address key issues (such as wildlife, woodlands, and water conservation) and to pursue initiatives

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<sup>23</sup> Slope, as a percentage, is defined as "rise divided by run". Therefore, a land that rose 15 feet from the beginning point to a point 100 feet away would have a slope of 15/100, or 15%.

12,500 0 12,500 Feet

1 inch equals 12500 ft.

GIS data provided by Adams County Department of Planning & Development, 2005.



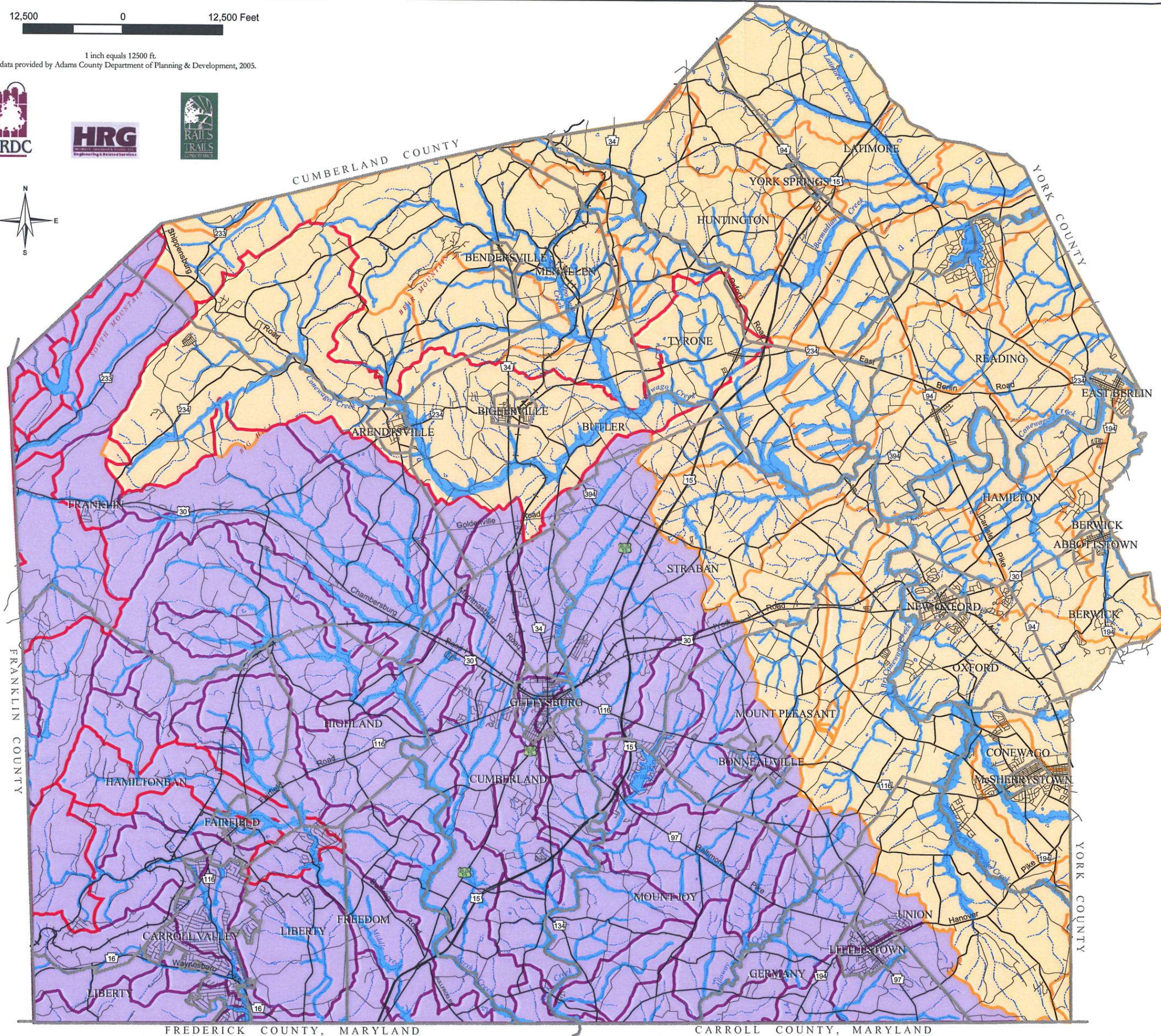
# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania

## Water Features

### MAP 2.10

-  Streams
-  100 Year Flood Zone
-  High Quality or Exceptional Value Watersheds
-  Susquehanna River Watersheds
-  Potomac River Watersheds



12,500 0 12,500 Feet

1 inch equals 12500 ft.

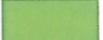
GIS data provided by Adams County Department of Planning & Development, 2005.

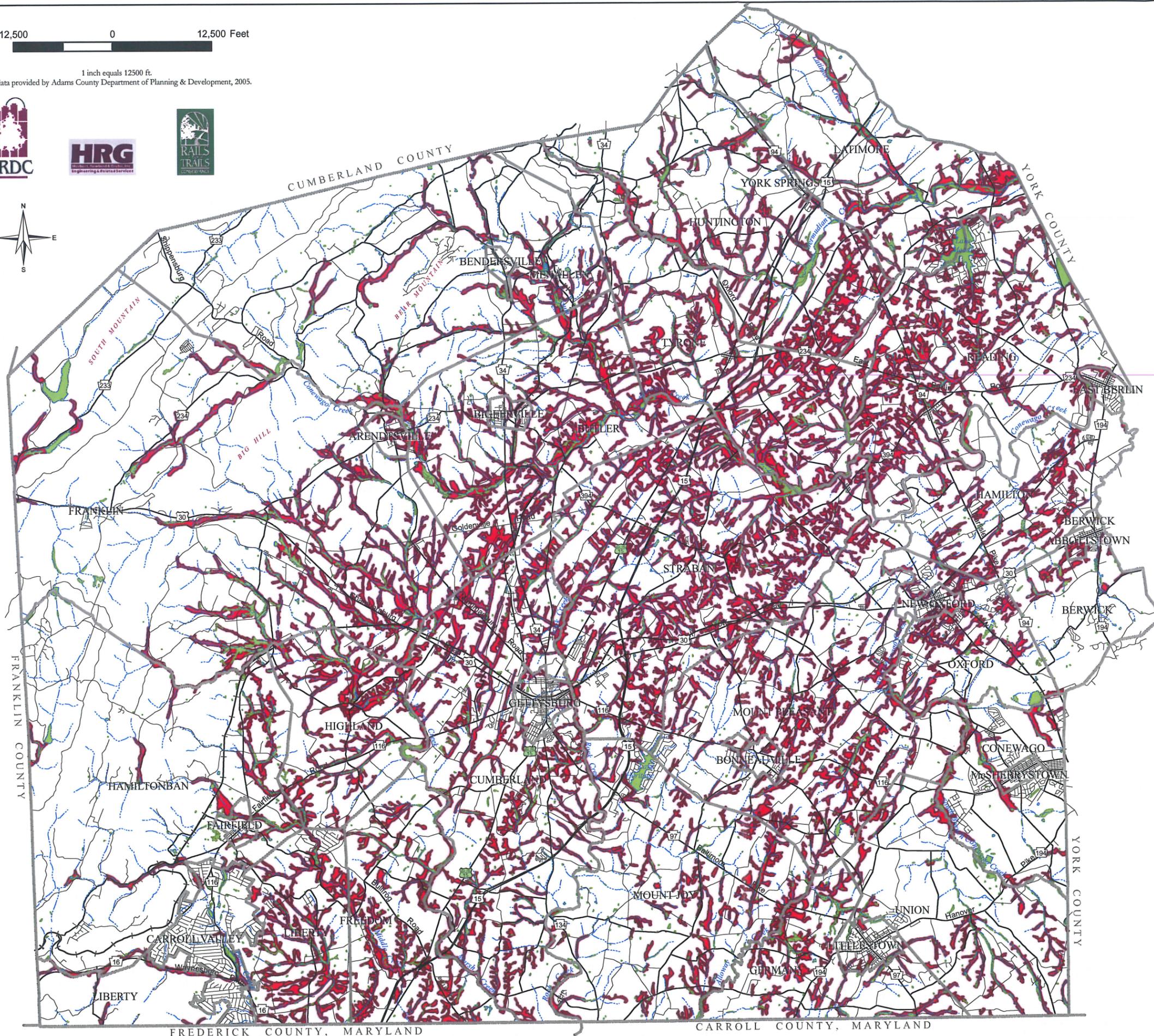


# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania  
**Wet Areas**

**MAP 2.11**

-  Streams
-  Wetlands
-  Hydric Soils



12,500 0 12,500 Feet

1 inch equals 12500 ft.  
GIS data provided by Adams County Department of Planning & Development, 2005.



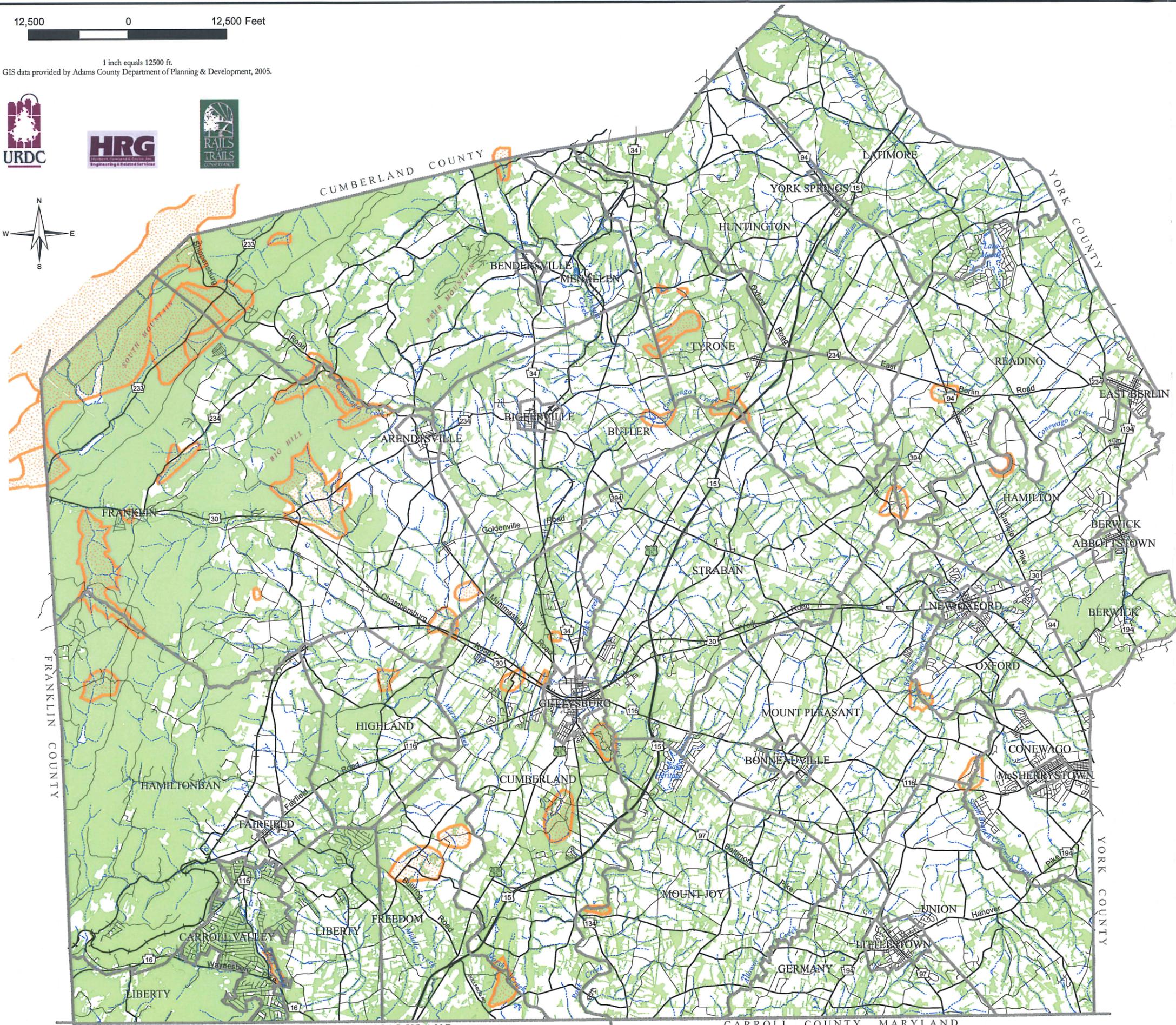
# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania

## Woodlands & Natural Areas

MAP 2.12

-  Natural Areas Inventory Sites
-  Woodlands





12,500 0 12,500 Feet

1 inch equals 12500 ft.  
GIS data provided by Adams County Department of Planning & Development, 2005.



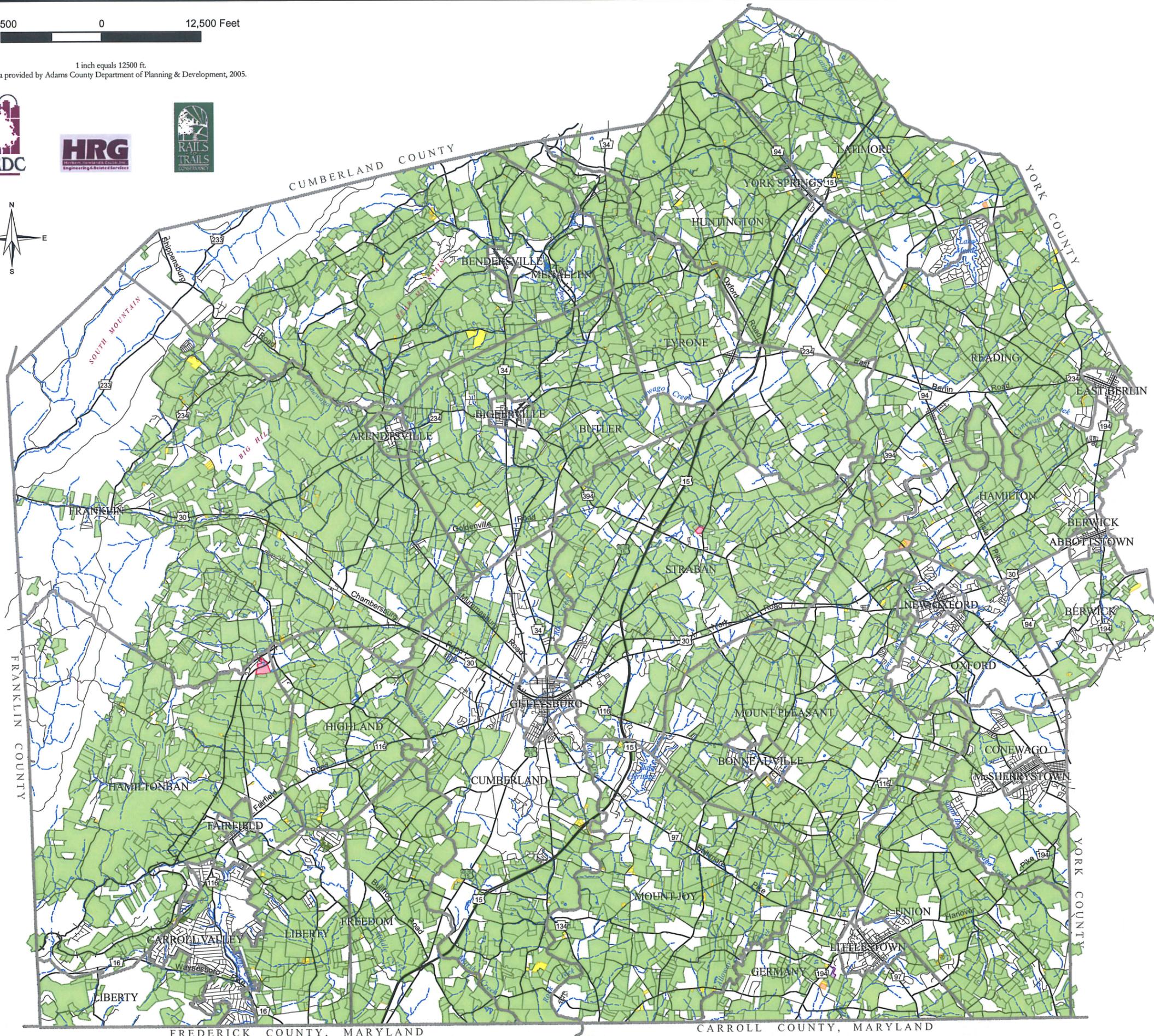
# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania  
**Clean & Green Properties**

MAP 2.14

### Designations

- Approved
- Split
- Requested
- Denied
- Vacant



FREDERICK COUNTY, MARYLAND

CARROLL COUNTY, MARYLAND

to protect the South Mountain Faces and associated watersheds (including the Conewago Narrows) within western and northwestern Adams County through the South Mountain CLI planning process. start here

The Narrows is one of Adams County’s most scenic areas, consisting of about 3,000 acres of quality forest habitat with mossy seeps and many older hemlocks and white pines on the higher slopes. The Narrows is located along Conewago Creek headwaters, a High Quality Cold Water Fishery that is part of the Susquehanna River Basin Chesapeake Bay Watershed. The Narrows is the center of Adams County’s forestry industry, with saw mills, tree farms, timber companies and several large privately-held parcels (500+ acres) managed for timber. The area is named for its water gap, which reaches 680 feet and contains gray-green metarhyolite outcrops that support several plant species of conservation concern. The Narrows is one of the largest unprotected forests in Adams County and could be connected to Michaux State Forest, which lies a few miles to the west.

## Water Features

Creeks, streams, wetlands, and floodplains are generally, by nature, existing “greenways”. Wetlands also play important natural roles in a greenway by reducing floodwaters and improving surface and groundwater quantity and quality.

Adams County is split up into two major watersheds. The Potomac River watershed is located in the southwestern region of the county, and the Susquehanna River watershed is located in the northeastern region of the county (Map 2.10). Most of the land in the Susquehanna River Watershed drains to the Conewago Creek, the largest creek in Adams County, via various streams. Tributaries to the Conewago Creek include the South Branch Conewago, Bermudian, Latimore (Fig. 2.7), Opposum, Beaverdam and Beaver Creeks. Most of the land in the Potomac River Watershed drains to tributaries of the Monocacy River in Maryland that include Toms Creek, Middle Creek, Marsh Creek, Rock Creek, Piney Creek, and many smaller streams. Virtually every stream in Adams County originates in the county.



**Fig. 2.7** — The Latimore Creek has shallow banks in some areas, allowing livestock free access and illustrating the need for fencing and/or riparian buffers.

Water resources are monitored and championed by various groups, including the following:

- The Watershed Alliance of Adams County has been instrumental in several stream restoration and clean-up projects for Conewago, Rock, and other creeks draining various environmental threats to Adams County watersheds.
- The Interstate Commission on the Potomac River Basin seeks to protect and enhance the Monocacy River Watershed in the southwestern portion of Adams County.

- 
- The Susquehanna River Basin Commission has been striving to protect water resources within the Susquehanna River Basin, including the Conewago Creek Watershed, by mapping water-stressed areas.
  - The Conewago Creek Watershed Commission is preparing a study of the Conewago Creek and determining critical issues for protection of the watershed.
  - The Chesapeake Bay Initiative of Pennsylvania Department of Environmental Protection regulates against pollution in the watershed to guard against sedimentation and sewage disposal pollutants and related pollutants.

Recommendations from these alliances and commissions include riparian stream buffers, forest land preservation, and wetland restoration, all of which could be served by greenways. Floodplains and wetlands associated with Adams County streams are extremely important in helping to contain and retain surface water for groundwater recharge purposes.

Of course, floodplains (areas subject to flooding) are associated with the many streams and wetlands in Adams County. Floodplains in the upper reaches of the creeks are narrow. However, flood widths increase as streams flow to lower, flatter portions of the stream corridors, especially along the major streams. Floodplains require protection from development or disturbances that may impede, accelerate, or redirect the flow of flood waters. Protecting floodplains serves to protect human life and property throughout the county. Floodplains would be appropriate parts of a greenway system that could help to preserve and protect the floodplains.

Wetlands (Map 2.11) are characterized by a high water table, poor drainage, and surface ponding during the year. Wetlands are important natural areas that:

- Contribute to the quality and quantity of ground and surface waters.
- Control flooding by absorbing runoff.
- Support a wide variety of animal and plant species.

Adams County consists of many farm ponds which, according to the National Wetlands Inventory, are classified as open-water wetlands. One indicator of wetlands is the presence of hydric soil. A hydric soil is one that, in its undrained condition, is flooded, ponded, or saturated long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation. Hydric vegetation is another wetland indicator. Hydric soils covered approximately 15 percent of Adams County in 1967, when the soil survey was published (2.10).

One of the most direct influences of the county's location to development over time can be seen in the relationship of roads to waterways. Adams County is located near the top of watersheds, on relatively high ground. Previous text noted that many county waterways originate within the county. Therefore, few waterways, or even waterway segments, are navigable. As a result, the county was settled primarily by land, and, to do so, trails were blazed without regard to the location of water, except as an obstacle to get over by ford or bridge.

Today's roads throughout the county reflect the trails of yesterday and do not parallel county waterways. Therefore, the public is not as aware of the waterways in the county as residents in other parts of the state. To offset the flooding potential posed by new development, flood control and Best Management Stormwater Practices, including riparian buffers, should be an integral part of land design and development practices. Passive or active recreation should also be considered in the stream buffers and floodplains.

## Woodlands and Natural Areas

Greenways help to protect woodlands and other natural areas and provide opportunities for study and enjoyment. Woodlands (Map 2.12) are spread intermittently across central and eastern portions of Adams County, occurring primarily along stream valleys. In the western portion of the county, woodlands are predominant and continuous across the South Mountain area. Woodlands are generally found in areas less suitable for cultivation. Most of the area in and around South Mountain was designated as Michaux State Forest in 1902. The area is artificially restocked with commercially valuable trees.

The landscape of western Adams County is often described as the "South Mountain Faces". As noted previously, Adams County participates in the South Mountain Partnership and the South Mountain CLI planning process. The South Mountain landscape is also part of a broader landscape, ranging from Pennsylvania to Connecticut, known as The Highlands. The Highlands is a regional landscape that was federally designated in the Highlands Conservation Act of 2004 as an area where federal government assistance is provided to conserve important lands and natural resources. Technically, the federally designated Highlands area does not include Adams County, as the designation's southern boundary is located in north-central York County. However, the proximity of the federally designated Highlands area has helped focus attention on the importance of the regional landscape and associated landscapes and natural resources extending from the north into Adams County.

While the Highlands Conservation Act did not include the western part of Adams County within the federally designated Highlands area, other entities have recognized that the Highlands landscape and resources extend south into Adams County. The Highlands Coalition, a system of conservation organizations within the Highlands area extends mapping of the Highlands region to the Mason-Dixon Line, which represents an important association, since the Highland Coalition supports conservation projects within the Pennsylvania Highlands Greenway, one of five mega-greenways in Pennsylvania as designated by the Pennsylvania Department of Conservation and Natural Resources (DCNR). Developing partnerships with entities such as DCNR and the Highlands Coalition help Adams County pursue land and resource conservation activities within western and northwestern Adams County even though the area was not included in federal Highlands area designated by the Highlands Conservation Act.

The *Adams County Natural Areas Inventory* (NAI – Map 2.12) was completed in 1996 in conjunction with the *Adams County Vision for Parks, Recreation, and Open Space* and was updated

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in 2002. The NAI includes descriptions, maps, and rankings of sites of ecological and natural significance within the county. The report emphasizes exemplary natural communities and plant and animal species listed as rare, threatened, or endangered in Pennsylvania.

A majority of the identified natural areas (Map 2.12) are associated with wooded areas, notably but not exclusively within Michaux State Forest in western Adams County. Other important identified natural areas are located within open areas or grasslands, or along stream corridors.

Several conservation efforts have focused on protecting the sensitive areas identified in the *Adams County Natural Areas Inventory*. The Adams County Office of Planning and Development references the NAI and notifies property owners and the Western Pennsylvania Conservancy whenever a development proposal may impact an identified area. In addition, the Land Conservancy of Adams County targets properties within designated natural areas when considering the acquisition of conservation easements. As a result, several identified natural areas outside the Michaux State Forest have been either partially or fully conserved.

Adams County is also the site of two Important Bird Areas, as identified by the National Audubon Society:

- *Freedom Township Grasslands* — The Freedom Township Grasslands, also known as Pennsylvania Important Bird Area Site #41, encompasses approximately 2,000 acres along Pumping Station Road in Freedom Township. The area includes the Eisenhower Farm National Historic Site and a variety of private owners. Large cattle grazing operations have maintained open, untilled agricultural lands in the area that are attractive to grassland birds. Representative species include the Upland Sandpiper, Loggerhead Shrike, Eastern Meadowlark, Northern Harrier, Barn Owl, Bobolink, Grasshopper Sparrow, and Northern Bobwhite. In addition, the Freedom Township Grasslands is the only nesting location in Pennsylvania for the Loggerhead Shrike. Any disturbance to the grassland character of the area, including large-lot residential subdivision, can be detrimental to the grassland bird population.
- *South Mountain, Caledonia State Park, and Michaux State Forest* — Known as Pennsylvania Important Bird Area Site #40, the site includes approximately 40,000 acres of mixed forest along the boundary between Adams and Franklin Counties. The area features interior forest species. Specific species found in the mixed forest area include Wood Thrush, Veery, Ovenbirds, Hooded Warbler, and Eastern Pee-Wee. The lakes and reservoirs attract populations of waterfowl and wading birds including Wood Duck, Common Loon, Pied-Billed Grebe, Common Merganser, Canada Goose, Mallard, Great Blue Heron, and Green Heron. Development pressure within the area is limited due to primarily public ownership. However, increasing recreational impacts, particularly from off-road vehicle use, remains a concern.

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## **Agricultural Soils**

Adams County is generally made up of good farmland that can be classified as Prime Farmland, Unique Farmland, and Soils of Statewide Importance (Map 2.13). Prime Farmland is best suited for the production of food, feed, forage, fiber, and oil seed crops. Most of the Gettysburg Plain lowlands are classified as Prime Farmland. Unique Farmland is used to produce specific high value food and fiber crops. The Fruit Belt along the foothills east of South Mountain comprises the main portion of Unique Farmland in Adams County. Soils of Statewide Importance are also valuable for agricultural production and are located throughout the Gettysburg Plain.

Rooted in the physiography, the valuable farmland and agricultural soils of Adams County are paramount to a major agricultural industry and sustenance for Adams County. Of course, the soils and flatter areas best suited for agriculture are also best-suited for residential and nonresidential development, which underscores the need to plan for greenways and other land preservation mechanisms. Wise land use should take cue from the state's Growing Greener policies. A case in point is the unique Fruit Belt, with soils that are perfect for growing fruit and yet is experiencing land development pressures.

## **Agricultural Preservation**

Adams is an important agricultural county. Fifty-four percent of the land in the county is used for farms, according to the 2002 U.S. Census of Agriculture, down from 56 percent in 1987. For farming to continue as an economic enterprise, the farming area must be large enough to support the necessary agricultural infrastructure.

Four techniques are being used in Adams County to protect farmland:

- Differential assessment (Clean and Green Act)
- Agricultural Security Areas
- Agricultural zoning
- Purchase of agricultural conservation easements

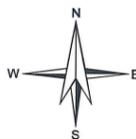
Farmland under the Clean and Green Act (Map 2.14) is assessed at farm production value instead of development value, which reduces the farmer's annual tax bill and creates an incentive to continue farming. If the land is developed, the landowner must repay the tax savings from the previous seven years plus interest.

The Agricultural Security Areas law prevents municipalities from enacting ordinances that restrict normal farming practices or structures. The law also requires that:

- State agencies review any programs that might negatively affect farmers.
- State agencies encourage agriculture in the Agricultural Security Areas.
- State or locally funded development projects in a security area be reviewed by the state Agricultural Preserve Board and the Adams County Agricultural Land Preservation Board.

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1 inch equals 12500 ft.  
GIS data provided by Adams County Department of Planning & Development, 2005.



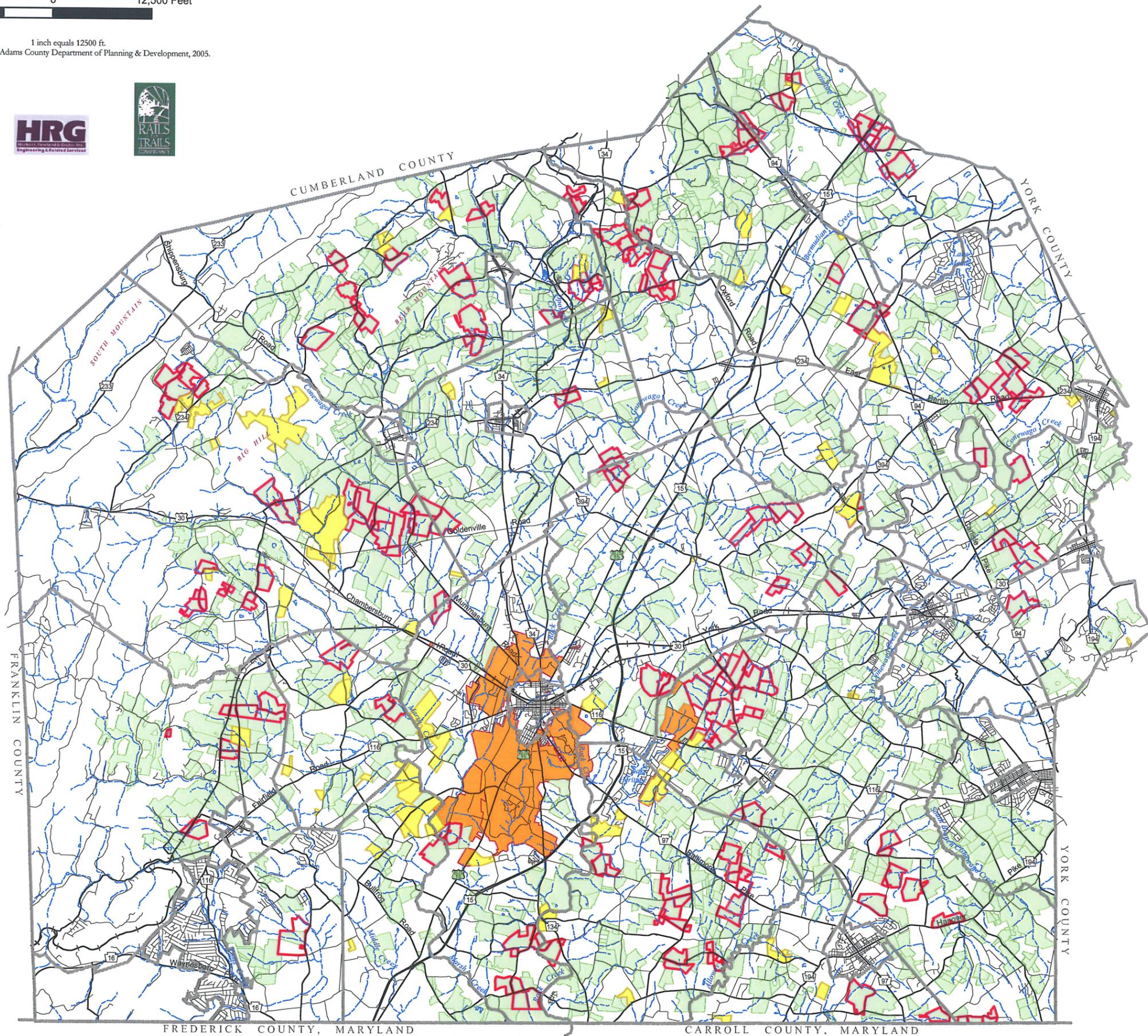
# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania

## Agricultural Preservation

### MAP 2.15

-  Preserved Farms
-  Land Conservancy Properties
-  Agricultural Security Areas
-  Gettysburg National Military Park



FREDERICK COUNTY, MARYLAND

CARROLL COUNTY, MARYLAND

FRANKLIN COUNTY

YORK COUNTY

CUMBERLAND COUNTY

YORK COUNTY

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1 inch equals 12500 ft.  
GIS data provided by Adams County Department of Planning & Development, 2005.



# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania  
**Man-Made Corridors**

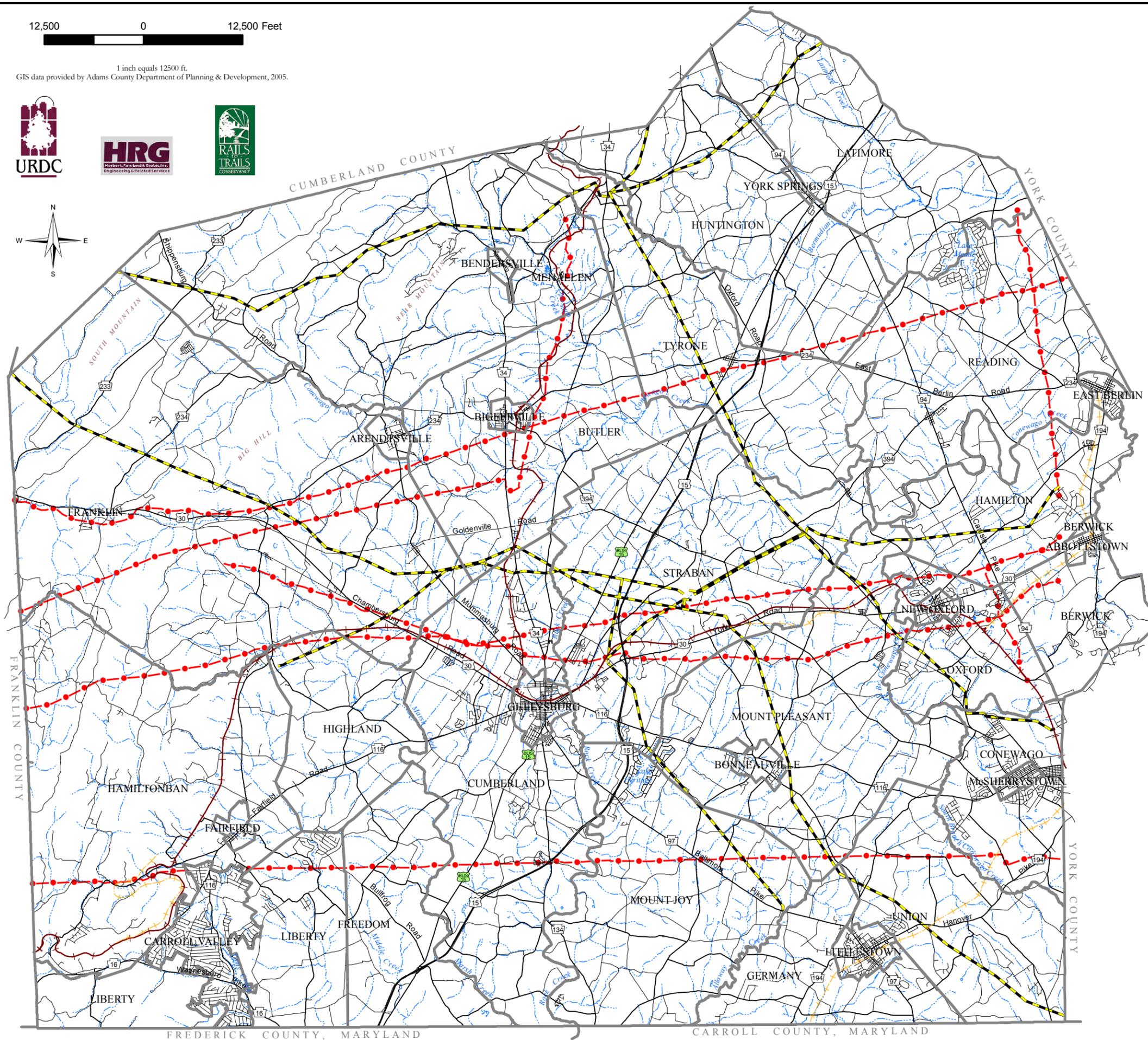
MAP 2.16

### Roadway Classifications

- Interstates
- State Roads
- Active Railroads
- Abandoned Railroads

### Major Utility Corridors

- High-Voltage Electric Transmission Lines
- Pipeline



FREDERICK COUNTY, MARYLAND CARROLL COUNTY, MARYLAND

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Agricultural Security Areas are located throughout Adams County (Map 2.15). In addition, eight townships (Conewago, Cumberland, Freedom, Hamilton, Mt. Pleasant, Reading, Tyrone, Union) have enacted agricultural zoning that strictly limits the development of farmland. Three additional townships (Latimore, Huntington, and Franklin) have adopted alternative forms of agricultural zoning. The county has also applied the effective agricultural provisions of the county zoning ordinance in Butler Township, which has not enacted a local ordinance.

Land within an Agricultural Security Area is eligible to be preserved through the purchase of a conservation easement on the property. Agricultural conservation easements provide protection of farmland that is essentially permanent. The easement can be reviewed after 25 years, and, if the land is no longer agriculturally viable, development rights can be sold to the current owner.

The Adams County Agricultural Land Preservation Board places a priority on the clustering of preserved farmland. The ranking system used by the board to identify farms on which to purchase development rights will give a higher value for clustering potential to land with the following characteristics:

- Closer to other lands protected by perpetual easements or restrictive covenants.
- Not located within a designated growth boundary or developed area.
- Subject to effective agricultural zoning.
- Subject to rural/alternative zoning district.
- The land is in agricultural production.
- Adjacent lands are in an Agricultural Security Area.

Adams County is among the 10 largest apple-producing regions in the nation and supports a diverse local economic infrastructure that includes orchard growing, fruit processing, pallet making and fruit stand operation. The Fruit Belt covers 20,000 acres of rolling hills stretching from southwest to northeast Adams County. Development pressures from Harrisburg to the north and east and Maryland to the south threaten to erode the orchards, the rural character, and the delicately balanced economic system of the region. Joint municipal planning, the creation of local historic districts, the enactment of local zoning ordinances or strengthening of existing ordinances, and farmland/open space preservation programs are all tools that can help to preserve land within the county and avert incompatible development.

The Land Conservancy of Adams County is a member-supported, nonprofit land trust with a mission to permanently preserve the rural lands and character of Adams County. One of the conservancy's success stories was the preservation of 1,011 acres in the Marsh Creek watershed using donated easements and funds from the Pennsylvania Department of Environmental Protection (DEP) to purchase easements. The Adams County Agricultural Land Preservation Program has also helped preserve numerous acres in Adams County. At the local level, Mount Joy Township established an Agricultural Land Preservation Program in 2001. The program has succeeded in preserving over 766 acres of farmland and hopes to preserve at least 5,000 acres within 15 years.

Man-made Corridors

Adams County consists of many different types of man-made corridors, including roads, railroads, trails, electric transmission lines, and major pipelines (Map 2.16). Most of the electric transmission lines are owned by Metropolitan Edison Company (MetEd). Many of the pipelines belong to Columbia Gas of Pennsylvania or York County Gas Co.

Two active and three abandoned railroad lines are located within Adams County. CSX operates service on a major east-west line through the county. The Gettysburg and Northern Railroad Company owns a line from Gettysburg north into Cumberland County on which Pioneer Lines operates scenic train rides (www.gettysburgrail.com).

The Tapeworm Railroad is an abandoned rail segment from the Western Maryland Railroad located at the southwestern portion of the county near Carroll Valley. Another abandoned portion of the Western Maryland Railroad is located south of U. S. 30 between Gettysburg and New Oxford. The segment was abandoned after the Lincoln Highway (U. S. 30) was established and the railroad was realigned. Another abandoned right-of-way, formerly used by the Penn Central Railroad, extends through the southeastern corner of the county connecting Hanover, Littlestown, and Taneytown, Maryland. Other notable railroads include the abandoned East Berlin Branch Railroad and the scenic railroad from Gettysburg to Mount Holly Springs that was designated as a greenway in the 1997 *Adams County Vision for Parks, Recreation, and Open Space*.

The major roadways in Adams County are U.S. Routes 15 and 30, which intersect east of Gettysburg. U. S. Business Route 15 passes through the center of Gettysburg. U.S. Route 15 connects the Harrisburg area to the north and the Frederick, Maryland area to the south and is part of the Grand History Trail and Journey Through Hallowed Ground initiatives. U.S. Route 30 in Adams County is part of the historic Lincoln Highway, the first transcontinental highway in the world designed to accommodate the automobile. Route 30 connects Gettysburg with York to the east and Chambersburg to the west. Some of the other major roads that run throughout Adams County are:

- State Route (SR) 34, north of Gettysburg.
- SR 116, connecting McSherrystown to Carroll Valley.
- SR 134, south of Gettysburg.
- SR 194, south from East Berlin.
- SR 233, north from Caledonia.
- SR 234, between East Berlin and U.S. 30.
- SR 97, from Gettysburg to Littlestown.

Other, less traveled roads, such as Blackstaff Road and Waterworks Road / Pumping Station Road at Sachs Covered Bridge, have historical significance. Utility transmission corridors also traverse the county and could be developed as trails to serve as alternate transportation routes when the land along the corridor becomes developed.

12,500 0 12,500 Feet

1 inch equals 12500 ft.
GIS data provided by Adams County Department of Planning & Development, 2005.

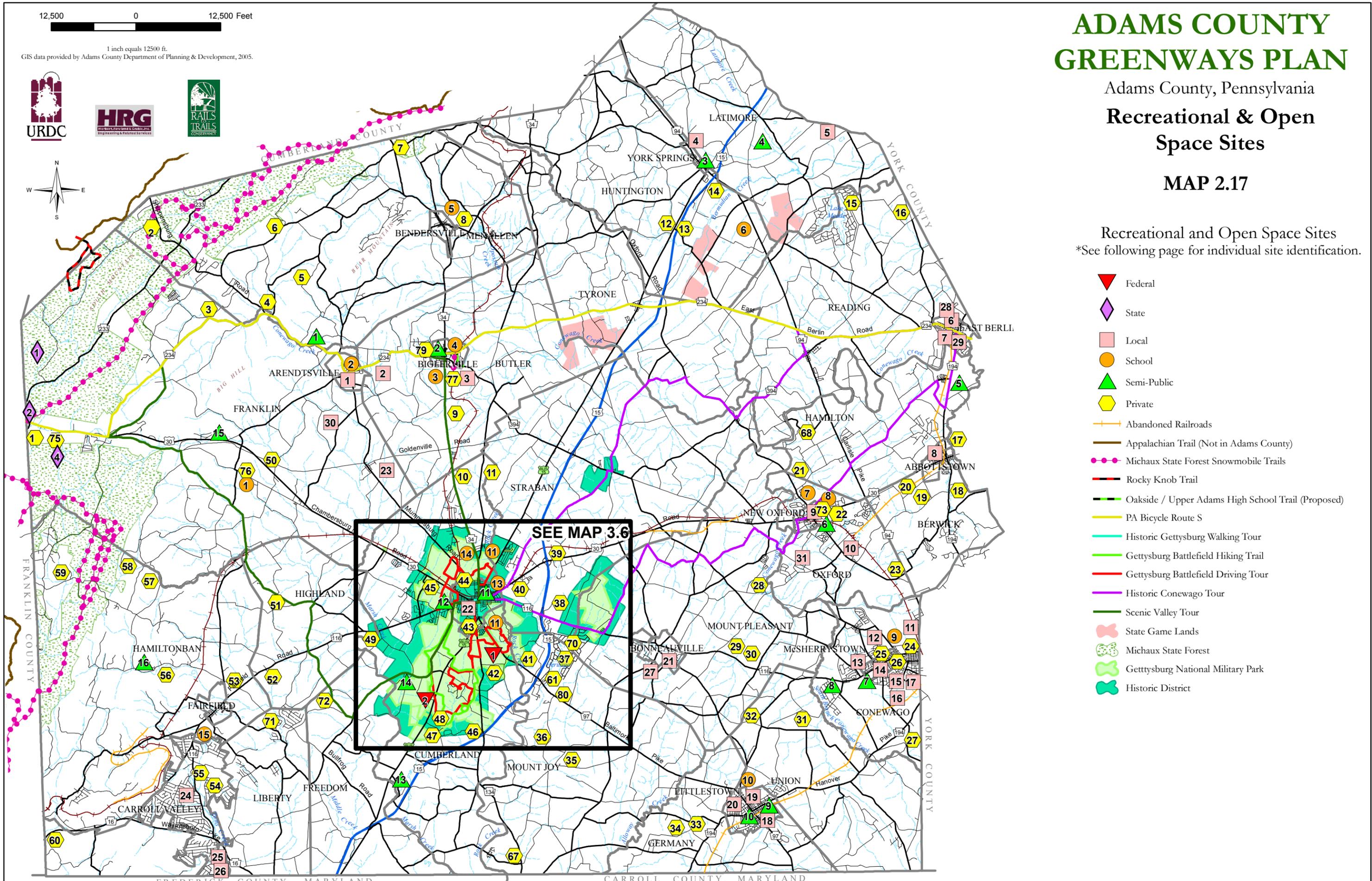


ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania Recreational & Open Space Sites

MAP 2.17

Recreational and Open Space Sites
*See following page for individual site identification.



- Federal
- State
- Local
- School
- Semi-Public
- Private
- Abandoned Railroads
- Appalachian Trail (Not in Adams County)
- Michaux State Forest Snowmobile Trails
- Rocky Knob Trail
- Oakside / Upper Adams High School Trail (Proposed)
- PA Bicycle Route S
- Historic Gettysburg Walking Tour
- Gettysburg Battlefield Hiking Trail
- Gettysburg Battlefield Driving Tour
- Historic Conewago Tour
- Scenic Valley Tour
- State Game Lands
- Michaux State Forest
- Gettysburg National Military Park
- Historic District

Recreation and Open Space Sites

Parklands in Adams County include areas owned by the federal and state government, municipalities, school districts, semipublic, and private organizations. Parks, recreation sites, trails, and conservancy lands (Map 2.17, Table 2.5) are the hubs and spokes of the greenway system and provide important recreational enjoyment for Adams County residents. The Michaux State Forest, the Gettysburg National Military Park, Eisenhower National Military Site, and the state game lands all have restrictions on the type of public activity permitted. Also, a site in Franklin Township has been studied as a potential land conservancy with some pedestrian trails.

The public school systems have both outdoor and indoor facilities that may be used for leisure activities. The six school districts that serve Adams County have policies that provide community groups and other organizations with access to school facilities. The Gettysburg Area School District has a formal agreement which grants the Gettysburg Recreation Department second priority in scheduling school facilities behind school events and programs. Various local active recreation facilities—including fields, courts, and other amenities for games—are located at active recreation sites throughout the county. Softball/Little League fields are the most common active recreation facility on publicly-accessible recreation land in Adams County. The county has only one public swimming pool in Littlestown, and a few trails in Michaux State Forest can accommodate bicycle users. Route S on the Pennsylvania statewide system of bicycle touring routes passes through Adams County using PA Route 234 throughout the county. Lippencote Trail (mountain biking) and the world-famous Appalachian Trail are just beyond the county’s western border in Franklin County. Michaux State Forest includes many trails, such as Rocky Knob. The Strawberry Hill Preserve and the Arendtsville Orchard Trails include many private trails. The North Gettysburg Trail is being developed, and other trail projects in Carroll Valley, Oak Park (near Biglerville), and Hamilton Township are being planned.

PLANNING FRAMEWORK

The *Adams County Greenways Plan* is an important part of the vision and protection that planning provides in Adams County. The following section offers a brief summary of others related planning documents and initiatives.

Adams County Comprehensive Plan (1990)

The most recent, complete version of the *Adams County Comprehensive Plan* dates from 1990. Major aims of the comprehensive plan are to preserve and enhance the physical and environmental characteristics that make Adams County a distinctive place and to encourage new development to locate in areas where infrastructure can be provided most efficiently (“smart growth”). Specifically, the plan calls for the protection of the county’s agricultural economy and heritage, protection of important agricultural areas, groundwater, floodplains, wetlands, mature woodlands, steep slopes, prime farmland, orchards, and habitats of endangered species, as well as the abundant historic

Table 2.5
Recreation Sites in Adams County

| PUBLIC | Schools | PRIVATE¹ | |
|---|---|--|-------------------------------------|
| Federal | 1. Franklin Township School | 1. Caledonia Golf Club | 38. Drummer Boy Inc. Campground |
| 1. Gettysburg National Military Park | 2. Arendtsville School | 2. Camp 18 Arendtsville | 39. Gettysburg Golf Driving Range |
| 2. Eisenhower National Historic Site | 3. New Biglerville Elem. School | 3. Buchanan Valley Rod/Gun Club | 40. Family Fun Center |
| State | 4. Upper Adams High School | 4. Conewago Campground | 41. Mulligan McDuffers |
| 1. Michaux State Forest | 5. Bendersville Elementary | 5. Camp Nawakwa | 42. Artillery Ridge Camping Resort |
| 2. Caledonia State Park | 6. Bermudian Springs Schools | 6. Piney Apple Golf Club | 43. St. Francis School |
| 3. State Game Lands No. 249 | 7. Conewago Valley Schools | 7. Upper Adams Fish/Game Assn. | 44. Gettysburg College |
| 4. Carbaugh Run Natural Area | 8. New Oxford Schools | 8. Shoshonean Rod and Gun Club | 45. Gettysburg Country Club |
| Local | 9. Conewago Twp. Elem. School | 9. Thunderhead Lanes | 46. Round Top Campground Inc. |
| 1. Arendtsville Community Center | 10. Littlestown Schools | 10. Adams Co. Christian Academy | 47. Heritage Resorts Campground |
| 2. Butler Township Ballfield | 11. Gettysburg Schools | 11. Redding Auction Service | 48. Edgewood Lanes |
| 3. Oaksdale Community Park | 12. Keefauver Elem. School ² | 12. Mary Jane Roller Rink | 49. Gettysburg Campground |
| 4. Greist Park | 13. Eisenhower Elem. School | 13. Bermudian Lanes Bowling Center | 50. Jesus Is Lord School |
| 5. Latimore Township Park | 14. James Gettys School | 14. Hershey's Fur Center | 51. KOA Kampground |
| 6. East Berlin Area Community Center | 15. Fairfield Schools | 15. Lake Meade | 52. Granite Hill Campground |
| 7. Kuhn Drive Park ³ | 16. West Manheim Elem. School | 16. East Berlin Fish/Game Club | 53. Mountainview Golf Club |
| 8. Abbottstown Park | | 17. Hanover Country Club | 54. Ski Liberty |
| 9. New Oxford Boro. Comm. Ctr. | SEMI-PUBLIC¹ | 18. York-Adams Co. Game/Fish Assn. | 55. Carroll Valley Golf Club |
| 10. Oxford Township Ballfield | 1. South Mountain Fairgrounds | 19. Lincoln Speedway | 56. Camp Eder |
| 11. McSherrystown Baseball Field | 2. Upper Adams Senior Center | 20. Bridges Golf Course | 57. Adams County Fish/Game Assn. |
| 12. Community Pgd. of McSherrystown | 3. York Springs Senior Center | 21. Nu-Ox Rod and Gun Club | 58. Spring Grove Gun Club |
| 13. McSherrystown Field | 4. Latimore Fairgrounds | 22. Catholic Elementary School-New Oxford | 59. Rouzerville Gun Club |
| 14. Main Street Park | 5. Old Adams County Fairgrounds | 23. Allen's Cartway | 60. Blue Ridge Sportsman Assn. |
| 15. McSherrystown Boro. Comm. Park | 6. New Oxford Senior Center | 24. Magic Elm Skateland | 61. Yingling's Auction |
| 16. Panther Drive Park | 7. McSherrystown Senior Center | 25. Catholic Elem. School-McSherrystown | 62. The Links at Gettysburg |
| 17. Conewago Playground | 8. Brushtown Athletic Association | 26. Delone Catholic High School | 63. Boy Scout Camp |
| 18. Littlestown Community Park | 9. Littlestown YMCA | 27. South Hills Golf Club | 64. Lake View/Shady Grove |
| 19. Historic Crouse Park | 10. Littlestown Senior Center | 28. McSherrystown Fish/Game Protective Assn. | 65. Happy Valley Camp |
| 20. Littlestown Ballfields | 11. Gettysburg Sr./Multi-Purp. Ctr. | 29. Happy Ramblers Motorcycle Club | 66. New Dawn Camp |
| 21. Bonneauville Pgd. & Athletic Field | 12. Gettysburg YWCA | 30. Norm's Auction | 67. New Oxford Social Club |
| 22. Gettysburg Recreation Park | 13. Marsh Creek Park | 31. Trailways Speedway | 68. McMillan Woods Camp |
| 23. Mummasburg Ballfield | 14. Sachs Bridge "Fishing Spot" | 32. Flat Bush Golf Course | 69. Camp El-Wa-Ho |
| 24. Carroll Valley Commons Park | 15. Cashtown Lions Park | 33. Littlestown Fish/Game Assn. | 70. Cashtown Athletic Field |
| 25. Carroll Valley Ranch Park | 16. Strawberry Hill | 34. Quail Valley Golf Course | 71. American Legion Park |
| 26. Carroll Valley Lower Ranch Rec. Area ³ | 17. Biglerville Am. Leg. Ballfield | 35. Cedar Ridge Golf Course | 72. Hampton Athletic Field |
| 27. Northwest Adams Park ³ | 18. Oaksdale Community Park | 36. Meadowbrook Golf Course | 73. National Apple Museum |
| 28. East Berlin Community Park ³ | | | 74. Mt. Joy Twp. Neighborhd. Trails |
| 29. Abbottstown Street Site ³ | | | |
| 30. Oxford Township Feeser Site ³ | | | |
| 31. Larry B. Feeser Memorial Park ³ | | | |

¹ Other semipublic and private organizations may have some recreation facilities, such as a church basketball court or volunteer fire company meeting room, which are ancillary to the primary use and are not included in the inventory.

² Facility not currently operating. Private sites 62 through 66, and 69 are no longer recreational uses and were purposely omitted

³ Currently undeveloped

Sources: Adams County Office of Planning and Development, URDC.

resources. The future land use map contained in the comprehensive plan suggests that resources should be protected as an interconnected open space system anchored by stream corridors.

The plan's circulation chapter calls for scenic excursion routes highlighting the county's visual and historic resources and supports the broad goal of reducing reliance on the automobile. Specifically with regard to bicycles, the plan recommends low-cost physical improvements on existing and future roads that would accommodate bicycles.

The proposed countywide open space network is to be implemented through municipal land use regulation, expansion of existing state and federal land holdings, residential cluster development, conservation easements, pedestrian access easements, and outright purchase by governmental and nonprofit agencies.

Adams County Vision for Parks, Recreation and Open Space (1997)

The county's most recent comprehensive look at recreation and open space contains a section completely dedicated to greenways. The plan proposes to strengthen the county's naturally occurring open space system that consists of floodplains, associated wetlands, steep slopes, and prime farmland. The plan classifies greenways into two groups: those that occur along streams (labeled *streamways*), and those that follow other linear landscape features, such as abandoned railroads, historic or scenic roads, or utility corridors. Streamways are divided into three types:

- *Active streamways* — Suited for both conservation and selected recreation pursuits, such as hiking, equestrian use, and fishing
- *Passive streamways* — Appropriate for intense conservation efforts, with only the most limited recreation activities, such as fishing access in designated locations
- *Stream conservation corridors* — Water quality and habitat protection are primary goals, with little or no public access

The plan provides 16 implementation recommendations, covering a full range of conservation and recreation goals. Property owners along streams are encouraged to follow best management practices and to consider providing conservation easements along waterways. Municipalities are charged with establishing stream corridor protection areas in zoning ordinances, within which development is prohibited or strictly controlled. The municipalities are also encouraged, with the help of county funding, to acquire title or easements to the most environmentally significant lands within their jurisdictions. Utility companies are encouraged to open strategic rights-of-way to the public. Recreation and tourism options are to be provided through trail links as well as scenic road networks. The networks should highlight the county's natural and historic heritage sites as much as possible. The various arms of Adams County government are to provide technical and financial support through a bond issue in order to assist municipalities, nonprofit organizations, and landowners in protecting, acquiring, or developing greenways.

In general, the potential for active greenways is higher within boroughs and adjoining areas that are designated for higher density development. Within some boroughs, urban greenways along streams

or sidewalks may extend through historic neighborhoods. The Gettysburg Pathway Project, which focuses on the Baltimore/Carlisle Street corridors as well as the downtown portions of York and Chambersburg Streets, is a type of urban greenway. Merchants and other property owners are increasingly using sidewalks for plantings and other green displays. The greening of urban sidewalks adds greatly to the ambience of town centers. Entrances to borough cores also present another opportunity for greening the suburban gateways to the county's historic boroughs. Added landscaping, provisions for pedestrians and bicyclists, and, whenever possible, the undergrounding of utilities all enhance the image of many town entrances.

Adams County Natural Areas Inventory (2004)

As of 1996, Adams County contained 41 locations with unique, threatened, or endangered species of plants or animals.²⁴ The natural areas inventory provided county and municipal planners and leaders with specific direction in protecting natural habitat. The locations and significance of Adams County's natural areas are further described in the natural features section of the *Adams County Greenways Plan*.

Adams County Green Ribbon Commission Final Report (2004)

In 2003, the Adams County Board of Commissioners charged a panel of county citizens with developing a series of recommendations to manage and fund future recreation, open space, and conservation initiatives. The commission's final report, *An Agenda for our Future*, notes that, since the completion of the 1997 parks, recreation, and open space plan, the county has seen substantial population growth (4th highest in the state from 1990–2000) with virtually no additional public recreation or open space lands preserved. The study mentions that 23 of Adams County's 41 important natural areas have no land use protection in place. Similarly, many of the county's National Register historic sites have no protection or interpretation.²⁵

The first and foremost funding recommendation in the report is to develop a bond initiative of \$20–30 million. The proposed program, to be administered by a bond referendum committee, would be divided into education/planning grants, dedicated funding, and competitive funding. The report also calls on the county to take a lead responsibility in supporting open space preservation and conservation measures, regardless of the outcome of a bond issue. The county is viewed as a lead educator of municipal officials and county citizens, fostering partnerships between entities. The report recommends pursuing a countywide greenways plan, a bicycle and pedestrian plan, a scenic and historic roads plan, and updated inventories of natural and cultural features. The report

²⁴ The Nature Conservancy, *A Natural Areas Inventory of Adams County, Pennsylvania*, 1996

²⁵ The websites of the Pennsylvania Historical and Museum Commission (<http://www.phmc.state.pa.us>) or the National Register of Historic Places (<http://www.nps.gov/nr/listing.htm>) contain more information about the process of listing/registering historic places.

recognizes that the recommended tasks may require additional staffing and/or advisory boards at the county level.

Adams County Water Supply and Wellhead Protection Plan (2001)

The county water supply and wellhead protection plan serves a dual role: evaluating and providing solutions for community water systems and serving as a model for protecting the resource areas that surround wells in the county. The plan also draws attention to the negative effects of land development on water quality and quantity. A majority of the proposed solutions are focused on land use planning. The plan encourages enhanced zoning protection for floodplains, wetlands, riparian corridors, steep slopes, and woodlands in order to maximize water infiltration and water quality. At specific well locations, the plan recommends protective buffers surrounding the immediate well areas, and land use controls in the outlying areas of influence. The plan also recognizes that areas with diabase geology, including portions of the Gettysburg Plain, have poor groundwater yields.

North Gettysburg Area Trail System Feasibility Study (2000)

The trail study examined the possibility of off-road and on-road bicycle/pedestrian links between the north side of Gettysburg Borough and Gettysburg Area High School, as well as between neighborhoods and major destinations in surrounding areas. The study proposes five types of facilities:

- *On-Road Routes* — including on-road bike lanes, signed shared roadways (“bike routes”), and shared roadways (the road as constructed)
- *Off-Road Routes* — usually following stream-based or railroad-based greenways
- *Gettysburg College Trail Routes* — sharing existing and proposed college paths at Gettysburg College
- *National Park Service On-Road Routes* — sharing the existing automobile drives through Gettysburg National Military Park
- *National Park Service 1863 Historic Lane Routes* — reestablishing now-obliterated routes that existed during the Battle of Gettysburg

The plan assigns the highest priority to the proposed trail connection between Gettysburg Area High School and Gettysburg Borough. All proposed locations have been noted within the *Adams County Greenways Plan*.

Gettysburg Bicycle Connection Planning Session (2005)

Participants in Gettysburg Bicycle Connection planning session included representatives from the Adams County Office of Planning and Development, Gettysburg Borough Council, Cumberland Township, the National Park Service, and PennDOT. The primary focus of the session was to develop conceptual bicycle connections between the North Gettysburg Trail and the new National

Park Visitor Center south of Gettysburg Borough. The proposed links would take the form of bike lanes, shared roadways and paved shoulders. The study also encouraged end-trip facilities to promote bicycle use, including bike parking, bike rentals, bike repairs, and links to public transit.

The Lincoln Highway Heritage Corridor Study (2000)

The Lincoln Highway Heritage Corridor (LHHC) is a state-designated heritage park consisting of a touring route along the original alignment of U.S. 30 from Westmoreland County near Pittsburgh to Abbottstown in Adams County. An overriding goal of the LHHC is to promote economic development through tourism. The study calls on chambers of commerce and visitors bureaus to market and promote the corridor through printed materials, organized tours, and visitor information services. Governmental jurisdictions are to assist with physical improvements and viewshed preservation. Recommended projects include:

- Better identifying historic alignments of Lincoln Highway with gateway markings.
- Improving landscaping in the boroughs and villages along Lincoln Highway.
- Facade and other visual improvements on private properties (with assistance).
- Acquisitions and easements of the most visually sensitive locations.
- Specialized driving tours, including a side trip to the Fruit Belt.

General Management Plan of the Gettysburg National Military Park (1999)

The National Park Service has several efforts underway to enhance visitor experiences at Gettysburg National Military Park. The 1999 general management plan for the park included the following major recommendations:

- Construction of a new, larger visitors center on Baltimore Pike south of Gettysburg Borough, along with stream and wetland restoration
- Rehabilitation of the David Wills House in Downtown Gettysburg for the purpose of fully interpreting the famed Gettysburg Address
- Reestablishment of historic lanes that existed at the time of the battle for use by pedestrians and equestrians
- Restoration of the natural landscape to the appearance of 1863, which entails replacing certain woodlands with scrub-shrub cover, converting crop fields to open meadows, and reestablishing peach orchards.

Planning Initiatives Underway as of 2008

Many other planning activities were underway as of 2006. The *Adams County Greenways Plan* acknowledges the effort of all the dedicated professionals and volunteers in helping to preserve the

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heritage of the county and increase the quality of life for all county residents through the following planning programs:

- *Grand History Trail* — A multistate effort is underway, headed by the Rails-to-Trails Conservancy, to create a 230-mile loop trail connecting Gettysburg, Hanover, York, Baltimore, Annapolis, Washington DC, and Frederick.
- *Hamilton Township Rail Trail* — Hamilton Township is establishing a trail along an old railroad bed and power line corridor that will connect East Berlin with Abbottstown.
- *Carroll Valley Trail* — Fairfield and Carroll Valley boroughs are beginning to implement a plan to establish bicycle/pedestrian connections between the Fairfield School District campus and the public parks and facilities within Carroll Valley Borough.
- *Hanover Trolley Trail* — The York County Rail Trail Authority is developing a trail on an abandoned trolley grade between York and Hanover, terminating less than a mile from the Adams County border.
- *South Mountain Conservation Landscape Initiative (CLI)* — The South Mountain CLI has been established by the Pennsylvania Department of Conservation and Natural Resources to address the conservation of the globally significant natural, cultural, agricultural, and recreational resources of the South Mountain region. Adams County includes a significant portion of the South Mountain region and a variety of important natural, cultural, agricultural, and recreational resources associated with South Mountain. Therefore, Adams County government and several local municipalities and conservation organizations have become active participants in the South Mountain Partnership (SMP). Through the SMP, the South Mountain CLI addresses the issues of conserving important resources and providing appropriate recreation opportunities for visitors. The ultimate goal of the South Mountain CLI process is to ensure that conservation activities from the various partner organizations are coordinated to ensure the protection of the South Mountain resources.
- *River Basin Commissions* — Both the Susquehanna River Basin Commission and Potomac River Basin Commission are calling on local governments to pursue enhanced environmental regulations while encouraging property owners to use Best Management Practices for the purpose of enhancing water quality in the two rivers.
- *Greater Hanover Alliance* — A group of concerned citizens and municipal officials wishes to draw attention to and address the negative impacts of widespread development on water resources in the Hanover area. In Adams County, the alliance includes the watershed of the South Branch of the Conewago Creek.
- *North Gettysburg Trail Feasibility Study* — The county also completed a feasibility study to develop the North Gettysburg Trail. The trail is currently in design and will connect Gettysburg to the site of Gettysburg Area High School.

## Adams County Green Space Grant Program

The Adams County Commissioners unanimously adopted the Adams County Green Space Grant Program on 9 May 2007. The program will be funded with an allocation of \$1,000,000 from the county's general budget in 2008 as matching funds to preserve land in Adams County. Eligible applicants will include municipalities, either individually or jointly, and 501(c)(3) organizations with an identified focus on agricultural preservation, open space/natural resource preservation, parks/recreation, or historical/cultural land preservation. In general, projects will require a minimum 50% match, with one exception: projects submitted by a multimunicipal applicant will require a minimum 40% match.

The program includes four categories of funding:<sup>26</sup>

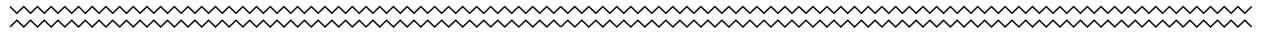
- *Agricultural Land Preservation*—lands that sustain the agricultural economy of Adams County and local municipality (60% of total available funds with an annual minimum allocation of \$600,000); Based on the allocation of \$1,000,000, a total of \$600,000 will be available for agricultural land preservation in 2008.
- *Open Space Land Preservation*—lands that protect water or other natural resources or provide wildlife habitat. (20% of total available funds); Based on the allocation of \$1,000,000, a total of \$200,000 will be available for open space land preservation in 2008.
- *Parkland and Active or Passive Recreational Land Preservation*—lands such as subregional parks, community parks, and neighborhood parks or lands that provide active or passive recreational opportunities for current and future generations. (10% of total available funds; 80% of which will be allocated for passive recreational use and 20% for active recreational use) Based on the allocation of \$1,000,000, a total of \$80,000 will be available for passive recreational use, and \$20,000 will be available for active recreational use in 2008.
- *Historical or Cultural Resource Land Preservation*—lands listed in or deemed eligible for listing in the National Register of Historic Places. Other lands that are determined by the Adams County Green Space Advisory Committee to be historically or culturally significant may also be considered eligible for Green Space Grant Program funds. (8% of total available funds) Based on the allocation of \$1,000,000, a total of \$80,000 will be available for historical or cultural resource land preservation in 2008.

## Land Conservation Activities and Programs in Adams County

The Land Conservancy of Adams County (LCAC) is a member-supported, nonprofit land trust with a mission to permanently preserve the rural lands and character of Adams County. One of major

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<sup>26</sup> Wording taken from *Adams County Green Space Grant Program Guidelines, Adopted May 9, 2007*

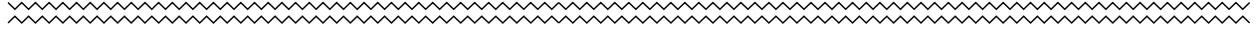


accomplishments of LCAC was preserving 1,011 acres in the Marsh Creek watershed using donated easements and funds from the PA Department of Environmental Protection (DEP) to purchase easements. Another important acquisition involved several hundred acres along Flohrs Church Road in Franklin Township. Overall, the conservancy holds 91 easements protecting nearly 5,500 acres.

The Adams County Agricultural Land Preservation Program has worked to preserve numerous acres of farmland in Adams County for nearly two decades. Farms to be considered for easement acquisition are ranked using a rigorous scoring system. Top scoring applicants are offered conservation easements to preserve valuable farmland in perpetuity. Overall, the program has resulted in the preservation of 125 farms totaling over 17,000 acres.

At the local level, Mount Joy Township and Union Township have also established agricultural land preservation programs. The Mt. Joy Township Agricultural Land Preservation Program was established in 2001 and has succeeded in preserving over 766 acres of farmland. The township hopes the program will preserve at least 5,000 acres within 15 years.





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## VISION FOR ADAMS COUNTY GREENWAYS

The *Adams County Greenways Plan* begins with a vision. The vision of the *Adams County Greenways Plan* is easily summarized in a few key phrases:

...a *network*  
of *different types of greenways*  
*throughout Adams County*  
that serve a *variety of purposes...*

Yet within the vision lies the hard work and dedication of countless residents, professionals, volunteers, and others who know and care about Adams County. Greenways are one tool that should be used to enhance the physical legacy of one of America's most historic places.

The following chapter presents a proposed greenway system for Adams County. The portions of the proposed system represent elements of the Adams County landscape that should be considered for preservation through either the private sector or thorough public/private partnerships, whenever such partnerships are appropriate. The chapter includes information on the following topics:

- Greenway Organizing Principles
- Greenway Issues
- Factors Used to Develop the Proposed System
- Proposed Adams County Greenway System
- Greenway Design Considerations

### GREENWAY ORGANIZING PRINCIPLE

The previous chapter provides a thorough inventory of existing natural, cultural, historic, and landscape resources within Adams County. The resources are vast and varied and form a complex and often overlapping matrix of natural and man-made features. The primary organizing principle behind the proposed Adams County greenway system is connecting the built and natural environments.

#### Connecting the Built and Natural Environments

As discussed in chapter 2, Adams County and the Gettysburg area are frequently cited as a classic example of Central Place Theory. Developed by German geographer Walter Christaller in 1933,

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Central Place Theory attempts to explain the size and spacing of human settlements. Christaller argued that villages are hierarchically arranged around a dominant central place with outlying supporting communities located at regular intervals along transportation corridors. Although many other factors must be considered when analyzing the location of a village or city, Central Place Theory is based on economic principles, specifically involving the function of settlements as markets for goods and services.

When viewing the spatial characteristics of Adams County’s built environment, it is evident that Gettysburg Borough, the county seat, developed as a classic central place, and that smaller villages and settlements were established at regular intervals surrounding Gettysburg. Early roads, many of which were inventoried in Chapter 2, connected each village to Gettysburg.

Generally, two concentric rings of villages developed, the first approximately one-half day’s wagon ride from Gettysburg (for example, Bonneauville, Mummasburg, Hunterstown), and the second approximately a full day’s ride (for example, New Oxford, Littlestown, York Springs). This development pattern, which emerged by the early 19<sup>th</sup> century, and is still evident today, resembles a 13-spoke wheel centered on Gettysburg (Map 2.3).

Chapter 2 also summarizes the wide variety of natural, agricultural, and landscape components of Adams County’s physical geography. The natural setting includes four physiographic provinces (South Mountain, Gettysburg Lowland, Piedmont Upland, and Piedmont Lowland) containing the landforms and water features that characterize the Adams County landscape. Mountain ridges dominate the western portion of Adams County, and the county contains the headwaters of virtually all streams flowing in the county. In the eastern and southern portions of Adams County, some streams are surrounded by wide, heavily forested floodplains and associated buffers. Many Adams County landscapes consist of vast and scenic agricultural settings which contribute to the county’s dramatic visual and rural character.

The proposed Adams County greenways system identifies, protects, develops, and enhances connections between the built environment and the natural environment and landscapes. In many settings, defining connections, and ultimately greenways, can be a relatively simple task as the man-made development patterns can be easily related to the broader natural and physical setting. In Adams County, the relationship between the built environment and the natural environment cannot be so simply described.

With the exception of South Mountain, Adams County has no dominant physical or natural features, such as a large river, that clearly illustrate the history of settlement patterns. The “Central Place” development pattern is, in essence, superimposed on the natural environment, principally the rolling landscape of the Gettysburg Plain. The county’s historic development pattern is not dependent on, and is, therefore, not directly associated with, the natural network of streams or other natural or physical features in the county.

Consequently, many residents may not be aware of the ecologically important relationships between the built and natural environments. Many connections are not immediately visible to residents

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because the built environment (such as roadways) crosses, rather than follows, many natural settings (such as streams). Often, only small portions of the natural feature are generally known or readily visible.

## Hubs, Nodes, and Spokes

The *Adams County Greenways Plan* uses a system of hubs, nodes, and spokes to make connections between the built and natural environments: residential, commercial, and business landscapes (hubs and nodes) are linked to parks, preserves, and open spaces via greenway and physical corridors (spokes). For residents, the links (connections) can mean improved access to the outdoors for recreation, transportation, and participation in activities to improve health, fitness, and quality of life.

- **Hubs:** Hubs are large centers of extensive human activity. Examples include the boroughs and villages, agricultural areas (e.g., the Fruitbelt, Hanover Shoe Farms), large recreational facilities, and extensive protected areas, such as Michaux State Forest and Gettysburg National Military Park.
- **Nodes:** Nodes include natural, recreational, cultural, and historical places of interest, origin, or destination. Nodes are smaller destinations than hubs and typically contain only one facility. Examples include:
  - Local parks (e.g., Carroll Valley Lakes, Gettysburg Borough Recreation Park, Littlestown Borough Park, and Oakside Park).
  - Outdoor recreation areas (e.g., state game lands, Strawberry Hill Nature Center, South Mountain Fairgrounds).
  - Historical sites (e.g., Villages of Cashtown and Hunterstown, Johns Burnt Mill Bridge).
  - Natural areas and open spaces that provided critical wildlife habitat (e.g., Glatfelter Tree Farm, Buchanan Valley, Adams County Fruit Belt).
- **Spokes** Spokes are linear connecting elements, including roads, historic roadways, and railroad lines, that act as linkages between the hubs, nodes, and communities within Adams County. Spokes are also identified as natural greenway corridors, such as floodplains and ridgelines.

The proposed Adams County greenway system is composed of greenways linking hubs, nodes, and communities, based on citizen, county, and municipal input. The identified greenway corridors provide connections between interesting destination points and attractions, increase recreational and tourism opportunities, and link population centers to recreation and community facilities. Additionally, the greenways plan aims to facilitate the protection of greenway corridors that preserve open

space and protect high priority natural resources while maintaining and enhancing the overall Adams County experience.

## GREENWAY ISSUES

The *Adams County Greenways Plan* begins with issues to address as greenways move forward toward implementation. The issues were identified throughout the planning process, in meetings with county staff, the steering committee, the public, and other stakeholders in Adams County. The information below is a summary of each issue with elaboration or examples of addressing the issue in other areas.

- *Ownership/maintenance* — Long-term ownership and maintenance of greenways is a major consideration. Greenways are long and linear, often crossing municipal boundaries. Different greenway/trail systems have different ownership and management options. In cases where public access is granted to land originally in private ownership, the greenway/trail is often created by easement—a mutual agreement between the owner and the community that allows access to a small portion of the land for recreational use. The greenway may or may not include a trail. In many cases, the land may remain in private ownership with an easement that simply prevents development of the land (referred to as a *conservation easement*).

The public sector also offers several options for ownership of greenways, including:

- MUNICIPALITY – Greenways within a municipal boundary are usually owned and, if necessary, maintained by the municipality, typically through the municipal recreation and parks department, such as the recently completed Radnor Township rail trail outside of Philadelphia ([www.radnor.com](http://www.radnor.com)).
- AUTHORITY – The York Commissioners formed the York County Rail Trail Authority in 1990 to develop recreational trails throughout the county ([www.yorkcountyrailtrails.org](http://www.yorkcountyrailtrails.org)).
- VOLUNTEER – In the Whitehall Township area, north of Allentown (Lehigh County), volunteers have formed the Ironton Rail Trail Oversight Commission to maintain the trail on the former rail line ([www.irontonrailtrail.org](http://www.irontonrailtrail.org)).
- *Lack of public understanding/acceptance* — Additional education and awareness about greenways concept in Adams County. Many people equate greenways with trails and public access rather than seeing greenways as a means of land preservation. Greenways are a tool for land preservation, with possible recreational and educational benefits in some cases.
- *Lack of parallel relationship between waterways and roads* — Adams County is located near the top of watersheds. Therefore, few waterway segments are navigable. As a result, the county was settled primarily by land, and, to do so, trails were blazed without regard to waterways.

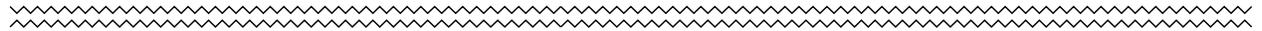
Today's roads reflect yesterday's trails and, by and large, do not parallel county waterways. Instead, roads cross over waterways, giving the traveler no visual sense of streams. Therefore, residents in Adams County may not be as aware of local waterways as residents in other parts of the state.

- *Connections to regional greenways* — The Appalachian Trail and the Pennsylvania Highlands are two major trails that pass near Adams County and connect to other trail systems nationwide. The *Adams County Greenways Plan* should consider places that an Adams County system might connect to other regional systems to provide a continuous hiking opportunity for Adams County residents.
- *Natural Areas Inventory sites* — Greenway designations can help preserve critical landscapes and parcels. Another recent planning effort by Adams County that had preservation as a primary purpose was the *1996 Natural Areas Inventory of Adams County* (NAI), prepared by The Nature Conservancy. The NAI identified plant and animal species in the county that are of national, state, and local concern and whose status warrants protection. The greenways plan should use the NAI as a focus for land preservation, if possible, by identifying concentrations of species as a greenway node without public access.
- *Need to plan for greenways* — One of the important issues raised in the focus groups was the need to plan for greenways, which involves many different groups and interests. Relevant points raised in the focus groups include:
  - Zoning is an effective means of planning for open space.
  - Developers and municipalities need to cooperate to maximize open space and greenways.
  - Groups with similar interests could form one large consortium to increase effectiveness.

Planning for greenways involves different levels of government performing different planning functions. State government provides broad statewide policy regarding multicounty resources for greenway systems, such as rivers and mountains, as well as financial resources for counties to develop county plans and projects. County government develops county greenway policy, offer assistance to local governments in developing greenways that support county policy, and may develop county greenway networks. Local governments develop and administer land use policy and may acquire and develop local greenways and trails.

## **FACTORS USED TO DEVELOP THE PROPOSED SYSTEM**

The *Adams County Greenways Plan* proposes a system of greenways based on four key factors emanating from the background analyses. The four factors, and the resultant elements of the proposed greenway system, reflect the priorities generated during the planning process:



### 1. Land Preservation

- Fruit Belt
- Unique agricultural areas
- Standardbred horse farms
- South Mountain Faces
- South Mountain



**Figure 3.1** — Buchanan Valley is a classic example of a potential landscape greenway under private ownership.

In the face of strong development pressure, land preservation is clearly the highest priority for the greenway system in Adams County. Greenways are often discussed in terms of public access and trails, but preserving land requires no public access. Conservation easements and many other tools are available that allow a landowner to realize the value of a property without developing. The Fruit Belt, other unique agricultural areas, the South Mountain Faces, and South Mountain itself are all areas where land preservation efforts should be concentrated. Landscape greenways can be a useful tool for land preservation and an important element of the greenway system.

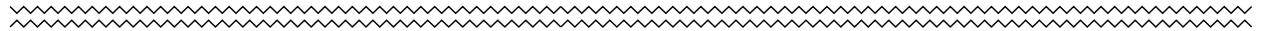


**Figure 3.2** — The Conewago Creek in the area of the South Mountain Faces known as The Narrows, is an example of an area targeted for land preservation.



**Figure 3.3** — The Conewago Vistas area is identified in the plan as a landscape greenway.





## 2. History

- Central Place / small villages
- Battlefield



**Figure 3.4** — The station for the scenic railway in Gettysburg is an example of Americana found in the small boroughs throughout Adams County.



**Figure 3.5** — The view from the Pennsylvania Memorial shows the Codori farm on the historic Gettysburg Battlefield today. The 14<sup>th</sup> Vermont Infantry Monument is in the foreground. The Hancock Wounding Monument is across the road in shadow, and the 16<sup>th</sup> Vermont Infantry Monument is in sunlight at the far left.

In the arena of history, Adams County needs no introduction. Gettysburg is internationally known for its place in the American Civil War. Interestingly, the research for the *Adams County Greenways Plan* found that the county is almost as well known among historians for the small towns and cultures spawned throughout the county. Gettysburg and the growth of the surrounding small towns are a classic example of the economic model known as Central Place Theory. The towns and connecting roads provide one network of hubs and spokes for the greenway system that offers a historical context.



**Figure 3.6** — The Latimore Creek flowseastward from northern Adams County into York County and, eventually, into the Susquehanna River.

## 3. Natural Features Protection

- Stream preservation
- Aquifer / water supply protection
- Unique geology

Previous planning studies have identified the importance of water supplies in Adams County. Preserving stream quality through stream bank preservation and aquifer protection is a high priority in the county. Greenways can play a key role in preserving land along streams, whether or not public access is granted for a trail or for fishing. The greenway system can also include sites of unique

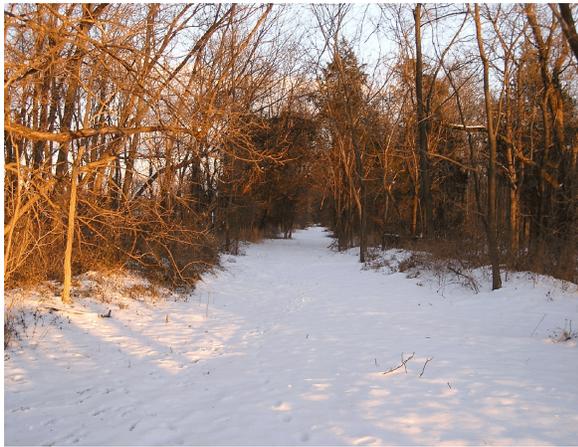


geology, such as Round Hill and the Pigeon Hills slopes, that are preserved through conservation easements or other means.

#### 4. Connections / Trails

- Recreation
- Quality of Life
- Linear rights-of-way

The fourth and final consideration used to develop the proposed greenway system is connections and trails. The greenway system does have a recreational element that adds considerably to the quality of life, as evidenced by greenway systems in other areas of the country. By definition, connections and trails require some public access. Linear rights-of-way, such as abandoned railroad rights-of-way, utility corridors, low-volume roads, and road shoulders, often provide the necessary connections to complete a greenway system.



**Figure 3.7** — Abandoned rail lines are excellent examples of linear rights-of-way within a greenway system and make excellent hiking trails—even in winter.



**Figure 3.8** — The Adams County Fairgrounds is one example of recreational places within the county—another category of lands that greenways can link together.

## PROPOSED ADAMS COUNTY GREENWAY SYSTEM

The proposed Adams County greenways system includes more elements than can be illustrated on a single map. Therefore, the *Adams County Greenways Plan* presents the system concept on a series of illustrations. The system is composed of three elements:

- Significant Riparian Greenways
- Significant Landscapes and Green Spaces
- Potential Trail Corridors

## Significant Riparian Greenways

Riparian areas are lands located along a water course and containing the natural vegetation and animal life associated with flowing or stationary water. The plan classifies riparian greenways into three distinct types:

- **Active** (Figures 3.9 through 3.11) — Trails are strongly recommended whenever opportunities for public access arise. Greenways are designated as “active” based on the connections offered to hubs and other major sites in the county as well as potential connections to greenway systems in Maryland.
- **Accessible** (Figures 3.12 and 3.13) — Public access is only available at selected points, often for specific activities, such as fishing. Informal fishing access points are already available along many of the stream sections identified as accessible greenways, such as along the Conewago Creek.
- **Passive** (Figures 3.14 through 3.18) — Limited or no public access is provided.

The plan recognizes the difficulty of developing greenways when most of the land is owned by many different private parties. However, trails, fishing access, and other public elements are important parts of both the recreation and educational component of greenways, and the plan identifies all three types of riparian greenways to encourage cooperation in developing the greenway system. For instance, informal fishing access points are already available along many of the stream sections identified as accessible greenways, such as along the Conewago Creek.

Each type of greenway is illustrated with a development concept (Figures 3.9, 3.12, and 3.14) and some explanatory details (Figures 3.13, 3.15, and 3.18) and sections (Figures 3.10, 3.11, 3.16, and 3.17). The illustrations should be used by municipalities, landowners, nonprofit organizations, and others interested in the greenway system to generate specific ideas and locations for developing individual greenway segments.

The plan includes riparian greenways (Map 3.1) along all 12 significant waterways in the county, seven flowing southward into Maryland and the Potomac River and five flowing eastward into the Susquehanna River.

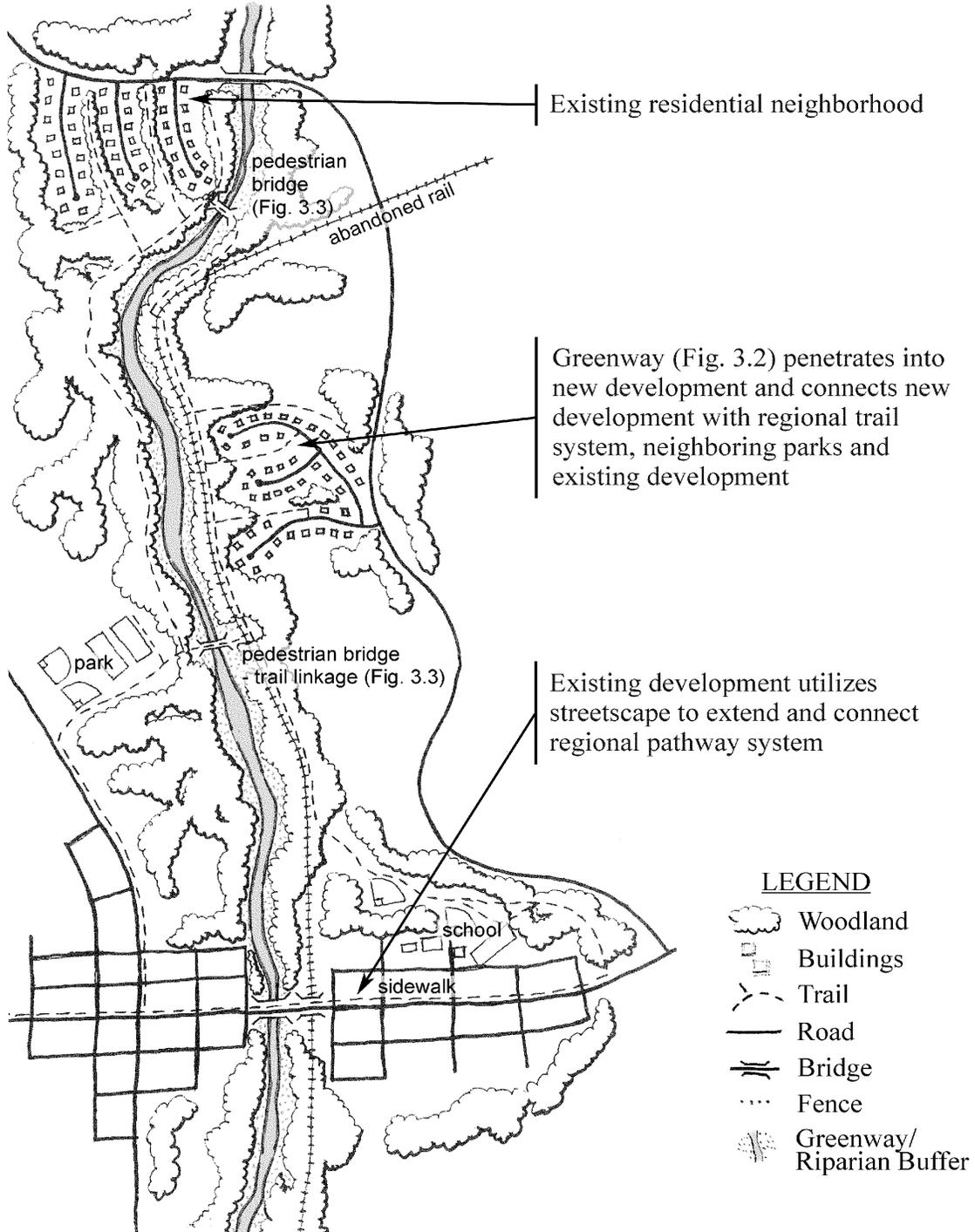
### Proposed Potomac Watershed Greenways

- The plan proposes the **Toms Creek Greenway** as a *passive*<sup>27</sup> greenway from the fork with Copper Run in the headwaters for a distance of approximately 2.4 miles to approximately Iron Springs Road. Near Iron Springs Road, the plan envisions a trail along the greenway for

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<sup>27</sup> Only two of the three types of greenways (active and passive) are proposed for the seven greenway segments proposed in the Potomac River watershed within Adams County.

Figure 3.9  
**Active Greenway Concept**



Source: URDC, 2007

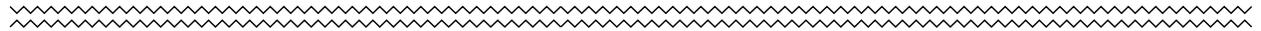
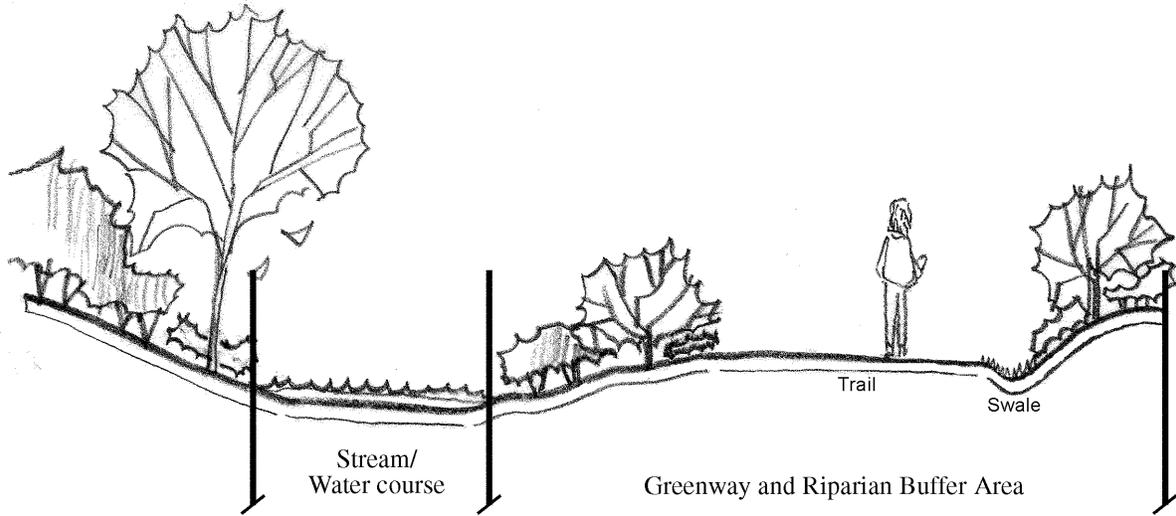
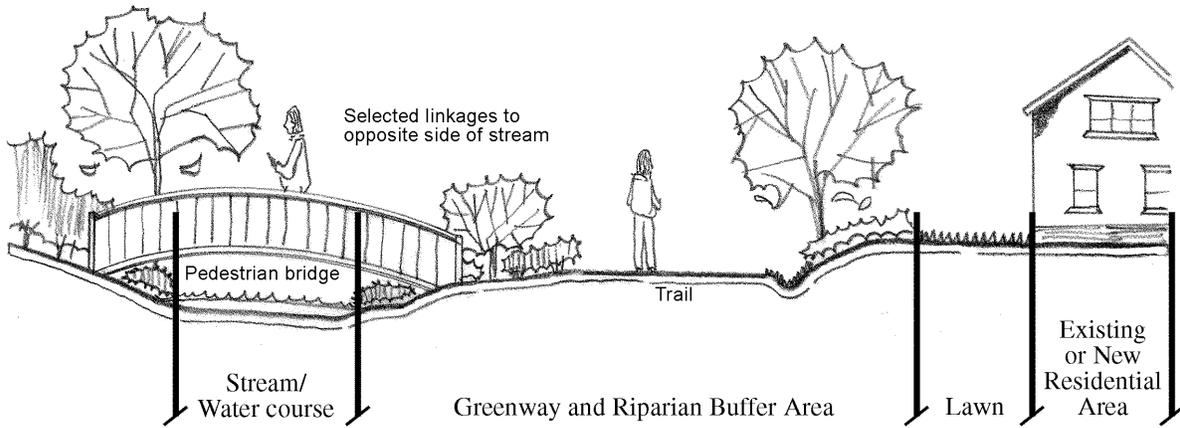


Figure 3.10  
**Active Greenway Section**



Source: URDC, 2007

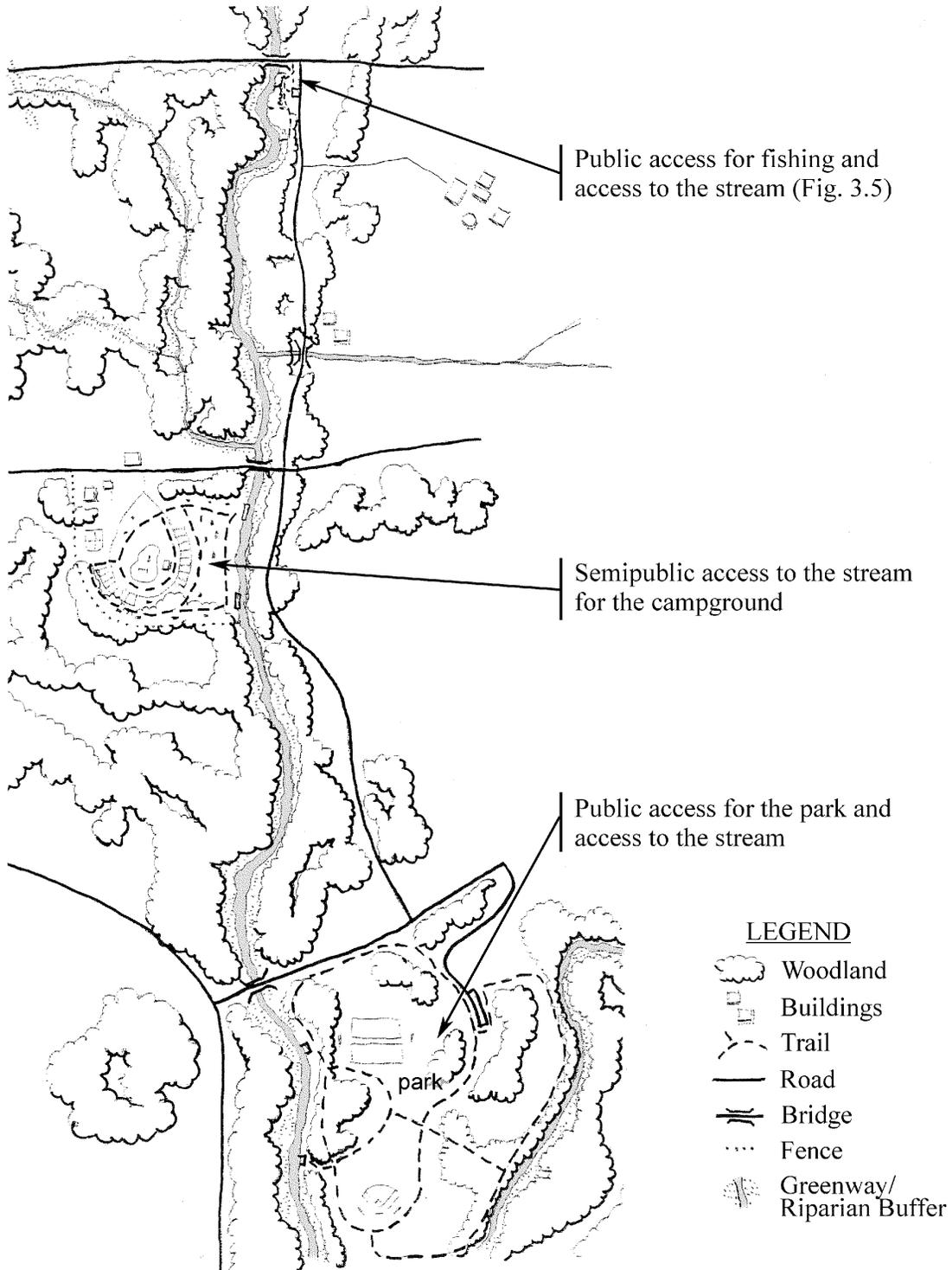
Figure 3.11  
**Active Greenway Section with Pedestrian Crossing**



Source: URDC, 2007



Figure 3.12  
**Accessible Greenway Concept**



Source: URDC, 2007

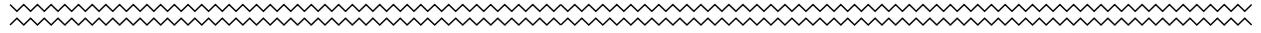
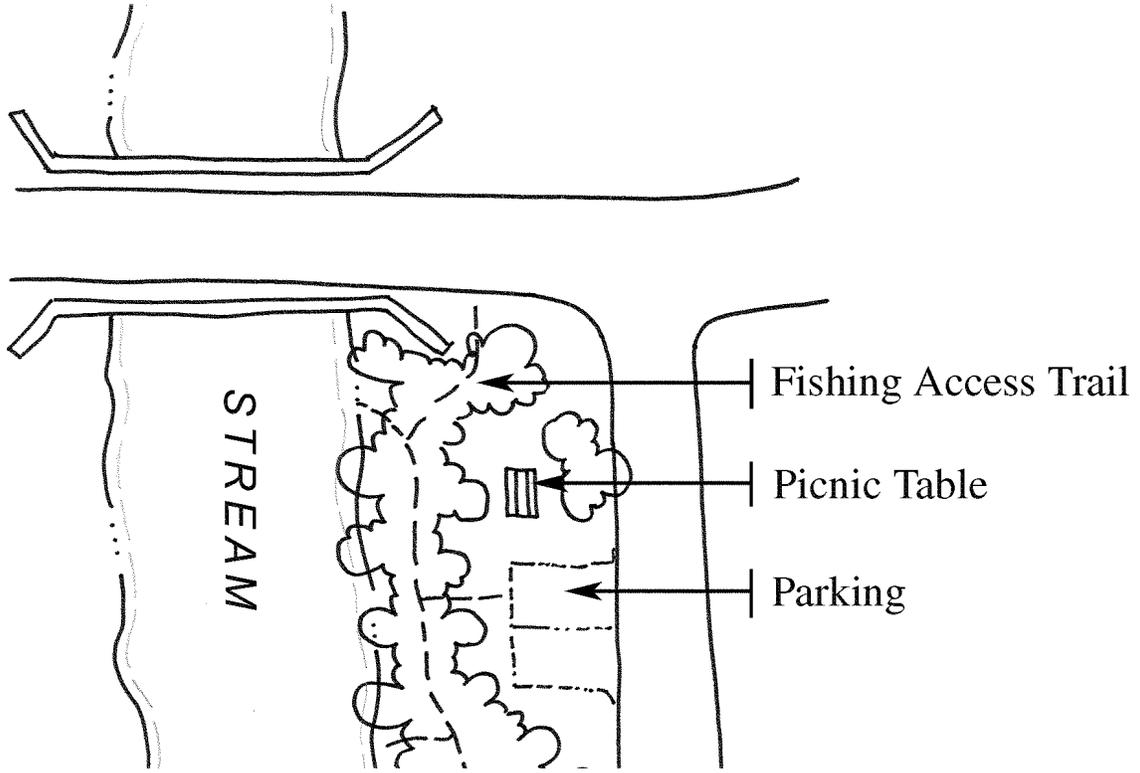


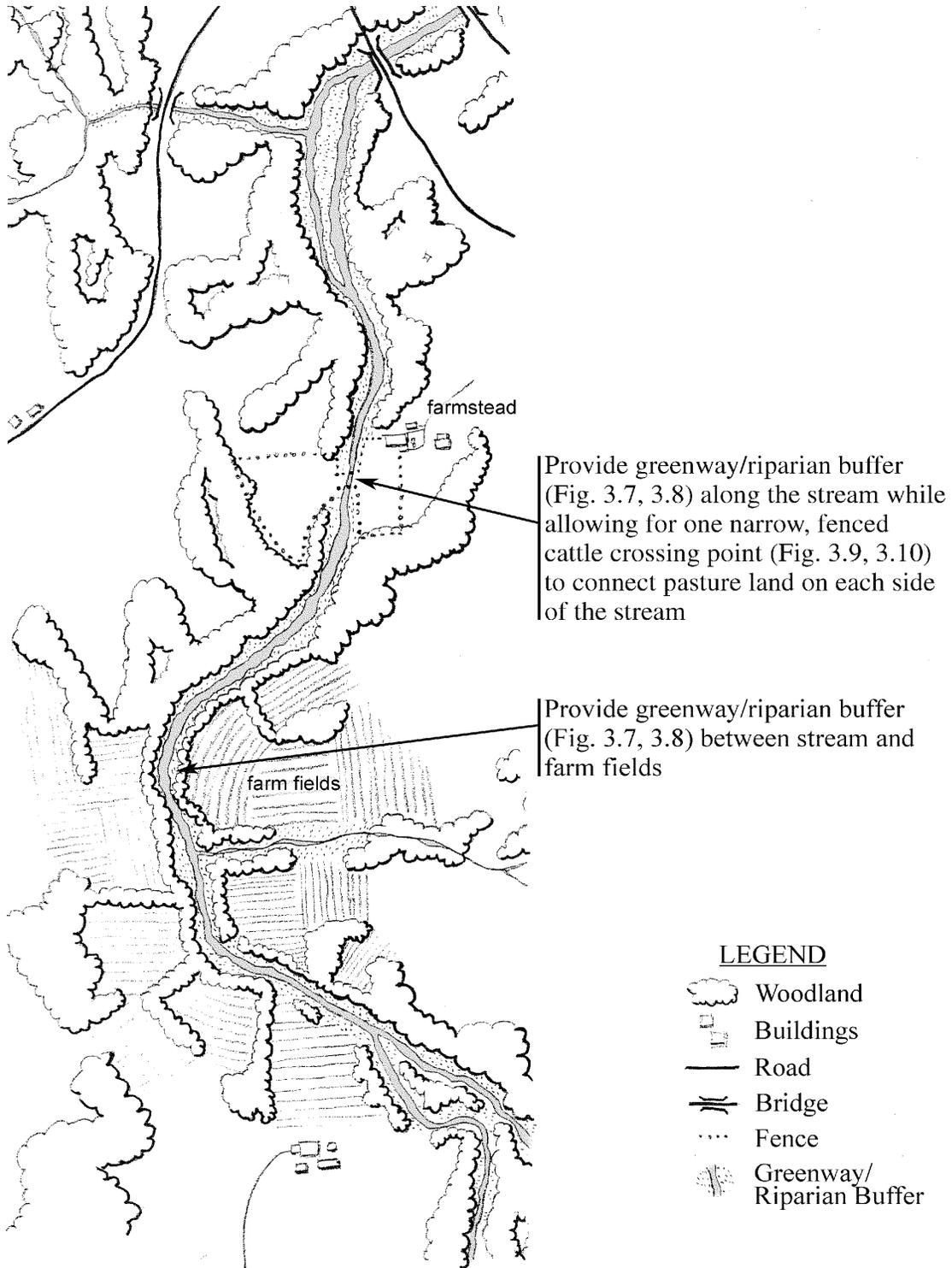
Figure 3.13  
Fishing Access Detail



Source: URDC, 2007



Figure 3.14  
**Passive Greenway Concept**



Source: URDC, 2007



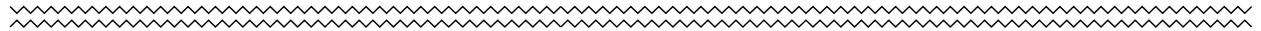
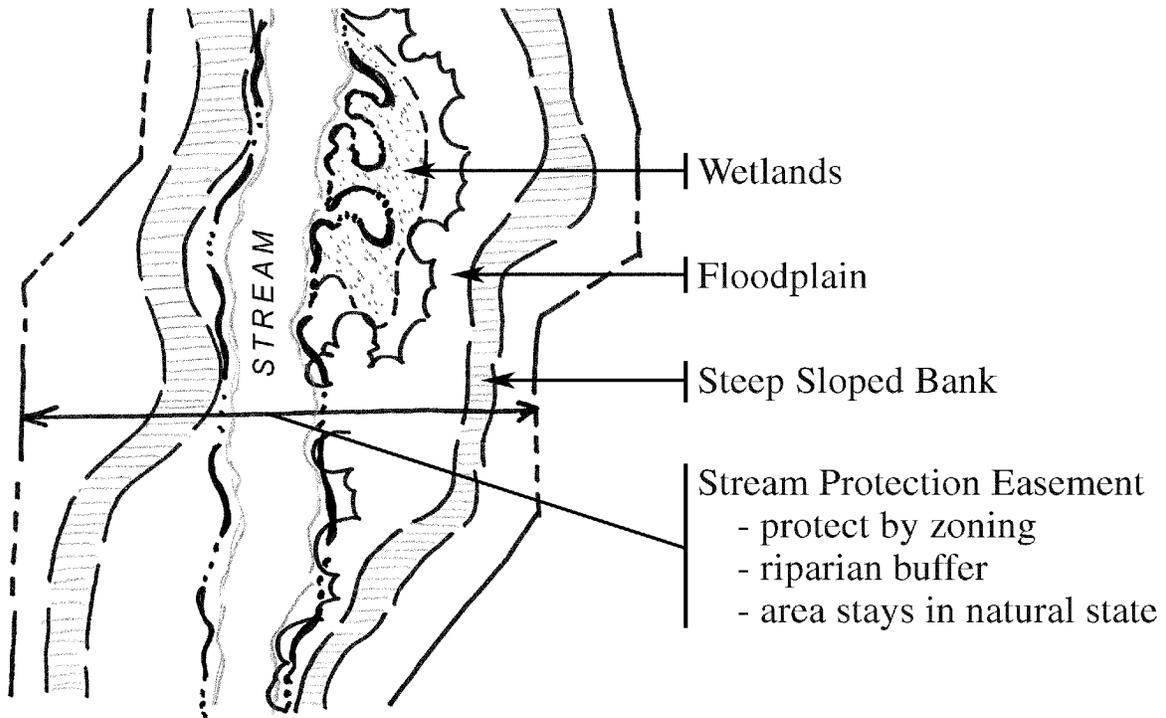
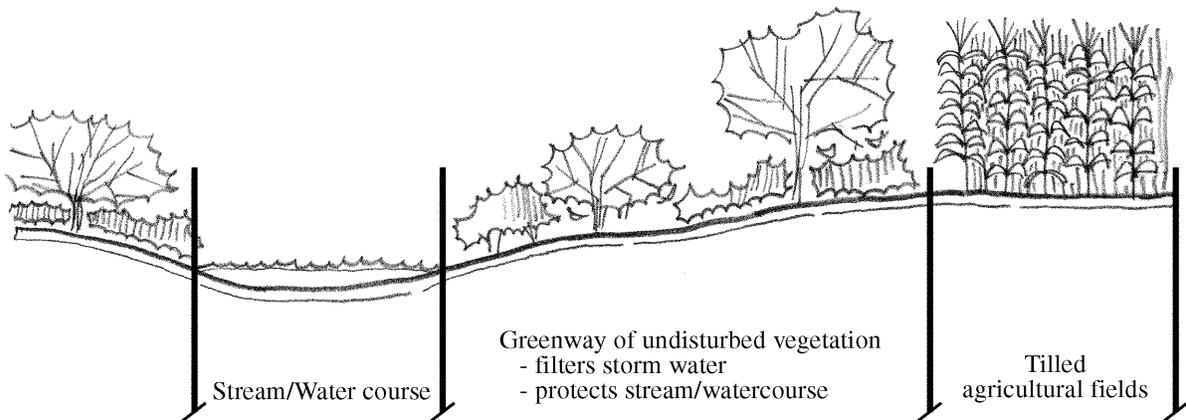


Figure 3.15  
Riparian Buffer Detail



Source: URDC, 2007

Figure 3.16  
Passive Greenway Section



Source: URDC, 2007



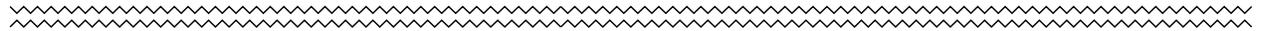
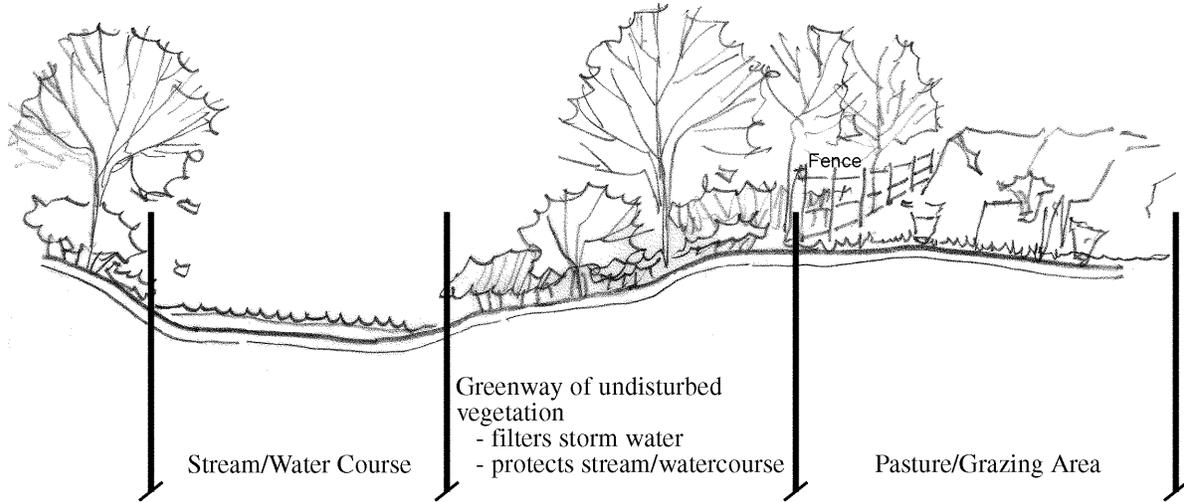
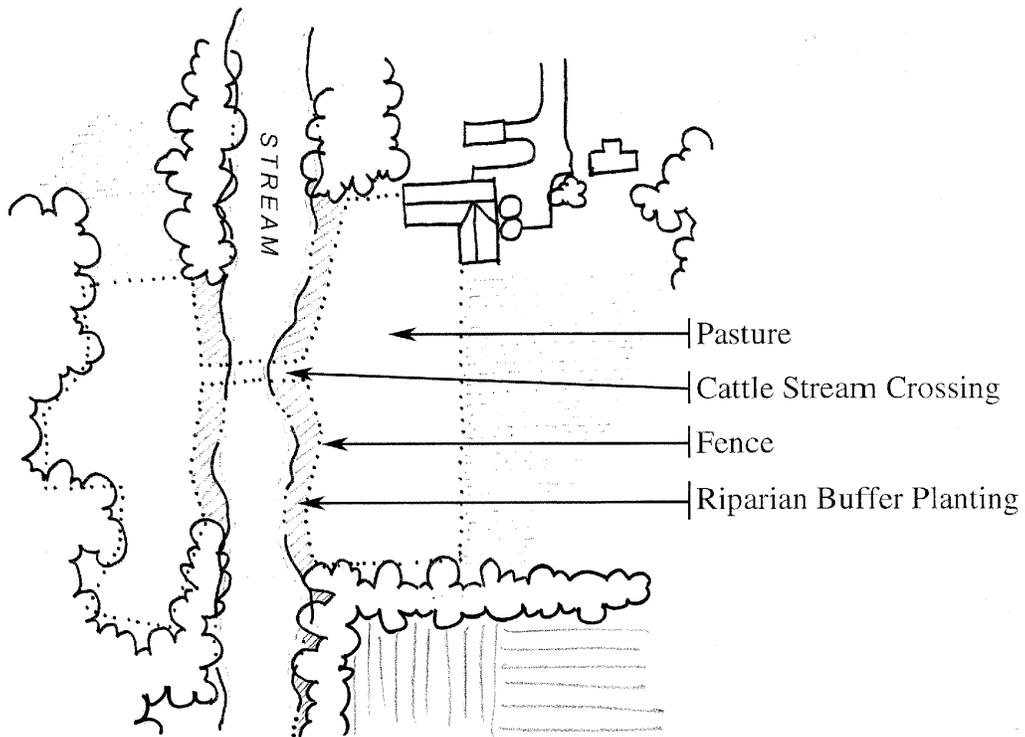


Figure 3.17  
**Cattle Crossing Section**



Source: URDC, 2007

Figure 3.18  
**Cattle Crossing Detail**



Source: URDC, 2007



approximately 5.0 miles to the Maryland state line making the greenway an *active*<sup>1</sup> greenway. The Toms Creek Greenway passes through Liberty Township, Carroll Valley Borough, and Hamiltonban Township.

- The ***Flat Run Greenway*** concept is a passive greenway from the fork in the headwaters west of Tract Road and north of Crum Road south to the Maryland state line. The Flat Run Greenway is relatively short (approximately 3.0 miles) and is contained entirely in Liberty Township.
- The concept for the ***Middle Creek Greenway*** is a passive greenway centered on the Middle Creek from Swamp Creek south to the Maryland line, a distance of approximately 12.0 miles. The Middle Creek Greenway also includes an extension off of Middle Creek along Muddy Run and through the Mountain View Golf Club outside the Borough of Fairfield. The extension ends near the Strawberry Hill Nature Preserve. The greenway and extension pass through Fairfield Borough and the Townships of Freedom, Liberty, and Highland.
- The ***Marsh Creek Greenway*** concept begins in the headwaters south of U. S. 30 near the northeast corner of Michaux State Forest as a passive greenway. After approximately 3.1 miles, at a point west of Flohrs Church Road, a trail begins and continues to the Maryland state line, making the final 23.6 miles of the main stem of the Marsh Creek Greenway an active greenway. The concept includes an extension from the headwaters along Poplar Spring and Little Marsh Creek that add approximately 7.4 mi. to the greenway and are passive in nature. Just as the Marsh Creek is one of the major southerly flowing waterways in the county, the Marsh Creek Greenway is one of the key north-south anchors of the greenway system, passing near the Borough of Gettysburg and historic sites such as the Eisenhower National Historic site, the Gettysburg National Military Park (GNMP), and the Sachs Covered Bridge.

A small portion of the Marsh Creek Greenway is shown passing through the GNMP, which is controlled by the National Park Service. Therefore, no trail will be permitted along the creek in the park without the consent of the National Park Service. No trail along the creek within the park boundary is currently envisioned in the management plan for the park.

- The ***Rock Creek Greenway*** concept begins with two branches of passive greenway: one beginning at the point where Rock Creek meets PA 94 and continuing southwesterly and another beginning in the headwaters north of PA 94 and following an unnamed tributary southwesterly toward Table Rock Road, then turning southeasterly. The two passive greenways meet Rock Creek between Miller Road and U.S. Business 15, at which point the plan envisions a trail continuing along the remainder of Rock Creek to the Maryland state line. The greenway concept includes an extension along White Run from Rock Creek in Mount Joy Township to Low Dutch Road in Mount Pleasant Township, a distance of approximately 6.7 miles.

The entire Rock Creek Greenway concept is 28.8 miles, 14.7 miles of which includes the proposed trail. The Rock Creek Greenway includes the Borough of Gettysburg and the Townships of Straban, Cumberland, and Mount Joy.

Two parts of the Rock Creek Greenway are shown passing through the GNMP, which is controlled by the National Park Service. Therefore, no trail will be permitted along the creek in the park without the consent of the National Park Service. No trail along the creek within the park boundary is currently envisioned in the management plan for the park.

- The simple concept for the ***Alloway Creek Greenway*** is a passive greenway beginning at a point in the headwaters near the border with Mount Pleasant Township. The greenway extends the entire 7.0-mile length along the border between Germany and Mount Joy Townships to the Maryland state line.
- The seventh and final proposed greenway in the Potomac River watershed is the ***Piney Creek Greenway***. The 4.4-mile passive greenway extends along Piney Creek from approximately the border between Germany and Union Townships southwestward through Germany Township and Littlestown Borough to the Maryland state line.

### Proposed Susquehanna Watershed Greenways

- The concept for the ***Conewago Creek Greenway*** begins with two forks—both passive greenways—one beginning at the source of Conewago Creek on the east side of PA 234/Buchanan Valley Road approximately 0.7 miles north of U. S. 30 and following the creek northeastward approximately 4.9 miles, and the other, along a tributary to the Conewago, beginning on the south side of Nawakwa Road and continuing westward and southward approximately 0.6 miles. The two forks meet at a point west of Nawakwa Road and south of PA 234 where the Conewago passes through The Narrows—the passage between Big Hill and Bear Mountain that separates Buchanan Valley from the remainder of Adams County to the southeast. The accessible (see footnote #1) greenway along the Conewago Creek continues the length of the creek to the York County line.

The Conewago Creek Greenway concept includes an accessible greenway along the entire length of the south branch of the creek. The south branch begins at a point east of Oxford Road and south of Mill Road that helps to form the boundary of three townships Hamilton, Mount Pleasant, and Reading. The entire Conewago Creek Greenway concept encompasses approximately 66.8 miles, including the main branch, south branch, and both forks in the headwaters.

- The proposed ***Plum Creek Greenway*** is a small, passive greenway along the entire length (4.4 miles) of Plum Creek within Adams County. Plum Creek is a distributary of the south branch of the Conewago Creek, beginning at a point northwest of Chapel Road and southwest of Edgegrove Road in Oxford Township. The greenway follows the creek southward, along the western border of the Borough of McSherrystown, across Mount Pleasant Road, and east to the York County line.



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- The plan calls for the ***Opossum Creek Greenway*** to be a passive part of the greenway system. The greenway begins in the headwaters at a point southeast of Coon Road in Menallen Township and continues to the confluence of the Opossum and the Conewago Creeks in Butler Township east of Biglerville, a distance of approximately 9.4 miles. The proposed Opossum Creek Greenway also includes a spur of passive greenway along Quaker Run. The spur begins near the intersection of PA 34 and Clear View Road in Menallen Township south of Bendersville, moves southeast along an unnamed tributary for approximately 0.5 mile to the confluence with Quaker Run, then continues along Quaker Run for approximately 0.4 miles to the confluence with the Opossum Creek.
  - The plan calls for the ***Bermudian Creek Greenway*** to begin as a passive greenway at the railroad bridge south of Peach Glen–Idaville Road and follow the creek approximately 13.3 miles to the confluence with Latimore Creek. From the Bermudian/Latimore confluence, the greenway continues as an accessible greenway approximately 4.2 miles to the York County border.
  - The concept for the ***Latimore Creek Greenway*** begins with a passive greenway along an unnamed tributary from the Cumberland County line northeast of Peak View Road in Latimore Township and proceeds approximately 0.9 mile southeast to the Latimore Creek. The passive greenway continues for an additional 4.1 miles to the U. S. 15 bridge. From the U. S. 15 bridge, the plan envisions limited public access along the Latimore Creek Greenway for the additional 2.5 miles to the confluence with the Bermudian Creek.

## Significant Landscapes and Green Spaces

Landscapes and green spaces (Map 3.2) define the character of Adams County. The forests, cultivated and fallow fields, and views offered between the historic areas throughout the county—anchored, of course, by the most famous battlefield of all—create the high quality living environment that Adams County residents have come to know. The *Adams County Greenways Plan* identifies landscapes and green spaces as hubs in the proposed system. The plan recommends the use of zoning buffer requirements, easements and other nonregulatory means to preserve the land as greenways.

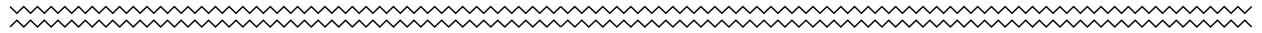
The plan recognizes the importance of large landscapes—tens and sometimes hundreds of thousands of acres—in creating the character of Adams County. Preserving landscapes is a difficult and long-term planning goal, requiring incentives and education so that all landowners understand the value of the land as a legacy for future generations.

The landscapes identified in the plan include:

- ***Fruitbelt*** — The Fruitbelt is deemed eligible for listing as a historic district on the National Register by



**Figure 3.19** — The Fruitbelt—Adams County's unique agricultural sector—offers serene panoramic views throughout the year.



the Pennsylvania State Historic Preservation Office. The area is unique in agriculture and provides outstanding vistas.

- ***South Mountain and South Mountain Faces*** — The mountainous area of western Adams County is part of the Pennsylvania Highlands region and the larger, multistate Highlands region of the eastern United States. The area includes the Michaux State Forest, unique and historic among Pennsylvania’s state parks and forest sites. Specifically, the major mountains included in the area as identified on Map 3.3 are:

- Bear Mountain
- Big Hill/The Narrows
- Front Range
- Jacks Mountain
- Raven Rock Mountain
- South Mountain

- ***The Narrows*** — Identified above as part of the South Mountain Faces, The Narrows is a unique portion of the upper Conewago Creek that passes through an area with a high gradient and rocky outcrops. The Narrows is well-known for high quality trout fishing and is one of the most scenic areas in Adams County.

- ***Federal Historic Sites*** — The National Park Service operates several historic sites within Adams County. Each of the following sites is under federal jurisdiction:

- ***Gettysburg Battlefield National Historic District*** — The district includes the Gettysburg National Military Park as well as additional lands around the park site. The district is discontinuous, including both a primary land mass, which includes the entire Borough of Gettysburg, and a secondary land mass encompassing East Cavalry Field.

- ***Eisenhower National Historic Site*** — General Dwight D. Eisenhower, 34<sup>th</sup> President of the United States, had a farm in Gettysburg. The Eisenhower homestead has been designated a National Historic Site and is located within the confines of the Gettysburg Battlefield National Historic District.

- ***Rock Creek/White Run Union Hospital Complex*** — The site of one of the hospitals used during the battle has been identified as a National Historic Landmark. The site lies between U. S. 15 and PA 97 to the southeast of the Gettysburg National Military Park.

In addition to landscapes, the plan recognizes green spaces, unique natural, agricultural, historical, and visual areas that add to the character of Adams County. Green spaces (Map 3.2) will provide additional nodes for the greenway system. The green spaces identified in the *Adams County Greenways Plan* include (Numbers correspond to Map 3.2):

1. ***Buchanan Valley*** — The valley is a scenic area nestled between South Mountain, Big Hill (one of the South Mountain Faces), and the Fruitbelt.



**Fig. 3.20** — Wetlands are a significant part of the land identified as a potential nature preserve in western Adams County.



12,500 0 12,500 Feet

1 inch equals 12500 ft.  
GIS data provided by Adams County Department of Planning & Development, 2005.

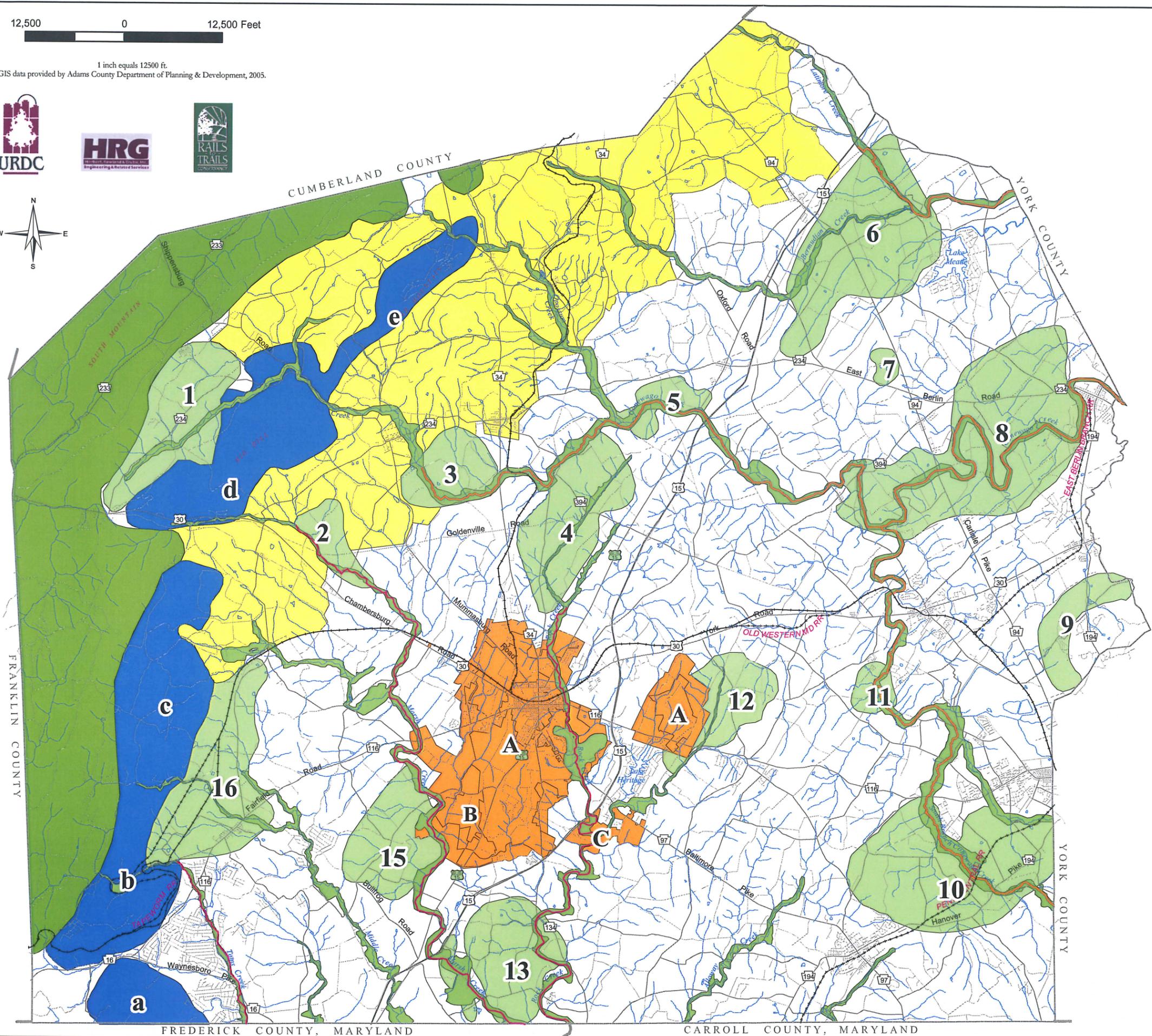


# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania

## Significant Riparian Greenways, Significant Landscapes & Green Spaces

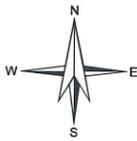
### MAP 3.3



- Fruitbelt
- South Mountain
- South Mountain Faces
- a Raven Rock Mountain
- b Jacks Mountain
- c Front Range
- d Big Hill/The Narrows of the Conewago
- e Bear Mountain
- Federal Historic Sites
  - A Gettysburg Battlefield National Historic District
  - B Eisenhower National Historic Site
  - C Rock Creek/White Run Union Hospital Complex
- Significant Riparian Greenways
  - Active - pursue trails where opportunity arises
  - Accessible - selected points of public access
  - Passive - limited or no public access
- Green Spaces
  - 1 Buchanan Valley
  - 2 Potential Preserve Area
  - 3 Butler Flatlands
  - 4 Table Rock Vistas
  - 5 Conewago State Gamelands
  - 6 Bermudian Gamelands Area
  - 7 Round Hill
  - 8 Conewago Vistas
  - 9 Pigeon Hills Slopes
  - 10 Standardbred Horse Farms Area
  - 11 St. John's Bridge Area
  - 12 East Cavalry Field Area
  - 13 Mason-Dixon Farming Areas
  - 14 Harpers Hill Uplands
  - 15 Audubon Designated Grasslands
  - 16 Carroll's Delight

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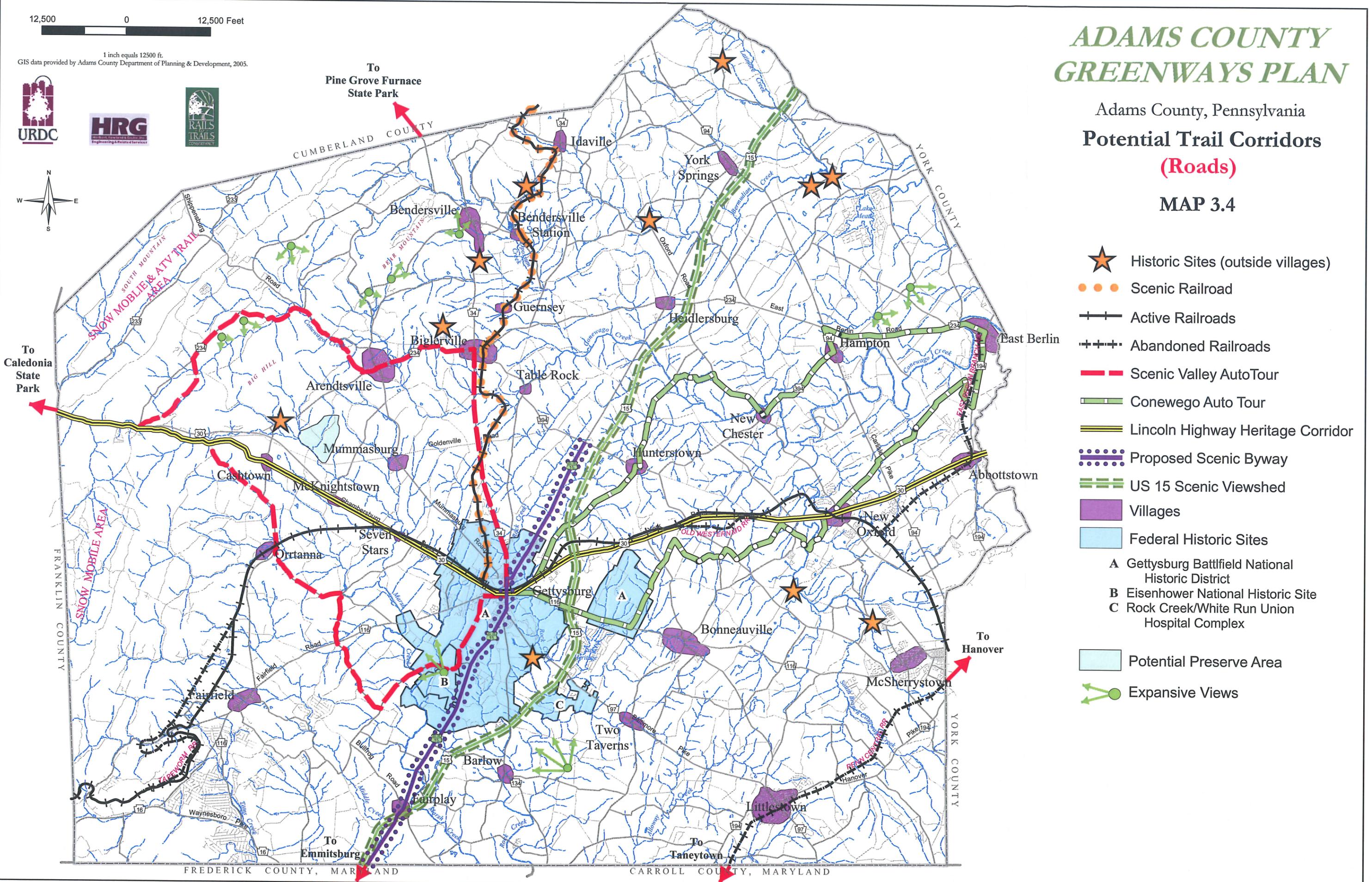
1 inch equals 12500 ft.  
GIS data provided by Adams County Department of Planning & Development, 2005.



# ADAMS COUNTY GREENWAYS PLAN

## Adams County, Pennsylvania Potential Trail Corridors (Roads)

### MAP 3.4



- Historic Sites (outside villages)
- Scenic Railroad
- Active Railroads
- Abandoned Railroads
- Scenic Valley AutoTour
- Conewego Auto Tour
- Lincoln Highway Heritage Corridor
- Proposed Scenic Byway
- US 15 Scenic Viewshed
- Villages
- Federal Historic Sites
  - A Gettysburg Battlefield National Historic District
  - B Eisenhower National Historic Site
  - C Rock Creek/White Run Union Hospital Complex
- Potential Preserve Area
- Expansive Views

12,500 0 12,500 Feet

1 inch equals 12500 ft.  
GIS data provided by Adams County Department of Planning & Development, 2005.



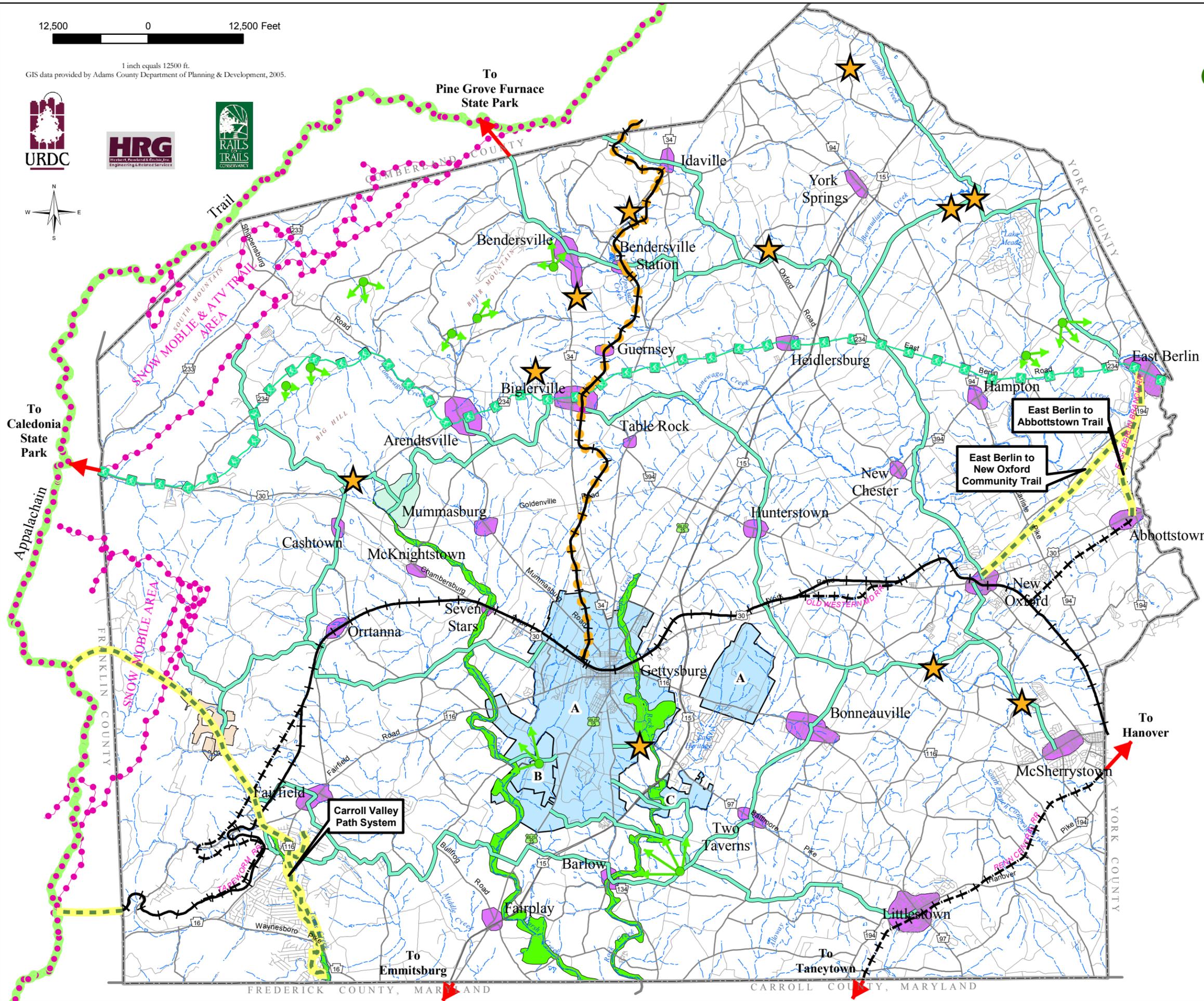
# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania

## Potential Trail Corridors

(Trails)

### MAP 3.5



★ Historic Sites (outside villages)

State Bike Routes

Proposed Bike Routes on Roads

Existing Trails

Proposed Trails

Scenic Railroad

Active Railroads

Abandoned Railroads

Active Greenways

Villages

Federal Historic Sites

A Gettysburg Battlefield National Historic District

B Eisenhower National Historic Site

C Rock Creek/White Run Union Hospital Complex

Strawberry Hill

Potential Preserve Area

Expansive Views

North Gettysburg Trail System Shown on Map 3.6.

Biglersville Trail System Shown on Map 3.7.

- 
2. ***Potential nature preserve*** — A major landowner in Franklin Township has expressed the possibility of establishing a nature preserve to serve the western portion of the county.
  3. ***Butler Flatlands*** — The Butler Flatlands is a lowlands area abutting the Fruitbelt.
  4. ***Table Rock Vistas*** — The vistas are an area of exceptional views around the village of Table Rock southeast of Biglerville.
  5. ***Conewago State Gamelands*** — State gamelands 249-70 are discontinuous and provide open space in the northeast portion of the county.
  6. ***Bermudian Gamelands Area*** — Additional portions of state gamelands 249-70 as well as the valley between Bermudian Creek and Mud Run comprise a large natural area in the northeast corner of the county.
  7. ***Round Hill*** — Round Hill is one of a unique group of geologic formations created from volcanic ash. Adams County is one of the few places in Pennsylvania where volcanic formations are found.
  8. ***Conewago Vistas*** — The topography along the lower portions of the Conewago in eastern Adams County provides some extraordinary views.
  9. ***Pigeon Hills Slopes*** — The topography of the Pigeon Hills area has also provided extraordinary views, which has attracted development in recent years. The plan targets the remaining portion of the area for preservation efforts, if possible.
  10. ***Standardbred Horse Farms Area*** — The southeast corner of Adams County and western part of York County is the home of Hanover Shoe Farms, the breeding farm for some of the most famous and most successful standardbred (harness racing) horses in the world. The farms create a wonderful and unique landscape.
  11. ***St. John's Bridge Area*** — The St. John's is a historic bridge across the Conewago Creek—South Branch.
  12. ***East Cavalry Field Area*** — East Cavalry Field is part of the Gettysburg Battlefield National Historic District.
  13. ***Mason-Dixon Farming Areas*** — The Mason-Dixon farming areas contain some unique agricultural pursuits and offer exceptional views.
  14. ***Harpers Hill Uplands*** — The Harpers Hill area is an area of unique geologic formations, similar to Round Hill.
-

15. ***Audubon Designated Grasslands*** — The Audubon Society has identified unique grasslands in the area southwest of the Gettysburg National Historic District.

16. ***Carroll's Delight*** — The site of one of the earliest land grants provides exceptional views.

Combining the elements of Maps 3.1 and 3.2 illustrates the “hub and spoke” concept of the greenway system (Map 3.3). Linear greenways (spokes) provide connections between wider elements of the system, some of which act as destinations (hubs). Some of the spokes provide public access through trails. Other spokes are simply connecting ribbons of preserved land with no public access.

## Potential Trail Corridors

Many other corridors will serve as spokes, providing connections throughout the proposed greenway system. The two maps showing potential trail corridors (Maps 3.4 and 3.5) illustrate both the spokes formed by the trails and some likely hubs that may grow as the greenway system develops. Map 3.4 focuses on roads that serve as potential trail corridors. Map 3.5 includes both on-road and off-road trail opportunities, such as abandoned railroads and existing trails. The following information presents each element of the two maps and briefly discusses the potential role each can play in the greenway system.

- ***Historic Sites*** — Outside of villages, single historic sites can serve as individual nodes of interest along greenway segments. Historic sites with the same theme might be linked with a single linear pathway to create a thematic tour. The historic sites outside villages that are identified on Map 3.4 are:
  - Cline's Church of the United Brethren in Christ (Map 2.2, #20)
  - Conewago Chapel (Map 2.2, #2)
  - Heikes Covered Bridge (Map 2.2, #17)
  - John's Burnt Mill Bridge (Map 2.2, #22)
  - Latimore Quaker Church (Map 2.2, #35)
  - McAllister Mill (Map 2.2, #33)
  - Menallen Quaker Church (Map 2.2, #32)
  - Pondtown Mill Bridge (Map 2.2, #18)
  - Round Barn (Map 2.2, #30)
  - Yellow Hill Cemetery (Map 2.2, #31)
  - Zeigler Farmhouse (Map 2.2, #19)
- ***Railroads*** — Scenic, historic, abandoned, and even active railroad rights-of-way can be used as connections within a greenway system. The vast majority of railroad rights-of-way used in greenway/trail systems have been abandoned, although some trails have been developed adjacent to active rail lines, including seven in Pennsylvania as of 2000:<sup>28</sup>
  - Arboretum Trail, Oakmont, 1.0 mi. parallel to rail corridor, open: 1992
  - Clarion-Little Toby Creek Trail, Ridgeway to Brockway, 2.0 mi. parallel to rail corridor, open: 1997
  - Eliza Furnace Trail, Pittsburgh, 1.0 mi. parallel to rail corridor, open: 1998
  - Five Star Trail, Youngwood to Greensburg, 5.7 mi. parallel to rail corridor, open: 1997

<sup>28</sup> *Rails-With-Trails; Design, Management, and Operating Characteristics of 61 Trails Along Active Rail Lines* Rails to Trails Conservancy, November 2000, available at: [http://www.railstotrails.org/resources/documents/resource\\_docs/Rails-with-Trails%20Report%20reprint\\_1-06\\_lr.pdf](http://www.railstotrails.org/resources/documents/resource_docs/Rails-with-Trails%20Report%20reprint_1-06_lr.pdf) Please note that fluctuations in rail service mean that trails may not be adjacent to currently active rail service.

- 
- Heritage Rail Trail County Park, New Freedom to York, 21.0 mi. parallel to rail corridor, open: 1996
  - Lehigh Gorge River Trail, White Haven, 15.0 mi. parallel to rail corridor, open: 1972
  - Schuylkill River Trail, Philadelphia to Valley Forge, 1.0 mi. parallel to rail corridor, open: 1993

Recognizing the potential of rail corridors for scenic and cultural value when active and for possible greenway trails when abandoned, the *Adams County Greenways Plan* includes the following rail corridors on Map 3.4:

- Scenic railroad from Gettysburg to Mount Holly Springs
  - Tapeworm Railroad (abandoned) in the southwestern part of the county near Carroll Valley
  - Small segment of the former Western Maryland Railroad (abandoned) south of U.S. 30 between Gettysburg and New Oxford
  - Former Penn Central segment (abandoned) in southeastern corner of the county
  - East Berlin Branch (abandoned) from East Berlin to active line near New Oxford
  - CSX line from the Franklin County line through Gettysburg to the York County line near McSherrystown
- ***Auto Tours*** — The Gettysburg Convention and Visitors Bureau has established two auto tours in the county, which are part of the greenway system: the Scenic Valley Auto Tour and the Conewago Auto Tour. Roads can provide connections in a greenway system, and the auto tours offer a thematic continuity that visitors or residents can follow and enjoy.
  - ***Roads with Historic Designation*** — Two highways in Adams County have received formal historic designations:
    - U. S. 30 through the entire county is the Lincoln Highway. The highway corridor is part of the Lincoln Highway Heritage Corridor, a multicounty state heritage region.
    - U. S. Business Route 15 (the Blue-Gray Highway) from the Maryland state line north to PA 394 has been proposed as a state scenic byway. The roadway will be the spine of the proposed historic landscape from Monticello to Gettysburg to be interpreted as the Journey Through Hallowed Ground.
  - ***U. S. 15 Scenic Viewshed*** — The current alignment of U. S. 15, which bypasses the Borough of Gettysburg, offers some outstanding views of Adams County landscapes. The greenway plan recognizes the value of viewsheds and identifies U. S. 15 as a system spoke to offer support for viewshed protection techniques, such as local ordinances requiring setbacks from the road.
  - ***Villages*** — The villages of Adams County serve as hubs of the greenway system, offering small but vibrant activity centers, each with a unique character, background, and story. The plan includes the village centers of the smaller boroughs in the county (Abbottstown, Arendtsville, Bendersville, Biglerville, Bonneauville, Carroll Valley, East Berlin, Fairfield, Littlestown, McSherrystown, New Oxford, and York Springs) as well as the following historical settlements that, in many cases, have little or no remaining development:
 

|                        |                |                 |               |
|------------------------|----------------|-----------------|---------------|
| — Barlow               | — Guernsey     | — Idaville      | — Orttanna    |
| — Bendersville Station | — Hampton      | — McKnightstown | — Seven Stars |
| — Cashtown             | — Heidlersburg | — Mummasburg    | — Table Rock  |
| — Fairplay             | — Hunterstown  | — New Chester   | — Two Taverns |

- 
- ***Federal Historic Sites*** — The three federal historic sites are included as major hubs in the greenway system. The Gettysburg Battlefield National Historic District, Eisenhower National Historic Site, and Rock Creek/White Run Union Hospital Complex sites tell some of the major stories in the rich history of Adams County.
  - ***Potential preserve*** — The plan identifies a potential nature preserve for which the landowner had a feasibility study prepared. If the preserve is developed, the site will serve the residents of western Adams County and surrounding areas and become a significant hub in the greenway system.
  - ***Expansive Views*** — Selected expansive views, among many others in the county, are identified in the plan to extend the list of natural assets that greenway users will enjoy. The plan includes 10 selected views, as identified by the greenway steering committee and ACOPD staff:
    - Wenksville Road, west of Celebration Hill Road in Menallen Township, generally facing south
    - Potato Road, slightly east of Brysonia Road in Menallen Township, generally facing south
    - Potato Road at the intersection with P&O Road, generally facing east
    - Potato Road in Menallen Township at the western border of Bendersville Borough, generally facing west and north
    - Stoney Point Road at Wolf Road in Reading Township, generally facing south and east
    - Stoney Point Road between Germany Road and Brough Hill Road in Reading Township, generally facing south and east
    - Buchanan Valley Road (PA 234) east of Pine Tree Road in Franklin Township, generally facing south and east
    - Buchanan Valley Road (PA 234) at the intersection with Mountain Road and Gun Club Road in Franklin Township, generally facing south and east
    - Station Road/Millerstown Road near the Eisenhower National Historic Site in Cumberland Township, generally facing north and west
    - Barlow-Two Taverns Road between Orphanage Road and White Church Road in Mount Joy Township, generally facing north and west
  - ***State Bike Routes*** — The Pennsylvania Department of Transportation has identified eight bicycling touring routes through the state. One of the eight, Route S, passes through Adams County on PA 234 and is recognized as a connecting spoke in the *Adams County Greenways Plan*. The statewide map is available at <ftp://ftp.dot.state.pa.us/public/pdf/bicyclepa.pdf>.
  - ***Proposed Bike Routes on Roads*** — The *Adams County Greenways Plan* proposes connections for bicycles on selected, lightly traveled roads throughout the county (Map 3.5). The proposed network include the following segments:<sup>29</sup>
    - From Piney Mountain Ridge Road to Cashtown Road via Milton Berger Road, Mountain Road, Church Road, and New Road (Franklin Township)
    - From New Road to Hilltown Road via Cashtown Road, Fox Hill Road, and Flohrs Church Road (Franklin Township)

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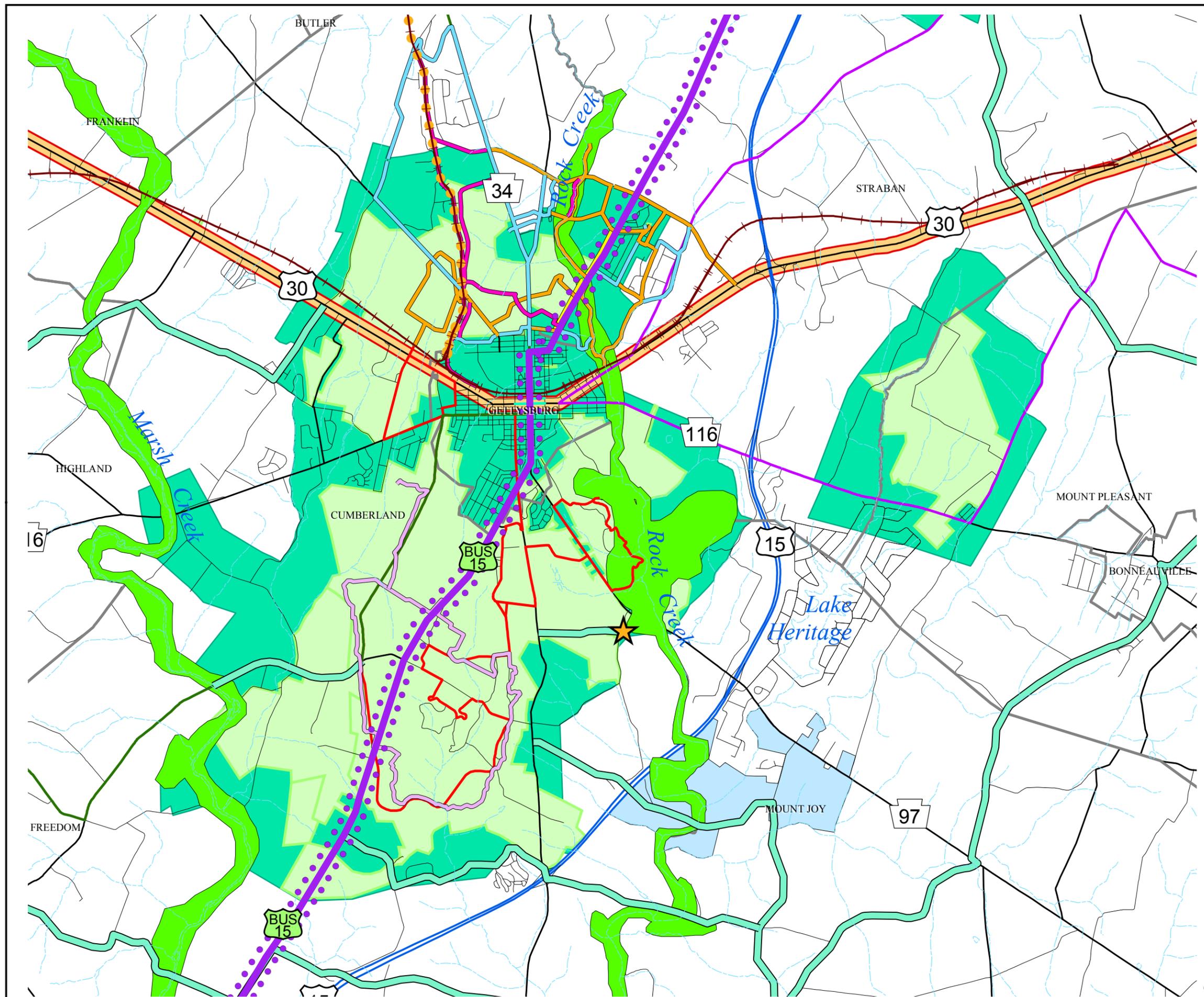
<sup>29</sup> URDC staff field checked approximately 70–90 percent of the listed road segments.

# ADAMS COUNTY GREENWAYS PLAN

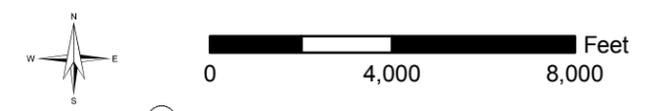
Adams County, Pennsylvania

Gettysburg Area

MAP 3.6



- ★ Historic Sites (outside villages)
- ⋯ Proposed Scenic Byways
- Active Railroads
- Scenic Railroad
- Proposed Bike Routes on Roads
- North Gettysburg Trail (Priority 1)
- North Gettysburg Trail (Priority 2)
- North Gettysburg Trail (Priority 3)
- North Gettysburg Trail (Priority 4)
- Historic Gettysburg Walking Tour
- Gettysburg Battlefield Bridle Trail
- Gettysburg Battlefield Driving Tour
- Historic Conewago Tour
- Scenic Valley AutoTour
- Active Greeways
- Rock Creek/White Run Hospital National Historic Landmark
- Lincoln Highway Heritage Corridor
- Gettysburg National Military Park
- Gettysburg Battlefield National Historic District



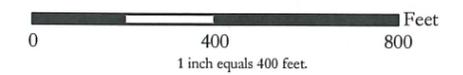
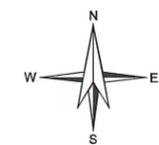
# ADAMS COUNTY GREENWAYS PLAN

Adams County, Pennsylvania

## Biglerville Trail

MAP 3.7

 Biglerville Trail



GIS data provided by Adams County Department of Planning & Development, 2005.



- 
- From New Road to Jack Road via Cashtown Road, High Street, Old Route 30, Orrtanna Road, Scott School Road, Mount Carmel Road, and Hickory Bridge Road (Franklin Township)
  - From the proposed extension of the Carroll Valley trail (see “Proposed Trails” below) to the Gettysburg National Military Park via Swamp Creek Lane, Moritz Road, Jack Road, Hickory Bridge Road, Carrolls Tract Road, Knox Road, Knoxlyn Road, Old Mill Road, and Country Club Road (Hamiltonban, Highland, and Cumberland Townships)
  - From Teaberry Road to Swamp Creek Lane/Moritz Road via Cold Springs Road (Hamiltonban Township)
  - From Hilltown Road to Clearview Lane via Flohrs Church Road, Camp Road, Winding Road, Fairview Fruit Road/Blue Ribbon Road, and Beecherstown Road (Franklin and Butler Townships)
  - From the Adams County/Cumberland County line to Lake Meade Road via Pine Grove Furnace Road, Bendersville-Wenksville Road, Main Street, Aspers-Bendersville Road, Aspers North Road, Oxford Road, Willow Lane, Old Harrisburg Road (Business U.S. 15), and Weirmans Mill Road (Menallen, Tyrone, Huntington, and Latimore Townships)
  - From the Adams County/Cumberland County line to Cranberry Road via Peach Glen-Idaville Road, Short Cut Road, and Upper Bermudian Road (Huntington Township)
  - From the tracks for the scenic railroad in Biglerville to Bon-Ox Road via Hanover Street East, Table Rock Road, Benders Church Road, Stone Jug Road/Woodside Road, Red Bridge Road/Granite Station Road, and Tall Oaks Road (Biglerville, Butler Township, Straban Township)
  - From the Adams County/York County line to East Berlin Road (PA 234) via Latimore Creek Road, Latimore Valley Road, Lake Meade Road, Stoney Point Road, Brough Hill Road, and Fish and Game Road (Latimore and Reading Townships)
  - From Weirmans Mill Road to Latimore Valley Road via Gun Club Road/Quaker Church Road (Reading and Latimore Townships)
  - From Gun Club Road to New Oxford via Weirmans Mill Road/Cashman Road/Turkey Pit Road, Group Mill Road, Hunterstown-Hampton Road, and Oxford Road (Huntington, Tyrone, Reading, Straban, Mount Pleasant, and Oxford Townships)
  - From New Oxford to McSherrystown via Water Street, Poplar Road, Kohler Mill/Irishtown Road, Black Lane, Edgemoor Road, and Church Street (New Oxford, Oxford Township, Conewago Township, and McSherrystown)
  - From Orphanage Road to Tall Oaks Road via Barlow-Two Taverns Road, Two Taverns Road, Locust Street, Cedar Street, and Bon-Ox Road (Mount Joy Township, Mount Pleasant Township, and Bon-neauville)
  - From Tall Oaks Road to Kohler Mill Road via Bon-Ox Road, Beck Road, Stone Bridge Road, and Storms Stone Road (Mount Pleasant and Oxford Townships)
  - From Business U. S. 15 at the Gettysburg National Military Park to White Church Road via Ridge Road, Knight Road, and Solomon Road (Cumberland and Mount Joy Townships)
  - From Taneytown Road (PA 134) to Barlow-Two Taverns Road via Sachs Road, Goulden Road, and White Church Road (Cumberland and Mount Joy Townships)
  - From the Tapeworm Railroad to Littlestown via Station Lane, Fairfield Station Road, Miller Street, Fairfield Road (PA 116), McGinney Drive, Tract Road, Pumping Station Road, Cunningham Road, Emmitsburg Road (PA 116), Barlow-Greenmount Road, Taneytown Road (PA 134), Barlow-Two Taverns Road, Orphanage Road, Hoffman Home Road, Krug Road, Mud College Road, Updyke Road, Gettysburg Road, and St. Johns Road (Hamiltonban Township, Fairfield, Liberty Township, Freedom Township, Cumberland Township, Mount Joy Township, Germany Township, and Littlestown)
  - From Iron Springs Road to Tract Road via Main Street and Sanders Road (Hamiltonban Township, Carroll Valley, and Liberty Township)
  - From the proposed Marsh Creek Greenway to the Eisenhower National Historic Site via Pumping Station Road/Millerstown Road (Cumberland Township)
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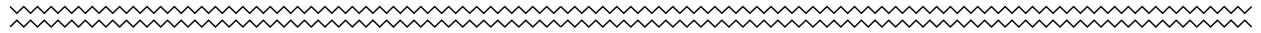
- **Existing Trails** — The proposed greenway system recognizes and incorporates existing trails throughout the county. The following section provides information about current trails in Adams County.
  - *Michaux State Forest* <sup>30</sup> — The Michaux State Forest provides many outdoor recreation opportunities, including:
 

|                               |                               |                    |
|-------------------------------|-------------------------------|--------------------|
| – Trails                      | – Warm and cold water fishing | – Horseback riding |
| – Small game and deer hunting | – Primitive camping           | – Bicycling        |
| – Trout fishing               | – Hiking                      | – Snowmobiling     |
  - *Appalachian Trail* — The Appalachian Trail is a continuous, marked footpath extending along the crest of the Appalachian Mountain range for more than 2,100 miles from Mt. Katahdin in central Maine, south to Springer Mountain in Georgia, traversing 14 states along the way. About 39 miles of the Appalachian Trail are on the Michaux State Forest located just north of the Maryland state line. The Appalachian Trail is located just across the Adams County boundary in Franklin County. A segment of the historic Tapeworm Railroad, discussed below, lies in Franklin County but can connect the Adams County greenway system to the Appalachian Trail. Every effort should be made to cooperate with neighboring Franklin and Cumberland Counties to provide sufficient access to the Appalachian Trail for Adams County residents and adequate connections between the Appalachian Trail and the Adams County greenway system.
  - *Rocky Knob Trail, Caledonia State Park* — The Rocky Knob trail is a loop trail approximately four miles in length located in Caledonia State Park. The road portion of the trail was constructed by the Civilian Conservation Corp (CCC) in 1937. In 1976, the Youth Conservation Corp (YCC) constructed a trail along the northern portion of the road.
  - *Biglerville Trail, Biglerville* — The Biglerville Trail is a 10-foot wide biking and walking trail approximately 1,600 feet long, primarily in the downtown region of the Borough of Biglerville. The trail was completed in the summer of 2008 and connects Oakside Community Park and the Biglerville High School to town so bikers, walkers and joggers can avoid using PA 394. The trail runs from Oakside's trail system across the American Legion property, and exits at Legion Drive.
  - *Biser Fitness Trail, Gettysburg* — The one-mile Biser Fitness Trail and Walking Path winds throughout the 52-acre Gettysburg Regional Recreation Park (Long Lane). The trail includes 10 fitness stations, providing a comprehensive fitness program for beginners and advanced users alike. Each exercise station promotes the development of strength and endurance while improving muscle tone and agility with signs at each station to instruct all users on proper form and repetition.

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<sup>30</sup> The individual trails shown on Map 3.5 are not listed in the plan text because the information is available from the PA Department of Conservation and Natural Resources at:  
[www.dcnr.state.pa.us/forestry/stateforests/michaux.aspx](http://www.dcnr.state.pa.us/forestry/stateforests/michaux.aspx).





- *Carroll Valley Municipal Park Trail* — The municipal park in Carroll Valley, located along PA 116, consists of 20+ acres of both treed and open green areas. The park consists of a one-mile fitness trail following a small stream served by a footbridge. The park borders both Lake Carroll and Toms Creek.
- *Strawberry Hill Nature Center and Preserve* — The nature center grounds include a one-mile nature trail, providing access to approximately nine miles of additional trail loops for more extensive hikes and a variety of terrains. Picnic areas and restrooms are available at the nature center.
- ***Proposed Trails*** — The *Adams County Greenways Plan* proposes several new greenway trails. The alignments shown on Map 3.5 are illustrative only. Each trail is discussed below and will require more detailed design studies.
  - *North Gettysburg Trail System* — The proposed North Gettysburg Trail system will connect Gettysburg to portions of Cumberland and Straban Townships via a network of pedestrian and bicycle trails. The system was designed in 2000 to function primarily as an alternative transportation route, allowing safe pedestrian and bicycling connections between the neighborhoods, schools, businesses in the North Gettysburg region.
 

The initial component of the North Gettysburg system is a walking and bicycling trail connecting Gettysburg with Gettysburg Area High School would beginning at Broadway and Old Harrisburg Road and passing through Cumberland and Straban Townships. The trail would provide a safe alternative for students walking to classes at the high school and Harrisburg Area Community College's Gettysburg campus. Additionally, the trail will provide recreational opportunities for local citizens while promoting awareness through greenway conservation efforts, particularly along Rock Creek.
  - *Historic Tapeworm Railroad* — The historic Tapeworm Railroad is an abandoned rail line still visible at the Adams County/Franklin County line. The rail alignment follows along Jacks Mountain and could potentially connect to the Appalachian Trail. A segment of the line lies in Franklin County but can connect the Adams County greenway system to the Appalachian Trail.
  - *Carroll Valley Path System* — The Borough of Carroll Valley completed a master site plan for a gravel pedestrian and bicycle trail along Toms Creek. The plan proposes extending Carroll Valley trail northward from Ranch Park connecting Lakes May, Carroll, and Kay to the Fairfield High School. Ultimately, the trail will connect to the Strawberry Hill Nature Preserve and continue through Michaux State Forest to provide another connection to the Appalachian Trail. Additional proposed improvements include upgrading the recreational facilities at Ranch Park, improving water access at Lake May, and improving the pathway at Carroll Commons Park.



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- *East Berlin and New Oxford Community Trail* — The plan proposes a trail connecting the Boroughs of East Berlin and New Oxford. Community volunteers have been working to establish a potential alignment for a trail.
  - *Hanover/Gettysburg Connector* — The York County Rail Trail Authority and Healthy Adams Bicycle and Pedestrian Incorporated partnered to completed a bicycle/pedestrian off-road trail feasibility study from Hanover to Gettysburg in December 2007. The proposed connector would provide opportunities for local commuters to ride bicycles to Hanover or Gettysburg for work, school or leisure. The trail will accommodate bicycling, walking, jogging, cross country skiing, and possibly horseback riding.

The area in and around the Borough of Gettysburg is the core of the county greenway system (Map 3.6). The county seat, population core, and historic concentration of the county is also the focus of the greenway system (Map 3.6). The Gettysburg area contains parts from each element of the system: significant riparian greenways, significant landscapes, green spaces, and trails.

Local initiatives in Adams County are an integral part of the *Adams County Greenways Plan*. Some municipalities have already begun to establish trails, which will become increasingly important as the overall network throughout the county grows and develops. One current example of local initiative is the Biglerville Trail (Map 3.7), which connects the Biglerville High School site to Oakside Park in Butler Township, located southeast of the borough. The trail uses primarily existing roads and is a good example of intermunicipal cooperation in trail development.

## PENNSYLVANIA'S GREENWAY VISION

Pennsylvania, known for large expanses of forests and wildlands, has long recognized the value of greenways for land preservation. In 1998, the Pennsylvania Greenways Partnership Commission and the Pennsylvania Environmental Council published a document entitled *Creating Connections: The Pennsylvania Greenways and Trails How-To Manual* to help Pennsylvanians understand the creation and protection of greenways and trails throughout the commonwealth.

The publication was followed by the 2001 release of the state greenways plan: *Pennsylvania Greenways: An Action Plan for Creating Connections*. The plan provides goals and strategies for creating greenways in Pennsylvania, including:

- ***Plan and establish greenway connections.***
  - Statewide network of greenways; “hubs and spokes”
  - Greenways plans in every county
  - Many purposes
    - Places for all people
    - Alternative transportation
    - Wellness
    - Natural resource protection
- ***Create a greenways organizational network.***

- 
- ***Provide funding for greenways.***
  - ***Provide technical assistance and outreach.***
    - Greenways Toolbox ([www.pagreenways.org](http://www.pagreenways.org))
    - Greenways education and training
    - Greenways promotion
    - Greenways Volunteer Network

The *Adams County Greenways Plan* supports and furthers the statewide greenways vision. The plan is the county response that is envisioned in the state plan. Similarly, the county plan envisions that municipalities will support and further the county plan by preparing local greenway plans in support of the county plan. The local plans will provide more details about greenway location and design as municipalities support greenway development through the private sector and, where appropriate, begin to establish greenways and, perhaps, trails with public resources.



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## IMPLEMENTATION

Fulfilling the vision presented in *The Adams County Greenways Plan* will require the efforts of many people, many agencies and organizations, and, most importantly, time. The following chapter presents some of the actions required to implement the plan and discusses some of the resources necessary and available to accomplish the recommended actions. The implementation chapter includes seven elements:

- **Action Program** — The action program (Table 4.1) includes recommendations to fulfill the vision presented in the plan. Each action includes a priority, in the form of a time frame, and the entity(ies) responsible for fulfilling the recommended action.
- **Pilot Projects** — The plan identifies key implementation projects that will advance the development of a countywide greenways system. Pilot projects include a potential county demonstration project and regional projects based on the recommendations of previous county plans and input from members of the greenway plan steering committee.
- **Land Preservation Techniques** — The plan includes information on various land preservation techniques, including many that do not require any public sector involvement:
- **Costs and Funding** — Examples of costs for greenway projects in other areas and the information on funding for greenways is also included in the implementation section. The information includes a list of state and federal funding programs (Table 4.3).
- **Organizational Framework** — Many entities are interested in the functions greenways serve and have a vital role to play in greenway development, from individual landowners to large government agencies to nonprofit agencies. The discussion of the organizational framework explains the mission and role of the parties in land preservation in Adams County, discusses ways the parties can be more effective working together than working alone, and offers a potential structure for the greenway effort in Adams County, .
- **Management Options** — A final section presents information on potential options for managing the greenways effort in Adams County. The section discusses the strengths and weaknesses of various options and provides examples of each alternative currently operating in Pennsylvania.
- **Potential Program Structure** — The implementation strategy concludes with a discussion of a potential structure for administering an Adams County greenways effort. National and global events that have occurred during the preparation of the *Adams County Greenways Plan* have significantly altered the financial and human resource capabilities of local governments. Nevertheless, the potential program structure is included for the county's consideration at a time when conditions improve.

**ACTION PROGRAM**

The action program (Table 4.1) of the *Adams County Greenways Plan* summarizes recommendations for establishing a greenways network in the county. The actions, priorities, and responsible organizations should serve as guidelines. Stakeholders may decide to deviate from the guidelines in order to take advantage of unforeseen opportunities to further the development of the greenway vision. Local stakeholders will also need to seek funding through grants or cost reimbursement programs throughout the process. Information on potential funding sources is provided later in the chapter.

Recommendations in the action program are presented according to the scope of responsibility (county or municipal) or the type of greenway (active or conservation). The action program should be reviewed at least annually to determine past accomplishments, subsequent tasks, and any needed adjustments to the program.

The list of entities with a role in undertaking a particular strategy (“Responsible Parties”) is preliminary. Additional parties with expertise or interest in a particular aspect of the plan should continue to be identified and brought into the process.

Prioritization of implementation tasks has been divided into short-term, mid-term, and long-term. Short-term tasks (S) should be accomplished within the first two years of plan adoption. Short-term success will establish a record of success and build further support for the greenway system. Mid-term priorities (M) should be undertaken in years three through five, and long-term priorities (L) are expected to begin after five or more years.

The “Status” column of the tables should be used to keep track of progress made toward completion of each strategy. For example, “I” could be noted to indicate “In Progress” and “C” to indicate “Complete”. The implementation strategies are intended to provide guidance to the county, municipalities, and other partners.

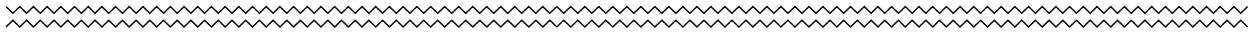
**Table 4.1  
Action Program**

| Recommendation                                                                                                                                                                                                                                                                              | Priority | Lead Entity(ies) <sup>1</sup>      | Status |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------|--------|
| <b>Recommendations of Countywide Scope</b>                                                                                                                                                                                                                                                  |          |                                    |        |
| 1 Officially adopt the <i>Adams County Greenways Plan</i> as part of the <i>Adams County Comprehensive Plan</i> .                                                                                                                                                                           | S        | ACOPD Commissioners                |        |
| 2 In line with the recommendation of the Green Ribbon Commission and the <i>Adams County Vision for Parks, Recreation, and Open Space</i> , establish a standing Adams County Open Space, Greenways, and Recreation Advisory Board/Forum/Program.                                           | S        | ACOPD Commissioners                |        |
| 3 Establish a county open space, greenway, and recreation program to strengthen educational and technical assistance to municipalities regarding the benefits of greenways, recreation, land preservation, and to implement the recommendations of the <i>Adams County Greenways Plan</i> . | S        | ACOPD Commissioners Advisory Board |        |
| 4 Advance the recommendations of the Green Ribbon Commission and the <i>Adams County Vision for Parks, Recreation, and Open Space</i> to investigate a finance mechanism that can leverage state and federal                                                                                | S        | ACOPD Commissioners Advisory Board |        |



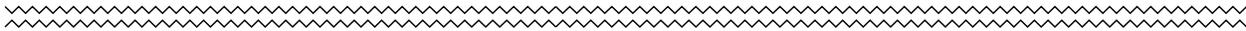
| Recommendation                                                                                                                                                                                                                                                                                                                                                       | Priority | Lead Entity(ies) <sup>1</sup>          | Status |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------|--------|
| funding opportunities to encourage municipal planning, development, and preservation of land for open space, greenways, and recreation.                                                                                                                                                                                                                              |          |                                        |        |
| 5 Implement a "Springboard / Pilot" project, such as the Hanover to Gettysburg Trail, to gather interest and increase public awareness of greenways.                                                                                                                                                                                                                 | S        | ACOPD<br>HABPI<br>Municipalities       |        |
| 6 Establish regular meetings with local municipalities and surrounding counties to develop regional greenways and to discuss issues of mutual significance.                                                                                                                                                                                                          | M        | ACOPD<br>Municipalities                |        |
| 7 Encourage local municipalities to conduct DCNR-funded peer projects to determine the feasibility of developing regional boards/commissions to advance the development of local greenways, open space, recreation, and conservation projects consistent with the <i>Adams County Greenways Plan</i> .                                                               | S        | ACOPD<br>Municipalities                |        |
| 8 Work with the historic and tourism communities to protect, conserve, and, where appropriate, develop the Adams County portions of regional cultural features, such as the DCNR's South Mountain Conservation Landscape Initiative, the Pennsylvania Highlands Mega-greenway, the Journey Through Hallowed Ground, and the Grand History Trail.                     | S        | ACOPD<br>DCNR<br>JTHG<br>ACCVB         |        |
| 9 Develop a marketing strategy, with an emphasis on economic development and resource conservation, to educate municipalities and county residents about the benefits of designing and implementing greenway projects.                                                                                                                                               | L        | ACOPD<br>ACEDC<br>ACCVB<br>GACCC       |        |
| 10 Encourage the historic, tourism, and agricultural communities with interest in the Fruitbelt region to request special attention from DCNR in the proposed South Mountain Conservation Landscape Initiative (CLI) for the South Mountain Faces and the adjacent Fruitbelt.                                                                                        | S        | ACOPD<br>DCNR<br>FGAAC                 |        |
| 11 Enhance local management and operational capacity to support the protection, conservation, and, where appropriate, acquisition and development of greenways and associated specialized park facilities.                                                                                                                                                           | M        | Commissioners<br>Municipalities        |        |
| <b>Recommendations of Municipal Scope</b>                                                                                                                                                                                                                                                                                                                            |          |                                        |        |
| 1 Prepare local greenway plans that specifically identify potential greenway corridors consistent with the countywide conceptual greenways framework provided in the <i>Adams County Greenways Plan</i> .                                                                                                                                                            | M        | Municipalities<br>ACOPD                |        |
| 2 Participate in an annual county open space, greenway, and recreation forum with neighboring municipalities to address open space priorities, develop regional greenways, expand recreation opportunities, respond to conservation priorities, and to discuss issues of mutual significance.                                                                        | S        | ACOPD<br>Commissioners<br>PSCE<br>ACCD |        |
| 3 Amend zoning and subdivision and land development ordinances to include provisions to protect greenways and encourage open space dedication along greenway corridors, streams, steep slopes, and other environmentally sensitive features. (Appendix B provides additional information about the use of local ordinances in preserving greenways and other lands.) | M        | Municipalities<br>ACOPD                |        |
| 4 Assist local municipalities with the development and adoption of official maps as a tool to help preserve land and, where appropriate, develop trail systems.                                                                                                                                                                                                      | M        | Municipalities<br>ACOPD                |        |





| Recommendation                                                                                                                                                                                                                                                                                                                            | Priority | Lead Entity(ies) <sup>1</sup>                  | Status |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------|--------|
| 5 Strengthen educational and technical assistance capacity provided to municipalities and conservation organizations regarding the benefits of greenways and land preservation consistent with the <i>Adams County Greenways Plan</i> .                                                                                                   | S        | ACOPD<br>DCNR<br>ACCD<br>PSCE                  |        |
| 6 Provide grant writing and other technical assistance to encourage municipalities, upon request, to pursue multimunicipal greenway planning and development. Provide matching funds through the county Community Development Block Grant (CDBG) program.                                                                                 | M        | Commissioners<br>ACOPD                         |        |
| 7 Provide GIS support to local municipalities to: <ul style="list-style-type: none"> <li>• Update open space / greenway priorities on an ongoing basis.</li> <li>• Create additional open space / greenway data sets, as required.</li> <li>• Provide mapping assistance.</li> <li>• Provide cartographic modeling assistance.</li> </ul> | S        | ACOPD<br>ACMGISO                               |        |
| <b>Recommendations Regarding Conservation Greenways</b>                                                                                                                                                                                                                                                                                   |          |                                                |        |
| 1 Initiate a stormwater management plan for the county which, where appropriate, will protect natural habitats along proposed county greenways.                                                                                                                                                                                           | S        | ACOPD<br>DEP<br>Commissioners                  |        |
| 2 Prepare a river conservation plan for the Monocacy Creek watershed to identify: <ul style="list-style-type: none"> <li>• Unique characteristics / threats.</li> <li>• Appropriate protection measures.</li> <li>• Key parcels for preservation.</li> </ul>                                                                              | M        | ACOPD<br>DEP<br>PEC                            |        |
| 3 Establish an initiative to work with landowners in headwaters areas to help protect water quality and establish conservation greenways.                                                                                                                                                                                                 | L        | ACOPD<br>WAAC<br>ACCD                          |        |
| 4 Educate landowners, developers, farmers, and the general public about the value of conservation and the use of Best Management Practices to protect water and land resources.                                                                                                                                                           | S        | ACOPD<br>ACALPO<br>WAAC<br>DCNR<br>PSCE        |        |
| 5 Work with municipal elected officials and planning commissions to develop local preservation strategies for important natural areas and habitats.                                                                                                                                                                                       | M        | ACOPD<br>Commissioners<br>Municipalities       |        |
| 6 Work with local municipalities, the Land Conservancy of Adams County, and the Watershed Alliance of Adams County to protect priority habitat sites identified in the Adams County Natural Areas Inventory.                                                                                                                              | S        | ACOPD<br>Municipalities<br>LCAC<br>WAAC<br>WPC |        |
| 7 Protect significant upland areas and geologic features, such as the Conewago Narrows, South Mountain, and Round Hill, through conservation easements or other available land preservation techniques.                                                                                                                                   | M        | ACOPD<br>DCNR<br>LCAC<br>WAAC                  |        |
| 8 Implement the 2007 <i>Conewago Creek Watershed Conservation Plan</i> , including recommendations designed to provide limited access to fishing sites along the creek, to provide limited recreational access along the creek, and to identify and rank key parcels for preservation.                                                    | M        | ACOPD<br>LCAC<br>WAAC<br>PEC                   |        |
| 9 Institute a program to reestablish riparian buffers along Adams County's creeks.                                                                                                                                                                                                                                                        | S        | ACCD                                           |        |





| Recommendation                                                                                                                                                                                                                                                                             | Priority | Lead Entity(ies) <sup>1</sup>           | Status |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------|--------|
| <b>Recommendations Regarding Active Greenways</b>                                                                                                                                                                                                                                          |          |                                         |        |
| 1 Support the development and construction of the Hanover to Gettysburg Trail, the North Gettysburg Trail, the Biglerville trail system, the Gettysburg Inner Loop, and the Grand History Loop.                                                                                            | S        | ACOPD<br>HAPBI                          |        |
| 2 Establish a broad advocacy capability to encourage the development of active greenways that help achieve a variety of community objectives including, but not limited to, economic development, business retention, community health and fitness, and nonmotorized vehicle connectivity. | S        | ACOPD<br>ACEDC<br>GACCC<br>HAC<br>ACTPO |        |
| 3 Incorporate community-accessible trails in proposed housing developments, and interconnect new developments along conserved greenways.                                                                                                                                                   | S        | ACOPD<br>Municipalities                 |        |
| 4 Work with PennDOT to develop a scenic and historic roads plan.                                                                                                                                                                                                                           | S        | ACOPD<br>JTHG<br>PennDOT                |        |
| 5 Initiate an auto tour devoted to the Underground Railroad.                                                                                                                                                                                                                               | M        | ACOPD<br>HGAC                           |        |
| 6 Identify a network of low-volume local roads which could serve as marked bicycle routes.                                                                                                                                                                                                 | M        | ACOPD<br>PennDOT<br>Municipalities      |        |
| 7 Encourage the county school districts to promote projects designed to enhance safety for students who walk or bicycle to school by supporting "Safe Routes to School" programs and projects.                                                                                             | S        | ACOPD<br>PennDOT<br>School Districts    |        |

<sup>1</sup> The following list of lead agency(ies) is not necessarily comprehensive. Other entities should be brought into specific implementation activities, as warranted.

- |                                                       |                                                  |
|-------------------------------------------------------|--------------------------------------------------|
| ACCD – Adams Co. Conservation District                | GACCC – Gettysburg–Adams Co. Chamber of Commerce |
| ACCVB – Adams Co. Convention/Visitors Bureau          | HABPI – Healthy Adams Bicycle/Ped. Initiative    |
| ACEDC – Adams Co. Economic Development Corp.          | HAC – Healthy Adams County                       |
| ACALPO – Adams Co. Agricul. Land Preservation Office  | JTHG – Journey Through Hallowed Ground           |
| ACMGISO – Adams Co. Mapping/GIS Office                | LCAC – Land Conservancy of Adams Co.             |
| ACOPD – Adams Co. Office of Planning and Devel.       | PEC – PA Environmental Council                   |
| ACTPO – Adams Co. Transportation Planning Org.        | PSCE – Penn State Cooperative Extension          |
| DCNR – PA Dept. of Conservation and Natural Resources | WAAC – Watershed Alliance of Adams Co.           |
| DEP – PA Dept. of Environmental Protection            | WPC – Western PA Conservancy                     |
| FGAAA – Fruit Growers Association of Adams County     |                                                  |

The action program is a recommended series of actions necessary to implement the *Adams County Greenways Plan*. The action program should be a “living document”, setting high goals but responding to fiscal and political realities. Actual implementation will depend upon the fiscal and political climate in any given year. Therefore, annual review and, if necessary, modification of the program is essential to realistically build on the success of the greenways program.



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## PILOT PROJECTS

The *Adams County Greenways Plan* recommends several pilot projects to serve as springboards for success. The pilot projects will:

- Support the county’s vision for an interconnected system of green spaces.
- Educate municipal officials and county residents on the value of conserving greenways and associated natural resources.
- Promote a county greenways program that utilizes county services and resources available to achieve the greenways vision.

The pilot projects include a potential county demonstration project, which will encourage municipal planning, development, and preservation of land for open space, greenways, and recreation, as well as regional projects, based on recommendations of previous county plans, that are unique to the different regions within the county.

Conservation greenway projects were chosen to conserve areas of the county that have the most significant natural infrastructure components identified in the greenways plan. Active greenway projects are destination-oriented, regional in nature, and serve multiple modes of transportation and were chosen to create momentum for future expansion of the greenway system. Each of the projects will require further study to determine feasibility.

### **County Pilot Project: Hanover/Gettysburg Connector**

Develop the Hanover to Gettysburg Trail as a model county active greenway and as a cooperative demonstration project with multiple partners. The Healthy Adams Bicycle/Pedestrian Action Coalition, Inc. (HABPI) promotes health and public recreational opportunities through safe bicycling and pedestrian activities, both on road and off. In December 2007, HABPI with assistance from the York County Rail Trail Authority, the PA Department of Conservation and Natural Resources (DCNR), and the Adams County Office of Planning and Development (ACOPD) completed a bicycle/pedestrian off-road trail feasibility study from Hanover to Gettysburg.

The trail will be a segment of the Grand History Loop Trail, a multistate effort to develop a trail system linking Pennsylvania, Maryland, and the District of Columbia. The multiuse trail will connect the Hanover Trolley Trail through Gettysburg to Emmitsburg and Frederick, MD and the C&O Canal Trail, which leads to Washington, D.C.

### **Regional Pilot Projects**

Implementing the *Adams County Greenways Plan* will require leadership at the county level and strong partnerships with local municipalities and key organizations, both public and private. The

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proposed greenways network can only be realized with a commitment at the county and local levels. A network of greenways is not created overnight. Greenway networks are created piece-by-piece, often a parcel at a time. The process takes years—even decades. Segments that can be achieved with few obstacles should be undertaken first. The following regional pilot projects should help to establish a record of success and build momentum for the greenways system.

Northwest Region

A conservation greenway should be developed throughout the ***northern branch of the Conewago Creek, focused on the headwaters*** from the upper reaches of Buchanan Valley through the Narrows ravine to Arendtsville. The headwaters have been identified as high quality streams, which have escaped the dangers posed by agriculture and development, sewage and sediment, to run virtually untainted for centuries. The municipalities in the region can help to keep the streams in pristine condition through a riparian buffer program. The woodlands in the ravine help maintain the cool microclimate required for a variety of rare plant species in Pennsylvania. The woodlands also provide scenic value and help maintain the quality of the Conewago Creek and the fisheries in the region.

The county and northwest municipalities should also support the development of the ***Biglerville Trail***, which will demonstrate the benefits of community trails and promote pedestrian byways. Options should also be studied to connect the trail to the Boroughs of Arendtsville and Bendersville.

Northern Region

The *Adams County Greenways Plan* recommends that the greenways focus for the northern region should include the development of detailed greenways plans for the Bermudian and Latimore Creeks. Both creeks both begin in the foothills of the Fruitbelt, extend eastward through state game lands, and approach York County just north of Lake Meade. In the western sections of the two greenway corridors, land use measures should be developed to protect the stream corridors. As the greenways extend eastward past U.S. 15, the emphasis should shift to active greenways connecting the communities of York Springs and Lake Meade to the state game lands and the Latimore Valley Fairgrounds.

Eastern Region

The ***South Conewago Creek Greenway*** concept includes an accessible greenway along the entire length of the south branch of the creek. Efforts in the eastern region should begin by evaluating the potential to develop a regional park providing access to the South Branch of the Conewago Creek. The greenway would provide active recreation in the form of trails and additional access points to the creek.

In addition, conservation efforts should focus on the Conewago Creek/New Chester, King's Pasture, and Green Ridge Bend areas to protect the PA endangered animal and plant species identified in the PA Natural Areas Inventory. Maintaining woodland buffers along the stream to minimize sedimentation and nutrient loading can help protect the rare animal and fisheries located along the greenway.

Southeast Region

The Healthy Adams Bicycle/Pedestrian Action Coalition, Inc (HABPI) has made significant progress toward developing the Gettysburg to Hanover Trail. HABPI has identified a potential first leg of the trail to link the Borough of Littlestown to the Borough of McSherrystown via the abandoned rail line of the Frederick Secondary Track. The segment will provide a vital pedestrian link to the services available in Hanover for residents of the two boroughs and the two townships. Support for the project would also increase public awareness of greenway benefits and stimulate interest in preserving the various horse farms identified within the southeast region.

Central Region

The entire ***Rock Creek Greenway*** concept is 28.8 miles, 14.7 miles of which includes a proposed trail. The Rock Creek Greenway includes the Borough of Gettysburg and the Townships of Straban, Cumberland, and Mount Joy.

The Rock Creek Greenway concept encourages the development of two conservation greenway sections: one in the northern branches and one around the Gettysburg National Military Park (GNMP). Regional efforts should concentrate on encouraging and supporting stream clean-up programs and the use of Best Management Practices to protect stream corridors throughout the greenways. Special conservation consideration should also be given to the Barlow Woods area in Cumberland and Mt. Joy Townships. The wooded floodplain and slopes in the two areas support several habitats types with a diversity of plant species unique to Pennsylvania.

The *Adams County Greenways Plan* also recommends two active greenways sections in the central region: one around the Gettysburg Area and the second south of the GNMP, at which point the plan envisions a trail continuing along the remainder of Rock Creek to the Maryland state line. A pilot project for the active greenways should include an intergovernmental cooperative effort with the Gettysburg Area School District and the National Park Service to support the development of the North Gettysburg Trail and the Gettysburg Inner Loop Project.

Southwest Region

The southern portion of the Toms Creek Greenway is located primarily in the Borough of Carroll Valley and has the potential to extend further into Hamiltonban Township, connecting to the Strawberry Hill Nature Center and the Appalachian Trail. The Borough of Carroll Valley is working to develop a trail along the creek extending approximately 4.5 miles from the Lower Ranch Recreational Area north along Lakes May, Carroll, and Kay to the Fairfield High School. Zora Woods has been identified in the Natural Areas Inventory as a significant community along Tom's Run, with relatively undisturbed forest that is home to a variety of important Pennsylvania plant species. As the greenway extends northward along the creek corridor, special consideration should be given to protecting the high quality streams that feed into the densely populated area to the south.

LAND PRESERVATION TECHNIQUES

One of the most important purposes of greenways, as noted throughout the *Adams County Greenways Plan*, is preserving land. The techniques used to preserve the land must be available to and feasible for the landowner. Since landowners have many different financial needs and circumstances, techniques that are appropriate for some owners will not be useful to others. The following section describes many of the tools that can be used to preserve greenways in Adams County.

- ***Fee Simple Acquisition*** — The most effective means of preserving land is through fee simple purchase. Fee simple purchase gives the owner complete control of the land, including all public access and conservation practice decisions. In most situations, fee simple acquisition is also the most expensive method of land control. Therefore, many entities interested in land preservation, particularly public agencies or land conservancies with limited budgets, will explore other, less expensive options for land control.
- ***Conservation Easements*** — Conservation easements place restrictions or an outright prohibition on development at a lower cost than fee simple acquisition. Under a conservation easement, land could (and usually does) remain in current ownership, but the property owner voluntarily agrees to donate or sell the right to develop the land. The property owner agrees to place a restriction in the deed of the property, which becomes binding on all future owners of the land. The easement is held by the municipality, county, or a private conservancy, such as the Land Conservancy of Adams County. Conservation easements often provide the property owner with federal income tax and estate tax benefits.
- ***Other Easements*** — Conservation easements may be used to preserve many types of resources. For example, easements may be placed on historic lands or buildings, open space, forests, or farmland. Conservation easements are frequently used for environmental preservation without providing for public use of the land. However, a conservation easement can also be combined with a *pedestrian easement* or *right of public access easement* to allow public access for walking, hiking, horseback riding, bicycling, and other activities with established rules and restrictions. With such an easement, the landowner is not held liable for any injuries, crimes, or death associated with public use of the land.

Another easement type is the *joint-use easement*, which accommodates multiple uses under one easement. Joint-use easements are particularly appropriate for public utility corridors. Electric transmission lines, sanitary sewer lines, petroleum or gas pipelines, and other such corridors may be ideal for trail connections, as they often contain a cleared pathway. Joint-use easements are advantageous in that landowners will know the exact purposes of the singular easement, rather than dealing with multiple easements.

Agricultural conservation easements may be appropriate in areas with prime farmland adjacent to greenways. The action preserves additional contiguous land and helps to maintain the scenic character of both the greenway and the area as a whole. Local, county, or state governments may

purchase easements from owners of prime farmland if the owner agrees to keep the land in agricultural use. The land must meet certain acreage, soil, and production criteria to qualify for the program.³¹

The Pennsylvania Land Trust Association (PALTA) is the statewide organization of nonprofit, land conservation groups. PALTA has developed model easements that are available on the association website (<http://www.conserveland.org>) and include:

- Pennsylvania Conservation Easement
 - Riparian Forest Buffer Protection Agreement
 - Trail Easement Agreement
 - Fishing Access Agreement
 - Water Quality Improvement Easement
- ***Purchase and Leaseback or Resale*** — An entity interested in preservation, such as a local government or conservancy, can purchase land in fee simple, place restrictions on the deed prohibiting certain uses (e.g., residential development), and sell or lease the land to interested parties. The original buyer gains the potential for future use at the current price and may recover some or all of the purchase price through leasing. The land is maintained in open space and may be developed as a park if and when future demand warrants. Resale of some or all of the land with deed restrictions may maintain open space, relieve the municipality of maintenance obligations, and return the land to the tax rolls.
 - ***Donations*** — Frequently, land can be acquired through donations from private owners, organizations, and corporations. Local governments should encourage land donations by pointing out benefits of such actions, such as federal income and estate tax benefits and the public relations value. Prior to accepting a donation, a municipality should consider two points:
 - Location of the parcel and the anticipated development and maintenance costs. If the location is poor and/or projected costs will be excessive, the municipality should strongly consider accepting a fee rather than the land.
 - If the land is suitable, the municipality should encourage the donor to provide an endowment fund along with the land to assist with development and/or maintenance costs.

In addition to land, corporations and other private parties also frequently provide cash donations for worthy causes, including land preservation.

³¹ Additional information about agricultural conservation easements is available from the Adams County Agriculture & Natural Resource Center, 670 Old Harrisburg Road, Suite 100, Gettysburg, PA 17325 (717-337-5859).

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- **Land Exchange** — A land exchange, or land swap, is useful when a development interest and a conservation interest both own a piece of land more appropriate to the mission of the other. For example, a residential developer may own a wetland area next to a park while a township government owns a vacant tract near an existing developed area. With the land exchange, the environmentally-sensitive land is preserved by the township, and the developer builds houses in an appropriate location. Any mismatches in land value can be negotiated.

 - **Municipal Ordinances** — One of the least expensive ways to protect environmentally-sensitive land is through municipal zoning ordinances and subdivision and land development ordinances (SALDOs). Local ordinances contain provisions that prohibit or limit activities on or near environmentally sensitive areas. The following provisions are most important with regard to greenways. Appendix A contains more details regarding the use of municipal ordinance provisions to preserve land for greenways.
 - *Riparian buffers* are the areas within a specified distance (or “setback”) of a waterway within which development or other activities is prohibited or restricted. Most township ordinances establish riparian buffers between 50 and 100 feet, while many borough and city ordinances do not contain any riparian buffer provisions. The most appropriate buffer size depends on the size of the stream, and the existing natural and human features along the stream. A two-tiered buffer can set different standards for two different setbacks (e.g. no development within 100 feet, and no mowing within 50 feet).

 - *Floodplain regulations* prohibit development and certain other activities within the 100-year floodplain, frequently in a separate floodplain ordinance. The 100-year floodplain corridor is composed of a *floodway* and *flood fringe* area. State floodplain regulations form a bare minimum of floodplain protection. All floodplains should be kept in open space. Activities such as tree-cutting, clearing of vegetation, storage of hazardous materials, and landfill operations would have a negative effect during flood events and should be prohibited. In places where existing structures are located within the floodplain, regulation options include establishing a lowest floor level for buildings, requiring floodproofing, and prohibiting further development or improvements.

 - *Wetlands, high water table soils, and hydric soils* are areas containing permanently or frequently saturated soil conditions or standing water. The three features often coincide. Most zoning ordinances take a site-by-site approach to wetlands regulation, requiring a zoning officer or engineer to determine if wetland indicators are present on a parcel being developed. If the site contains wetland indicators, the applicant must have a qualified wetland specialist delineate wetlands, on which development must be prohibited. Alternatively, a municipality may have a complete wetlands map database prepared for the jurisdiction by a wetlands specialist.

 - *Steep slopes* are usually divided into two categories: 15–25% and 25% and greater. Development densities and buildings sites are typically restricted in slopes between 15 and
-

25 %, and restricted or prohibited on slopes 25% and greater. Keeping steep slopes in open space is a benefit to ridge-based greenways as well as stream-based greenways, where the riparian zone is surrounded by slopes.

- *Woodlands* — Most SALDOs contain tree-cutting provisions, permitting unlimited tree-cutting in areas necessary to accommodate home sites and road right-of-ways, and providing a maximum tree extraction number or rate for other areas. A more protective option is to declare a maximum percentage of tree removal per lot. To protect woodlands along stream corridors and ridges, cutting restrictions can be placed on floodplain forests and upland forests, respectively.
- *Agricultural zoning* — “Effective agricultural zoning” limits the amount of development on key prime farmland tracts so that most of the land remains in large lots that can still be viable for farming. Agricultural zoning must consider soils, physical features, current land use patterns, and other matters. Limiting water and sewer extensions, transfer of development rights, and other techniques may also help to conserve farmland.
- ***Public Dedication*** — The Pennsylvania Municipalities Planning Code (Act 247, as amended) enables municipalities to require that residential developers dedicate land, or fees in lieu of land, for public recreation. Municipalities must have an adopted recreation plan and an adopted ordinance relating to mandatory dedication before land or fees can be accepted. The amount of land required must be related to the demand for recreation land typically created by new development. The required land dedication should be in addition to the preservation of natural features on the land, such as floodplains, wetlands, steep slopes, woodlands, or other sensitive areas. More information is available at
- ***Open Space Development*** — Open Space Development, similar in some respects to “cluster development”, can be a useful development technique where greenways pass through land envisioned for development. When a parcel is developed in accordance with Open Space Development principles, increased development densities can be authorized in exchange for the conservation of open space. For example, a standard set of suburban development regulations may permit a 100-acre property adjacent to a stream to be subdivided into 100 one-acre lots. Using Open Space Development techniques, the same property could be developed with the following design characteristics:
 - Natural features on the site are identified, mapped, and preserved in a common open space area (for example, 10 acres).
 - Additional common open space is set aside to further buffer and protect the identified natural features and to provide opportunities for land and habitat conservation as well as for active or passive recreation (for example, 40 acres).
 - The remaining area of the property is designated as the development area for the site and subdivided to allow for the permitted lots (for example, 100 half-acre lots using a density

neutral approach or 125 lots averaging 0.4 acres in size using a density bonus provision of 25%).

Use of Open Space Development techniques can be integrated into zoning ordinances and subdivision and land development ordinance. The technique can be applied as either an optional or a mandatory development technique, depending on the objectives within a specific setting or municipality. Within Adams County, Hamiltonban, Liberty, and Straban Townships require the use of Open Space Development guidelines in various settings. A significant number of other Adams County municipalities offer the use of Open Space Development techniques as an optional form of development. Open Space Development provisions are often coupled with density bonuses to encourage the use of the technique.

Adams County encourages the use of Open Space Development techniques in a variety of areas within the county. The techniques are appropriate within designated growth areas where suburban density development may be proposed. Adams County also encourages the use of Open Space Development techniques in rural settings that have transitioned or are transitioning from agricultural as the predominant land use. Within identified settings, Open Space Development techniques are applied in a manner to allow some development while conserving important rural and scenic features. Adams County does not support the use of Open Space Development techniques in areas that should be retained as active agricultural areas. The introduction of new residential uses, regardless of the development technique employed, ultimately results in conflicts between farm and nonfarm properties that can ultimately result in the degradation of agriculture as the primary use within a setting.

- ***Transfer of Development Rights*** — Transfer of development rights (TDR) is a voluntary option in a zoning ordinance that provides incentives for private developers to pay to preserve environmentally-sensitive land. Under a typical TDR system, a developer pays a private landowner to permanently preserve the land in return for being able to add the potential development from the preserved parcel to a parcel in another area of the municipality more suitable for intense development. Therefore, the developer receives approval to build on the development parcel at a higher density than would be allowed without the additional development rights from the preserved parcel. The developer and the owner of the sensitive land privately negotiate a price. The municipality approves the higher density development, and, simultaneously, a conservation easement is placed on the sensitive land.
- ***Official Map*** — An official map shows public lands and facilities from officially adopted municipal plans, such as a comprehensive plan.³² The official map can be used to reserve right-of-way for a period of one year, which can be very useful to a municipality for trail development, easement acquisition, or other negotiations with developers. When a greenway plan is adopted, the proposed greenways should be put on an official map, which should be adopted by the muni-

³² Authority for an official map is provided in Article IV of the Pennsylvania Municipalities Planning Code (Act 247 as reenacted and amended).

cipality. If a development is proposed on a parcel where a greenway is proposed, the municipality has one year to acquire control of all or a portion of the parcel or negotiate other arrangements in accordance with local policies prior to development of the parcel.

COSTS AND FUNDING

Costs for greenways vary widely depending on ownership circumstances (and, therefore, the price of acquisition/site control, if any), development proposed, such as trails, and maintenance required, if any. Conceivably, the greenway could involve no public cost at all, if the owner voluntarily places a permanent conservation easement on the land, and the land remains in private ownership.

If access is granted and trails are developed, costs will vary depending on the trail length, surface, and amenities. Trail design considerations are the subject of Appendix C. The following information comes from several recently constructed trails in Pennsylvania, all approximately 1–2 miles in length. The three examples illustrate the wide range of construction cost, depending on trail design and circumstances: from \$246,913 per mile in Pittston to \$475,388 per mile in State College.

- **Bellefonte Central Rail-Trail, 1.3 miles \$618,004 (includes engineering)**
State College, PA — 2005–2007
 - \$ 71,214 Initial design & engineering costs.
 - \$ 426,000 Construction: including design, environmental clearance and regulatory permits, and the bidding process.
 - \$ 33,000 Consultation, engineering, and inspection costs related to a required change in the trail design. Hydraulic studies revealed the need to create a large culvert to divert storm water from a natural ponding area above the trail.
 - \$ 87,790 Culvert
- **Luzerne County Rail Trail, 1.8 miles, 10' wide. \$444,444 (includes engineering)**
Pittston, PA — 2007
A riverfront rail-with-trail, the cost includes engineering, and the design includes a concrete walkway, iron rail fencing, chain link fencing, pebble, and crushed stone.
- **Heritage Rail Trail County Park, 1.0 miles, 10' wide, \$260,500 (excludes engineering)**
York, PA — 2007
The northern extension of an existing rail-trail, an approximate one-mile route in an area that is not on existing rail corridor; total construction cost estimates include everything required to complete the trail with crushed stone (drainage, reseeding, curbing & one gate) and ranged from a low of \$260,500 to a high over \$500,000. Engineering costs may be ball-parked at approximately 20%, bringing total cost to approximately \$312,600.

Maintenance costs will also vary significantly depending on the type of trail and the level of volunteer involvement. Carefully planned design and construction will have a significant effect on long-term maintenance costs.³³

Public-private partnerships can be an ideal way to address maintenance issues on a trail. A commonly seen partnership is one where the trail is owned by a municipality but maintained largely by volunteers with assistance from the county or municipality. Involving the local citizens and service groups in the planning of a trail from the very beginning of a project is a good step toward developing a friends group.

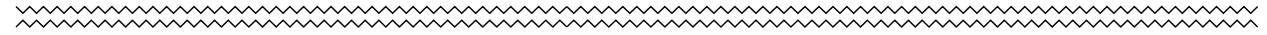
The Capital Area Greenbelt in Harrisburg is one local example of a successful partnership. The greenbelt is a 20-mile trail that loops around and through the city and parallels the Susquehanna River. Primarily constructed with asphalt tread, the greenbelt also includes sections of dirt ‘single track’ as well as boardwalk. The friends group built and maintains a community Five-Senses garden. The greenbelt includes only two miles of actual rail-trail, with the remainder using existing shoulders, miscellaneous rights-of-way, and shared roadways. The greenbelt maintenance budget (Table 4.2) is a good example of a successful partnership maintaining a trail. In the case of the Capital Area Greenbelt, the 2005 example is worth noting for the fact that the value of donated equipment, materials, and services (\$86,600) amounted to more than 62 percent of the organization’s annual budget.

Table 4.2
Capital Area Greenbelt Budget, 2005

| Maintenance Activity | Labor cost | Donated services | Eqpt. and material cost | Donated eqpt. and materials | Approx. total annual cost |
|---|------------|------------------|-------------------------|-----------------------------|---------------------------|
| Resurface non-asphalt trail | | \$2,000 | \$2,000 | \$3,500 | \$7,500 |
| Grade non-asphalt trail | | | | | \$0 |
| Pothole repair and other patches on non-asphalt trail | | \$1,000 | \$500 | \$1,500 | \$3,000 |
| Snow removal from non-asphalt trail | | | | | \$0 |
| Surface cleaning of non-asphalt trail | | | | | \$0 |
| Keep trailside land clear of trash and debris | | \$1,000 | \$1,000 | | \$2,000 |
| Mowing | | \$2,000 | \$1,000 | \$2,000 | \$5,000 |
| Leaf removal | | | | | \$0 |
| Tree pruning | | | | | \$0 |
| Tree removal | \$500 | \$800 | \$200 | \$1,000 | \$2,500 |

³³ Many free assistance services are available from web sites managed by Rails-to-Trails Conservancy (www.railstotrails.org) and American Trails (www.americantrails.org).

| Maintenance Activity | Labor cost | Donated services | Eqpt. and material cost | Donated eqpt. and materials | Approx. total annual cost |
|--|------------|------------------|-------------------------|-----------------------------|---------------------------|
| Invasive species removal | | \$1,000 | \$500 | \$800 | \$2,300 |
| Planting new vegetation | | \$3,000 | \$2,000 | \$3,000 | \$8,000 |
| Application of herbicides or pesticides | | \$1,000 | \$300 | \$1,000 | \$2,300 |
| Clearing of drainage channels and culverts | | \$500 | \$200 | \$500 | \$1,200 |
| Surface maintenance of parking areas | \$2,000 | \$1,000 | \$300 | \$1,000 | \$4,300 |
| General maintenance of trailheads (litter clean-up, etc.) | | \$200 | \$100 | \$500 | \$800 |
| Landscaping / gardening at trailheads | | \$3,000 | \$2,000 | \$3,000 | \$8,000 |
| Empty trash cans at trailheads | \$1,500 | | \$2,000 | \$2,000 | \$5,500 |
| Maintenance of stationary toilets at trailheads (clean, empty, etc.) | | | | | \$0 |
| Maintenance of portable toilets at trailheads (clean, empty, etc.) | | | | | \$0 |
| Empty trash cans along trail | | | | | \$0 |
| Maintenance of stationary toilets along trail (clean, empty, etc.) | | | | | \$0 |
| Maintenance of portable toilets along trail (clean, empty, etc.) | | | | | \$0 |
| Maintenance of informational kiosks (repairs, etc.) | | | | | \$0 |
| Maintenance of picnic tables, benches, etc. | | | | | \$0 |
| Updating information in informational kiosks | | \$300 | \$100 | \$200 | \$600 |
| Installation of signs | | \$200 | \$300 | \$500 | \$1,000 |
| Repair/maintenance of signs | | \$200 | \$300 | \$500 | \$1,000 |
| Installation of pavement markings | | | | | \$0 |
| Maintenance of pavement markings | | | | | \$0 |
| Patrols by police agency | \$30,000 | | | | \$30,000 |
| Patrols by non-police agency (e.g. trail watch) | | | | | \$0 |
| Recovery from illegal acts such as dumping and vandalism | | | | | \$0 |
| Installation of lighting | \$100 | | \$100 | | \$200 |
| Maintenance of lighting | \$200 | | \$500 | | \$700 |
| Installation of emergency call boxes | | | | | \$0 |



| Maintenance Activity | Labor cost | Donated services | Eqpt. and material cost | Donated eqpt. and materials | Approx. total annual cost |
|---|-----------------|------------------|-------------------------|-----------------------------|---------------------------|
| Maintenance of emergency call boxes | | | | | \$0 |
| Installation of gates, bollards and fencing | \$1,000 | \$200 | \$100 | \$20,000 | \$21,300 |
| Maintenance of gates, bollards and fencing | \$300 | \$10,000 | \$200 | \$15,000 | \$25,500 |
| Bridge, tunnel, underpass and crossing inspection | \$50 | \$50 | \$50 | \$50 | \$200 |
| Bridge redecking | | | | | \$0 |
| Paint/stain/treat bridge deck or structure | \$300 | \$600 | \$300 | \$1,000 | \$2,200 |
| General bridge maintenance | \$100 | \$500 | \$1,000 | \$1,000 | \$2,600 |
| Tunnel lighting maintenance | | | | | \$0 |
| Tunnel open/closed status | | | | | \$0 |
| Paint tunnel/underpass walls and ceiling | | | | | \$0 |
| General tunnel/underpass maintenance | | | | | \$0 |
| Railroad grade crossing maintenance | | | | | \$0 |
| Road grade crossing maintenance | | | | | \$0 |
| Totals | \$36,550 | \$28,550 | \$16,050 | \$58,050 | \$139,200 |

Source: Rails-to-Trails Conservancy, *Rail-Trail Maintenance & Operation*.
 Rails-to-Trails Conservancy, Camp Hill, PA, July 2005

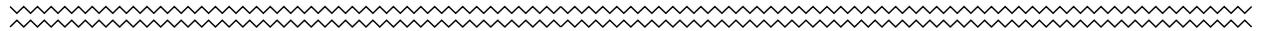
The federal government, state government, county government, private organizations, and foundations provide various opportunities for the funding of greenway efforts (Table 4.3). Funding sources are always changing. New programs are added. Older programs are revised or deleted. Therefore, any potential applicant should contact the administering agency to determine the exact requirements in effect at the time of application.

**Table 4.3
 Greenway Funding Sources**

| Name of Program | General Description of Program | Administering Agency |
|--|--|--|
| Agricultural Conservation Easement Purchase Program | The Agricultural Conservation Easement Purchase Program provides funds for the purchase of development rights on farmland. The perpetual easement ensures the farmland will be available for agricultural use indefinitely. Funding comes from federal, state, and county sources. | Adams Co. Agricultural Preservation Bd. and PA Bureau of Farmland Preservation |
| Community Conservation Partnerships Program (C2P2) - Land Trust Grants | Grants to well-established non-profit land trusts and conservancies to plan for and acquire critical natural areas. Land that is acquired must be open to the public. | PA DCNR |



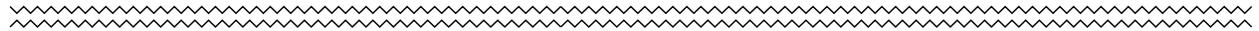
| Name of Program | General Description of Program | Administering Agency |
|--|--|--|
| C2P2 - Community Grants | Provides 50% matching grants for municipalities to: <ul style="list-style-type: none"> • Develop a plan for parks/recreation • Acquire parkland/nature preserves • Rehabilitate and improve public recreation areas. Grants up to \$20,000, without a local match, are available for material and design costs in small municipalities. | PA DCNR |
| Community Development Block Grant (CDBG) | Offers grants for a wide variety of activities, provided the applicant proves by survey or census that the project will benefit 51% low and moderate income persons or handicapped persons or eliminate "blighted" conditions in officially designated areas. For example, funds can be used for water and sewage improvements, storm drainage, handicapped accessibility, parks / recreation / greenways, street and sidewalk improvements, planning, and historic rehabilitation. | County Departments of Community and Economic Development & PA DCED |
| Community Revitalization Program | Very broad grant program. Officially intended to promote community stability, increase tax bases and improve quality of life. Applications may be made by municipalities, authorities, economic development organizations, and nonprofit corporations. Public/non-profit/profit partnerships are encouraged. Generally can be used for infrastructure, community revitalization, building rehabilitation, demolition of blighted structures, public safety, and park and greenways projects. | PA DCED & governor's office |
| PA Conservation Corps | Provides funding for work crews for community projects, such as trail improvements. | PA DCNR |
| Conservation Reserve Program (CRP) and Conservation Reserve Enhancement Program (CREP) | The U.S. Department of Agriculture, through its Farm Service Agency, provides payments to farm operators to plant long-term, stabilizing and filtering vegetation on highly erodible or environmentally sensitive landscapes (such as riparian areas). Contract duration is between 10 and 15 years. The participant, in return for annual payments during this period, agrees to implement a conservation plan approved by the local conservation district. Eligible land must be in cropland or pasture land, have an erosion index of 8 or higher, and may include field margins. | Natural Resource Conservation Service (U.S. Department of Agriculture) |
| Environmental Protection Agency (EPA) Watershed Initiative's | The Environmental Protection Agency (EPA) provides large Watershed Initiative grants ranging in size from approximately \$300,000 to \$1.3 million. Twenty grants are given out each year. The program is very competitive and requires state endorsement of the proposed project(s). | U.S. EPA (Philadelphia) |
| EPA — Water Quality | Grants for improving water quality are available for the U.S. EPA. | U.S. EPA (Phila.) |
| EPA — Brownfields Program | Grants for a very limited number of pilot demonstration projects for cleanup of contaminated underused industrial sites. | U.S. EPA (Philadelphia) |
| Flood Control - Army Corps of Engineers (CoE) | Various types of projects to manage flooding. Typically, the CoE is involved in larger watersheds, while NRCS has primary responsibility for smaller watersheds (see Small Watershed Program). | U.S. Army CoE |
| Flood Hazard Mitigation Grant Program | Provides 75% funding to relieve imminent hazards from flooding, such as voluntary buy-outs and demolitions of highly flood-prone properties. | Federal Emergency Management Agency |
| Flood Protection Program, PA | Offers design and construction of flood protection projects. The project must be deemed economically justifiable under the state capital budget process. | PA DEP — Bu. of Waterways Eng. |
| Forest Legacy Program | The Forest Legacy Program (FLP), a federal program in partnership with the state, supports state efforts to protect environmentally sensitive forest lands. The FLP directly supports property acquisition and also supports efforts to acquire donated conservation easements. Participation in the FLP is limited to private forest landowners. | USDA Forest Service in cooperation with state foresters |
| Growing Greener Program | As part of Pennsylvania's Growing Greener Program, PA DEP offers various grants that can be used for greenway related projects. They include: Watershed Grants, Technical Assistance Grants, and New or Innovative Technology Grants. | PA DEP |



| Name of Program | General Description of Program | Administering Agency |
|---|---|---|
| Home Town Streets and Safe Routes to School | The Home Town Streets Program provides funding for a variety of streetscape improvements that are aimed at reestablishing downtown and commercial centers. The Safe Routes to School Program provides grants and is designed to work with both school districts and pedestrian and bicycle safety advocates to make physical improvements that promote safe walking and biking passages to schools. Both programs require a 20% local match. | PennDOT |
| Historic Preservation Tax Credits | Offers federal income tax credits for a percentage of the qualified capital costs to rehabilitate a certified historic buildings, provided the exterior is restored. The program is generally limited to income-producing properties. | National Park Service |
| Historic Preservation - Certified Local Government Grants | Provides modest-sized matching grants to provide technical assistance to municipalities that have official historic districts and meet other criteria to be "certified." | Federal, administered by PA Historical and Museum Commission (PHMC) |
| Historic Preservation Survey and Planning Grants | Matching grants for historic surveys, historic preservation planning and National Register nominations. Available to municipalities and nonprofit organizations. Cannot be used for construction. | Federal, administered by PHMC |
| Heritage Parks Program | Provides grants up to 75% of costs for projects within state-designated "Heritage Parks" to preserve and interpret the significant contribution that certain areas made upon the industrial heritage of the state and nation. Funds four types of projects: <ul style="list-style-type: none"> • Feasibility studies • Special purpose studies • Management Action Plan • Implementation projects. Projects are intended to conserve natural, historic and recreational resources relating to industrial heritage to stimulate regional tourism. | PA DCNR |
| Industrial Sites Reuse Program, PA ("Brownfields") | Provides grants of up to 75% and low-interest loans for assessment of environmental contamination and remediation work at former industrial sites. Available to private companies, nonprofit economic development agencies, or authorities that own the land. Mainly targeted towards cities. Financing is not available to the company that caused the contamination. | PA DCED in cooperation with PA DEP |
| Intermunicipal Projects Grants | Promotes cooperation between neighboring municipalities so as to foster increased efficiency and effectiveness in the delivery of municipal services at the local level. | PA DCED |
| Keystone Historic Preservation Funds | Provides 50% matching grants to fund analysis, acquisition, or rehabilitation of historic sites. The site must be on the National Register of Historic Places or officially determined to be eligible for listing. The site must be accessible to the public after funding. Grants can be made to public agencies or nonprofit organizations. | PHMC |
| Land Use Planning and Technical Assistance Program (LUPTAP) | Provides grant funds for the preparation of community comprehensive plans and the ordinances to implement them. It promotes cooperation between municipalities in making sound land use decisions that follow or adhere to the Governor's Executive Order on Land Use. Priority is given to any county government acting on behalf of its municipalities, any group of two or more municipalities, or a body authorized to act on behalf of two or more municipalities. Applicants are to provide a minimum of 50% match consisting of cash or in-kind services. There are no minimum or maximum amounts. | PA DCED |
| Land & Water Conservation Fund | The Land & Water Conservation Fund (LWCF) provides matching grants to state and local governments for the acquisition and development of public outdoor recreation areas and facilities. | National Park Service in cooperation with PA DCNR |
| Local Government Capital Projects Loan Program | Provides low-interest loans to municipalities with populations of 12,000 or less for the purchase of equipment and the purchase, construction, renovation or rehabilitation of municipal facilities. Priorities are given to projects that are necessary for public health and safety or involve intergovernmental cooperation. | PA DCED |



| Name of Program | General Description of Program | Administering Agency |
|--|--|---|
| Municipalities Financial Recovery Act, PA | Provides technical advice and grants for special purposes (such as studies to improve service efficiency) within municipalities that have been officially designated as "financially distressed." After application and designation, the municipality must follow a financial recovery plan. | PA DCED |
| National Recreational Trails Funding (Symms NRTA) | Provides grants for the acquisition and development of recreation trails (which may include trails for motorized vehicles). A 20% local match is required. Applications may be made by federal, state or local government agencies, and some for-profit entities. | Federal, administered by PA DCNR |
| Nutrient Management Plan Development Incentive Program | Grants of \$4 per acre are available to farmers to cover up to 75% of the cost of preparing nutrient management plans. Low-interest loans are also available through the state to help implement nutrient management-related best management practices. | County Conservation District |
| On-Lot Septic System Program | Offers low-interest loans to limited income households to repair failing on-lot septic systems. | PennVest, PHFA |
| PA Infrastructure Investment Authority (PennVest) | Offers low-interest loans for construction and improvement of drinking water and wastewater systems. 100% grants may be available for highly-distressed communities. Mainly intended for public systems, but some private systems may be approved. Water projects are funded through the Drinking Water Revolving Loan Fund. Sewage projects are funded through the Clean Water Revolving Fund. PennVest is also authorized to provide loans for projects to control existing stormwater problems, such as separating stormwater from sanitary sewage. The "Advance Funding Program" provides low-interest loans for feasibility studies and engineering of systems if the utility cannot fund such work itself. | PennVest PA DEP (Bureau of Water Supply Management) — Involves both U.S. EPA and state funds |
| Rails to Trails, PA | Provides grants for feasibility studies, master site plans, acquisition, and improvement of former railroad lines for recreation trails. A 50% local match is required. Open to municipalities, authorities, and non-profit agencies. | DCNR |
| Recycling Grants (Act 101 of 1988) | Grants for up to 90% of municipal costs to develop and implement recycling programs, such as the purchase of recycling bins and composting equipment. Grants are also available to counties for a recycling coordinator, waste management plans, and pollution prevention education. | PA DEP Bureau of Land Recycling and Waste Management |
| Recycling Market Development Loan Fund | Provides low-interest loans to businesses to purchase recycling source-separating equipment. | PA DEP Bureau of Land Recycling and Waste Management |
| Rivers Conservation Program, PA | Offers 50% grants to conserve and enhance river resources. Typically, funding is first provided for a conservation plan for a waterway. Grants are available to implement an approved plan. Available to municipalities, authorities, and non-profit. | PA DCNR |
| Rivers, Trails, and Conservation Assistance Program | The National Parks service operates this program aimed at conserving land and water resources for communities. Eligible projects include conservation plans for protecting these resources, trail development, and greenway development. | National Park Service |
| Rural Utilities Service Financing | Offers low-interest loans for drinking water and sewage projects for rural areas and small towns. The "Water and Wastewater Disposal Loan Program" provides loans for water supply, wastewater disposal, solid waste disposal, and stormwater management systems for rural areas and towns with a population less than 10,000 persons. Available to municipalities, authorities, and nonprofit corporations. Grants up to 75% of project costs may be available for highly distressed areas. Also guarantee loans by private lenders. <ul style="list-style-type: none"> • Provides grants to nonprofit organizations to provide technical assistance to rural communities or for a circuit rider to serve several rural water systems. • Offers emergency grants to communities that have experienced a significant decline in quantity or quality of drinking water. | U.S. Dept. of Ag., Rural Utilities Service |



| Name of Program | General Description of Program | Administering Agency |
|--|---|--|
| Shared Municipal Services | Provides modest-sized 50/50 matching grants to promote cooperation among municipalities, in order to increase the efficiency of public services. Two or more municipalities may apply, or a council of governments. | PA DCED |
| Sewage Facility Planning Grants | Grants to pay up to 50% of the costs to prepare a new sewage facilities plan or update an existing plan, under State Act 537 of 1966. | PA DEP |
| Small Watershed Program (Public Law 566) | Provides technical and financial assistance in carrying out projects which aim to protect water resources, provide water-related recreation, or protect against flooding. Eligible watersheds must be smaller than 250,000 acres (390 square miles). The program provides up to 100% funding for flood prevention projects, and up to 50% matching for agricultural water management, public recreation, and fish/wildlife purposes. Each year, a state will receive an average of \$650,000 for allocation under P.L. 566. | Natural Resource Conservation Service (U.S. Department of Agriculture) |
| Stormwater Management Grants (PA Act 167 of 1978) | Grants for cooperative efforts at the watershed level among municipalities for stormwater planning and ordinances. Grants are typically made to counties, but may be made to municipalities. | PA DEP, Bureau of Watershed Conservation |
| Stream Improvement Program | Provides design and construction assistance to eliminate imminent threats to flooding and streambank erosion. | PA DEP Bureau of Waterways Engineering |
| TEA-21 Transportation Enhancements Program (part of federal Transportation Efficiency Act) | Provides grants of up to 80% for: pedestrian and bicycle facilities (including trails), acquisition of scenic easements at scenic or historic sites, development of scenic or historic route programs, landscaping and other scenic beautification along highways, restoration of historic transportation facilities (such as canals), preservation of rail corridors (particularly for multiple-use trails), control and removal of outdoor advertising, archeological research, and mitigation of water pollution due to highway runoff. All projects must have a direct correlation with transportation. | U.S. DOT funds administered by PennDOT |
| Urban Forestry Grants | Provides grants for tree planting projects. Is also a Federal "America the Beautiful" grant program for tree planting. | PA DCNR |
| Water Supply Plan & Well-head Protection Grants | Provides grants to counties to plan for water supplies at the county level and to implement programs to protect the wellheads of public wells. | PA DEP, Bureau of Water Supply |
| Wetlands Reserve Program | The U.S. Department of Agriculture also provides direct payments to private land-owners who agree to place sensitive wetlands under permanent easements. The program can be used to fund the protection of open space and greenways within riparian corridors. | U.S. Department of Agriculture (USDA) |

Sources: Publications and internet sites of various agencies; *Pennsylvanian* magazine; PA DCED *Resource Directory* PA DCNR and PA Growing Greener websites, URDC

ORGANIZATIONAL FRAMEWORK

Greenways implementation requires cooperation from many diverse interests, including groups in both the private and public sectors. Often, at the local level, one person, or a small group of people, have identified greenways as a personal passion and take a leading role in organizing the effort. Many successful greenway efforts have begun at the grassroots level within the county, where interested groups and citizens work together and focus local efforts that produce ideas presented to government officials, businesses, and others in the community, who assisted in implementation.



The establishment of a successful countywide greenways system will depend on a broad base of public support, which should begin at the local level. Developing and managing the partnership will require careful coordination and well-defined roles of the stakeholders involved, such as:

- Municipalities
- Adams County
- Conservation and recreation groups
- Landowners
- State agencies
- Federal agencies
- Other key organizations and individuals

Municipalities

Municipalities—township supervisors and borough councils, parks and recreation departments, and other local agencies—will be the focus of support for the Adams County greenway system. Successful greenway systems depend on a strong base of support, which should begin building at the local level.

One of the municipalities' first tasks with regard to greenways will be the review and, where necessary, the adoption or updating of planning and zoning documents to strengthen environmental provisions. Through zoning ordinances, SALDOs, comprehensive plans, open space plans, and official maps, municipalities can maintain conservation greenways by regulation rather than acquisition. For example, a borough or township can require in the zoning ordinance and SALDO that all 100-year floodplains, 50-foot stream buffers, wetlands, steep slopes, and riparian woodlands remain as open space. The documents can also include provisions on historic preservation.

Municipalities will also be the focus of land acquisition for publicly accessible greenways. In Pennsylvania, municipalities have local jurisdiction over land within municipal borders and are responsible for providing local services, such as police protection, local road maintenance, recreation, and trash collection.

Municipalities can also help with education and outreach efforts to promote land conservation. Local newsletters, posters, and pamphlets can help landowners and residents understand land preservation issues and environmental preservation practices.

Some municipalities create Environmental Advisory Councils (EACs) to advise the governing body regarding conservation, regulation, and development. An EAC is typically a volunteer group with environmental professionals and other residents that lend knowledge and experience to better guide the actions of the municipal government. A municipality can receive up to \$5,000 in grant money from the Pennsylvania Environmental Council to establish an EAC.

Adams County

The Adams County government has a strong presence in several areas related to land preservation, including land use, recreation and environmental planning and management, and economic

development. The county will be an important partner in conserving contiguous greenways through the work of the following agencies:

- ***Adams County Conservation District***— The conservation district plays an important role in the environmental conservation and land preservation aspect of greenways. In general, conservation districts promote the conservation of natural resources, particularly soil and water. Staff professionals:
 - Review development plans to check for threats to soil stability and water quality.
 - Educate farmers on best management practices.
 - Actively work with other agencies to enhance water quality countywide.

The conservation districts are important partners in the management of private land holdings along the conservation greenways, particularly in agricultural areas, recommending and monitoring riparian buffers, streambank restoration, and other management practices that result in better water quality and enhanced greenways along streams. The conservation districts are also the primary go-between agencies for enrolling in federal conservation programs such as CRP, CREP, and P.L. 566 (see Table ??).

- ***Adams County Agricultural Land Preservation Board***— The Adams County Agricultural Land Preservation Board is appointed to oversee the selection and purchase of agricultural conservation easements in the county. The board, which cooperates closely with the county conservation district, can help farmers apply for an easement and see how individual farms will rate against other applicants. As the facilitator of farmland preservation, the board has an important role in preserving contiguous belts of farmland throughout the county.
- ***Adams County Office of Planning and Development***— The Adams County Office of Planning and Development (ACOPD) will be an important partner in developing the county greenway system. Planning professionals craft countywide plans, such as the *Adams County Vision for Parks, Recreation, and Open Space* and the *Adams County Greenways Plan*, that provide the framework for further, more detailed studies at the local level. In addition, ACOPD staff can provide guidance to local officials in obtaining and preserving land as part of the county greenway system.
- ***Adams County Economic Development Corporation*** — The Adams County Economic Development Corporation (ACEDC) should promote the greenway effort for the potential to increase both tourism and quality of life in the county. Increased quality of life helps to maintain and attract citizens of all ages, and also attracts potential employers to the area.

Conservation and Recreation Groups

Conservancies and recreation organizations often provide the hands-on activism and volunteerism needed to realize the greenway vision. Conservancies are focused on the issue of land preservation and can solicit support and organize resources targeted to the specific cause. Recreation groups

provide an invaluable pool of volunteer effort and typically have goals compatible with those of land conservation efforts. Both types of groups will be instrumental in establishing greenways by advocating conservation on private land, raising funds, writing grant applications, increasing public awareness of conservation through events and publications, providing volunteer resources for trail and other conservation projects, and coordinating local and governmental entities. Some of the groups that may be involved at some point during implementation include the following:

- Land Conservancy of Adams County
- Watershed Alliance of Adams County
- South Mountain Audubon Society
- Trout Unlimited, Adams County Chapter
- Sierra Club, Pennsylvania Chapter
- Appalachian Mountain Club
- Highlands Coalition
- Pennsylvania Environmental Council (PEC)
- Healthy Adams Bicycle/Pedestrian Action Coalition, Inc.

Landowners

Effective greenway planning and implementation must involve all affected landowners. Any proposed action, such as riparian restoration, conservation easements, hiking trails, water trails, or bike routes, can have an impact on a landowner's well-being and interests. Landowners should be encouraged to support any greenway effort, especially at the conceptual stage, through public surveys, public meetings, and inclusion in steering committees.

State Agencies

Many agencies of the Commonwealth of Pennsylvania can be involved in realizing the vision for greenways in Adams County. The following agencies have funding programs available and/or land holdings in the county which can become part of a greenway network.

- ***Department of Conservation and Natural Resources (DCNR)*** — DCNR is the lead agency responsible for implementing the *Pennsylvania Greenways Action Plan*. Initiated by a governor's executive order in 1998, DCNR's greenway effort aims to significantly enhance conservation, recreation, and quality of life in Pennsylvania by conserving and enhancing a statewide network of linear open space and trails. The greenways proposed in the *Adams County Greenways Plan* have the potential to connect with a larger network of statewide greenways, including the Appalachian Trail, the Susquehanna River, and the Highlands Region greenways. Therefore, DCNR and the county and local entities have mutually supportive goals and should seek any and all opportunities to work together in planning, funding, and implementing the greenway network proposed for the county.

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- ***Pennsylvania Game Commission (PGC)*** — The PGC oversees all hunting regulations statewide and manages all state game lands. State Game Land #249-70 covers large areas in the northeastern portion of Adams County. The PGC will be an important contact when pursuing several recommended greenways in Tyrone, Huntington, and Latimore Townships. In addition, the PGC will be responsible for enforcing hunting regulations on any open space, public or private, where hunting is permitted.
 - ***Pennsylvania Fish and Boat Commission (PFBC)*** — The PFBC regulates recreational fishing and boating on all Pennsylvania streams and lakes and provides access points with parking. The PFBC will be an important contact for helping establish access points to the accessible riparian greenways along the Conewago Creek, Conewago Creek–South Branch, Latimore Creek, and Bermudian Creek.
 - ***Pennsylvania Department of Environmental Protection (DEP)*** — DEP will have a passive but necessary role in the implementation of Adams County greenways. DEP establishes and enforces environmental regulations that involve storm water and wastewater management, mineral extraction, smokestack venting, vehicle emissions, and development near wetlands and floodplains. Many DEP regulations are either modeled or referenced in municipal zoning and land development ordinances. Also, in the event of major environmental challenges or disagreements, DEP officials may become involved locally.
 - ***Pennsylvania Department of Transportation (PennDOT)*** — The owner and maintenance entity of all state-owned roads will be a major stakeholder when pursuing trails, auto, and bike touring routes, and parking areas. PennDOT approval is necessary when considering trail crossings or bike lanes in state road right-of-ways. The agency also oversees the distribution of certain grant monies for trail and path construction, including TEA-21 (Table 6.2).
 - ***Pennsylvania Department of Community and Economic Development (DCED)*** — The DCED can provide guidance and funding for community revitalization and redevelopment projects in the county as well as historic rehabilitation and interpretation efforts. Grants from DCED can also be used for establishing auto touring routes or any other tourism-related project. DCED would also be an important partner and funding source if pursuing the redevelopment of brownfield sites.
 - ***Pennsylvania Historical and Museum Commission (PHMC)*** — Created in 1945 as the official history agency of the commonwealth, PHMC is responsible for the collection, conservation, and interpretation of Pennsylvania’s heritage, accomplished through the Bureau for Historic Preservation, the Pennsylvania State Archives, the State Museum of Pennsylvania, and the Pennsylvania Trail of History. The agency also maintains a comprehensive database of historic resources statewide, and will be an important contact when seeking additional recognition and protection of any historic resources in the county.
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Federal Agencies

Three federal agencies may, depending on circumstances, become involved in the implementation of the *Adams County Greenways Plan*: the Susquehanna River Basin Commission, the Potomac River Basin Commission, and the Environmental Protection Agency.

- ***Susquehanna River Basin Commission (SRBC)*** — The SRBC was established by Congress in 1970 to coordinate the water resource efforts of the federal government and the three states through which the Susquehanna River flows—New York, Pennsylvania, and Maryland. The commission meets periodically to act on applications for projects using water, adopt regulations, and direct planning and management activities affecting the basin's water resources. Matters affecting Conewago Creek and its tributaries are under the jurisdiction of the SRBC.
- ***Interstate Commission on the Potomac River Basin (ICPRB)*** — Congress created the ICPRB in 1940 to enhance, protect, and conserve the water and associated land resources of the Potomac River basin through regional and interstate cooperation. The commission is composed of members representing Pennsylvania, Maryland, Virginia, West Virginia, the District of Columbia, and the federal government. Matters affecting Rock Creek, Marsh Creek, and other southerly flowing waterways in Adams County are under the jurisdiction of the ICPRB.
- ***Environmental Protection Agency (EPA)*** — The EPA is an appropriate contact in the event of major environmental challenges and undertakings. As an example, the EPA remediated the Whitmoyer superfund site in Jackson Township. Although the *Township of Spring Greenway Study* envisions no environmental difficulties, currently unforeseen environmental problems that could have a negative impact on the Tulpehocken Creek and its tributaries may involve future EPA coordination.

Other Key Organizations and Individuals

Many other organizations and individuals will play key roles in supporting the *Adams County Greenways Plan* and the proposed countywide greenway system. The following examples illustrate the breadth of interests that greenways can attract.

- ***Local Businesses and Corporations*** — Local businesses are often a good source of cash donations and volunteer efforts. Many local businesses are also important members of the community, and the approval of local businesses is often just as important to successful greenway efforts as the support of individual landowners. Local businesses are very attuned to the quality of life in Adams County, which the greenway system can enhance significantly. The potential benefits of a successful greenway system include an increase in the county's quality of life, which can generate new business through increased tourism and new residents.
- ***Chambers of Commerce and Tourism Bureaus*** — The Gettysburg Convention and Visitors Bureau, local merchant groups, and other business associations are strong partners that can help

to publicize greenway elements, such as hiking trails, water trails, and driving tours. Like a DCED, a chamber of commerce publicizes local amenities to foster economic growth in an area. Tourism bureaus promote the same amenities to draw visitors to the area. Occasionally, the organizations will provide funding for efforts that support economic growth.

- ***Volunteer Organizations*** — During and after the development of greenways in the county, volunteer efforts will be necessary to help build and maintain trails and assist with interpretive materials and events. Many groups can be enlisted for supporting projects, including the conservation and recreation groups listed above as well as youth organizations, such as the Boy Scouts, Girl Scouts, church groups, and extracurricular school groups.
- ***Land Developers*** — Throughout the development review process, municipal officials, conservation groups, and the general public should meet with developers to assure that new developments:
 - Respect sensitive natural features.
 - Leave ample buffers along streams.
 - Adequately control storm water and erosion.
 - Allow for connectivity of open space.
 - Facilitate the building of any proposed recreation trails.

ACOPD and other agencies should also help to educate developers on innovative, environmentally-conscious practices, such as open space development and traditional neighborhood developments.

Potential Program Structure

Adams County's greenways system will be developed with the support and assistance of local and county government through the greenways program. Township supervisors and borough councils, parks and recreation departments, local conservation agencies, economic development, and health agencies will be engaged to help implement the program.

The greenways program will be structured to build local support for the development of greenways and align that support with the proper countywide services and agencies. The proposed program structure (Figure 4.1) allows the county to maintain an active role in implementing the recommendations outlined in the *Adams County Greenways Plan* while helping to build municipal capacity to advance greenways throughout the county. The potential partnership structure is based on developing a greenways forum that will allow the county and participating municipalities to draw upon the expertise and resources of other state, county, local, and nonprofit organizations.

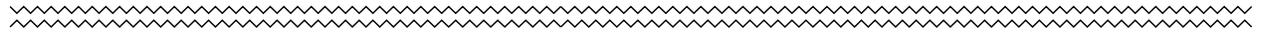
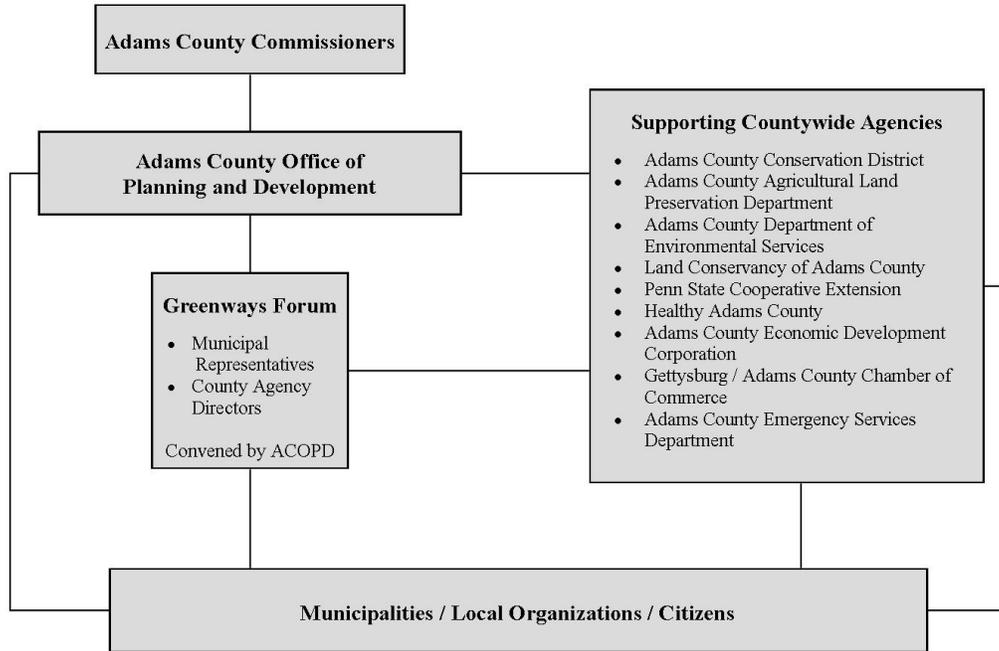


Figure 4.1
Potential Adams County Greenways Program Structure



Source: Adams County Office of Planning and Development

Developing and managing the partnership will require careful coordination and well-defined roles of the organizations involved. Two elements of the potential structure are critical to proper functioning of the greenway program:

- **Greenways Forum** — A primary focus in implementing the greenways program is to build capacity at the municipal level to advance the goals and recommendations of the county greenways plan. The greenways program will assist municipal officials and nonprofits in advancing the plan goals and recommendations, seeking funding, and connecting with other partners that can provide technical assistance. In some cases, interested local citizens may form nonprofit trail, watershed, conservation, and agriculture preservation groups that can work hand-in-hand with local municipalities to advance implementation projects.

In order to coordinate the various departments, agencies, and supporting organizations who are advancing planning, conservation, preservation, and facility development, the plan recommends the creation of a county greenways forum. The greenways forum will be comprised of the leadership of the supporting countywide departments, agencies, supporting organizations, municipal representatives, and citizens. The greenways forum will work to:



-
- Advance the objectives of the greenways program.
 - Protect critical resources at the countywide, regional, and municipal levels.
 - Identify future actions.

The ACOPD will convene the forum several times a year to evaluate the status of the county greenways program. The greenways forum is a central element of the potential program structure that will provide a periodic opportunity for all countywide participants in greenways programming, development, and conservation to share experiences and information.

- ***Municipal / Local Participation*** — The *Adams County Greenways Plan* recommends that the local municipalities, organizations, and private citizens work closely with the ACOPD to develop greenway strategies within specific areas of interest. Where possible, the county should encourage regional municipal cooperation, as many potential greenways implementation activities will, by nature, involve several municipalities and local interest groups.

Developing local capacity is the initial step necessary to advance municipal and regional greenway priorities and projects. Adams County recognizes that county government can not be the only entity promoting and advocating for greenways programming, development, and conservation initiatives. To successfully implement the greenways recommendations of the *Adams County Greenways Plan*, local municipal, organizational, and citizen interest in greenways initiatives must increase.

Current economic uncertainties will undoubtedly impact the pace at which local or regional greenways initiatives will occur. Although the county greenways plan recommends that the development of local interest and implementation capacity should be on-going short-term objective, some municipalities and organizations may not be in a financial position to begin new projects and initiatives. Nevertheless, local participation in the greenways forum should continue for local municipalities, organizations, and citizens to maintain interest and capitalize on future opportunities. The potential structure (Table 4.4) recognizes the need for continued communication and assistance by using direct lines to connect local municipalities and local to the greenways forum, ACOPD, and supporting countywide agencies and organizations.

MANAGEMENT OPTIONS

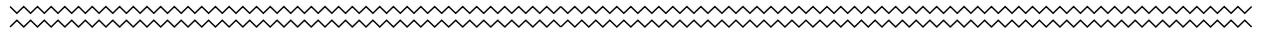
Several management models are available to facilitate the planning and development of greenways in Adams County. Each model contains strengths and weaknesses (Table 4.4). Potential models include:

- Greenways and Trails Organizations
- County Parks and/or Greenways and Trails Department
- County Parks and/or Recreation or Greenways /Trails Board

- Greenways, Trails, Recreation, and/or Conservation Authority
- County Planning Office/Multimunicipal Greenway Coordinator

**Table 4.4
Potential Management Options**

| Type of Organization | Strengths | Weaknesses | Examples |
|---|--|--|--|
| <p>Greenways and Trails Organization</p> <p>A nonprofit organization usually created for the purpose of developing and managing greenways and/or trails — Such organizations are not directly affiliated with a municipal government, but serve to support and enhance greenway development.</p> | <ul style="list-style-type: none"> • Able to apply for public funds • Able to apply for funds that are only available to non-profits • Volunteers have a special interest in greenways and trails • Easier recruitment of volunteers for special activities / projects • Strong interest in greenway development • Able to recruit and utilize volunteer experts for a variety of services such as engineering, design, and construction | <ul style="list-style-type: none"> • Relies solely on volunteers • Often end up with few people doing the work • Volunteers have limited experience in trail maintenance • Fund-raising often accounts for the majority of time/work • Groups may become singularly focused on one greenway • Organization’s goals may not align with the county goals • Limited accountability of volunteers | <ul style="list-style-type: none"> • The Pennsylvania Rails-to-Trails Conservancy • Susquehanna Greenway Partnership |
| <p>County Parks, Recreation, and Greenways Department</p> <p>A county department is responsible for aspects of planning, development, management, and maintenance. Volunteer groups may be used to assist or support the county on specific projects.</p> | <ul style="list-style-type: none"> • Able to apply for public funds • County sets all greenway management standards • Paid staff are usually more reliable and are accountable to the county • County has control over priorities and procedures • County manages quality control | <ul style="list-style-type: none"> • Relies on paid staff to accomplish almost all the work • Volunteers usually play a limited role • County funds all aspect of planning, development, management, and maintenance • Priorities may be divided between greenway development and other staff responsibilities. • Unable to apply for grants that are only available to nonprofits | <ul style="list-style-type: none"> • Bucks County Dept. of Parks and Recreation • Dauphin County Parks and Recreation • Indiana County Parks and Trails • Westmoreland County • York County Parks |
| <p>County Parks & Recreation or Greenways Board</p> <p>A volunteer board appointed by the county commissioners. The commissioners determine the purpose and responsibilities of the board. Some boards are permitted to hire staff through the county to assist with necessary tasks.</p> | <ul style="list-style-type: none"> • Able to apply for public funds with county as legal applicant • Comprised of volunteers who have special interests in parks and recreation and or greenway and trails • Operates in conjunction with the county to advance greenway goals • Could provide a balance of workers between volunteers and county paid staff • County sets operating procedures for the board | <ul style="list-style-type: none"> • Relies mostly on volunteers to accomplish almost all the work • Often end up with few people doing most of the work • Limited interest in on-going maintenance and upkeep tasks • Fundraising often accounts for the majority of time/work • Not able to apply for grants only available to nonprofit organizations | <p>None</p> |



| Type of Organization | Strengths | Weaknesses | Examples |
|---|--|---|--|
| <p>Greenways, Parks, Recreation, Trails, and/or Conservation Authority An organization created by the county commissioners for the express purpose of greenway planning, development, maintenance, and management</p> | <ul style="list-style-type: none"> • Separate from the political structure • Operates independently of the governmental unit • Able to apply for public funds • Can borrow funds for major development projects • Sets own standards for quality and accountability • Typically think and plan for the long-term | <ul style="list-style-type: none"> • Apart from county or municipal funding, an authority has limited sources for revenue • Typically do not have associated volunteer groups • Not able to apply for grants only available to nonprofit groups • Relies mostly on paid staff to accomplish most of the work • Goals may not always match county goals • Commissioners have little control over the authority | <ul style="list-style-type: none"> • Cambria County Conservation and Recreation Authority • Centre Region Park and Recreation Authority • Lewisburg Area Recreation Authority • Tri-Area Joint Recreation Authority (Luzerne) • Montour County Recreation Auth/ • York County Rail Trail Authority |
| <p>County Planning Office The planning office manages the planning and supervision of greenways and trails, coordinating with local municipalities and volunteer organizations for implementation and operation. A full-time staff member would be assigned to coordinate greenway development.</p> | <ul style="list-style-type: none"> • Able to apply for public funds • Establishes standards for all aspects of greenway management • Paid staff are usually more reliable and are accountable to the county • County has control over priorities and procedures • Coordination with local municipalities and volunteers spreads the work and funding among many agencies • Volunteer groups can apply for funding available to nonprofits • Assures compliance with county greenways plan • Assures greater accountability • Allows all the benefits of both volunteer nonprofit organizations and municipalities | <ul style="list-style-type: none"> • Requires a county-paid position to coordinate greenways planning, development, and management • Requires a tremendous amount of coordination by the planning office | <ul style="list-style-type: none"> • Chester County • Montgomery County • Monroe County • Pike County |





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Appendices

A Results of Interviews/Focus Groups

**B Preserving Greenways Through
Development Regulations**

C Trail Design

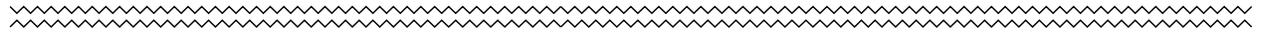


Appendix A

RESULTS OF INTERVIEWS/FOCUS GROUPS

Interviews and focus groups for the *Adams County Greenways Plan* were held on 27-28 April 2006. The following points are the major results of the interview/focus group process.

- Currently, greenways are not a high priority with municipal governments in Adams County, especially if local funds must be used.
- Municipal government leaders and the general public need to be educated about the importance of land preservation. Effective tools might include:
 - Individual meetings with officials.
 - Adams County local-access, cable television.
- Greenways would be an economic benefit to the county.
 - Home resale value will increase if abutting green space.
 - Not all tourists want to visit the battlefield. Greenways would provide an alternative.
- Greenways would increase the quality of life in the county.
 - (See above items.)
 - The Chamber of Commerce deals with quality of life issues and understands the link between greenways and the quality of life.
- At least two groups in the county are organized around the concept of safe places to walk:
 - Healthy Adams County, Bicycle/Pedestrian Committee
 - Gettysburg Walking Group
- Participants expressed no strong preference for greenways with or without trails.
- How will the greenway system be implemented; i.e., who should be the driving force behind developing and paying for greenways?
 - Groups with similar interests could form one large consortium.
 - Local municipalities need to change local zoning ordinances to plan for open space.



- Developers and municipalities need to work together.
- Municipalities need help to understand greenway issues.
- Most of the discussion surrounded greenways with trails but did acknowledge the need and desire for greenways for environmental protection.





Appendix B

PRESERVING GREENWAYS THROUGH DEVELOPMENT REGULATIONS

A variety of methods can be used in zoning ordinances, subdivision and land development ordinances (SALDOs) and floodplain ordinances to assist in preserving greenways. The following appendix describes a menu of various choices, which can be combined as appropriate.

Floodplain—The 100-year floodplain is the area expected to be flooded during the worst flood in an average 100-year period. However, storms in recent years have shown that the mapping throughout Pennsylvania may not cover all of the flood-prone areas.

Most municipal floodplain regulations allow construction to occur within the portions of the floodplain that are not within the main flood channel. By limiting development in the floodplain, the municipality not only increases safety by reducing the potential for flood damage but gains the additional benefits of maintaining open land along waterways, which are further explained later in the appendix.

Typically, new buildings have to be elevated and floodproofed. However, elevated buildings can still displace floodwaters and raise flood levels on other properties. Municipalities can prohibit the construction and placement of any new building within the entire 100-year floodplain. Exceptions could be included for small accessory sheds or locations in developed portions of a borough.

In addition, most floodplain regulations allow the construction of parking lots in the 100-year floodplain. As a result, the entire floodplain can be paved, which destroys natural vegetation and prevents groundwater recharge. Vehicles can also be carried by floodwaters, which can create hazards. One alternative is to prohibit new parking lots for three (3) or more motor vehicles on any lot within the floodplain.

Creek Buffers — The natural vegetation along a creek is extremely important to filter out pollutants and eroded soil. Thicker vegetation is preferable than thinner to filter out more pollutants, ideally including a combination of mature trees and thick, understory shrubs. (Grass has only a limited benefit in protecting water quality.) A municipal zoning ordinance can require that existing vegetation along a creek that is removed as part of a development must be replaced with new vegetation that will have a similar or better ecological benefit. A variety of free publications are available on the internet from nonprofit and governmental organizations that recommend ways to design vegetation buffers along creeks, also known as “riparian buffers.”

Creek Setbacks — A minimum setback can be established for all new buildings, parking lots, and business outdoor storage areas from any perennial creek. A perennial creek is a creek that usually has year-round flows, except during droughts. USGS mapping is often used as the source to separate



perennial from intermittent creeks. The setback can vary by importance of the creek—a creek with great ecological important should have a wider setback than a creek with less value for recreation and fishing.

Allowed Uses and Densities—Zoning typically involves varying land uses and densities in different zoning districts. Zoning uses incentives and disincentives to encourage development to be placed in certain areas, as opposed to areas where preservation is encouraged. For example, business uses and higher densities of housing are allowed in growth-oriented zoning districts, while only very low density residential, agricultural, and open space-oriented uses are allowed in more conservation-oriented zoning districts. Where greenways are being encouraged, municipalities should consider prohibiting intense commercial uses and reducing the densities of residential development.

A municipality may wish to create a “conservation” zoning district to encompass an area with a concentration of natural features, such as flood-prone land, wetlands, and/or steep slopes. That conservation district could allow a limited number of uses, at a low density, with a strict maximum on the percentage of the lot that can be covered by buildings, paving, and other surfaces that are impervious to water.

Varying Densities Based Upon Natural Features—In many locations where greenways are desirable, land is often not suitable for development. The total density on a tract of land can be based upon all of the natural features on the tract. In other words:

- The total lot area of the development would be calculated first.
- Areas within wetlands, flood-prone areas, and very steep slopes would be deleted.
- A certain percentage of other natural features would be deleted. For example, 50 percent of areas with moderate slopes could be deleted. Sometimes, areas with electric transmission lines are deleted.
- The resulting net tract area is divided by a minimum lot area to determine the number of homes allowed on the tract.

A tract with fewer natural constraints would be allowed a higher number of homes than the same sized tract with many natural constraints. A similar requirement could state that wetlands, flood-prone areas, and very steep slopes would not be allowed to count towards the minimum lot area. For example, a zoning district may require a minimum *buildable* lot area of one acre. Then, a lot would need to include at least one acre *after deleting* all wetlands, floodprone areas, and very steep slopes.

Forestry and Tree Removal—The Pennsylvania Municipalities Planning Code (MPC) requires that forestry be allowed by right in all zoning districts and that it cannot be “unreasonably regulated.” However, municipal regulations have been upheld that regulate forestry. For example, one township ordinance, upheld in a court decision, prohibited large clearcutting and prohibited forestry close to creeks and on very steep slopes. A municipality can also require that a forest management plan be prepared to show how erosion is being minimized and that the forestry is being carried out to allow long-term productivity on the forested land.

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A municipality can also regulate unnecessary removal of mature woodlands as part of a development. Where trees are proposed to be preserved, temporary fencing should be placed around the root system to prevent damage to the tree trunks and compaction of the soil during construction.

***Steep Slopes***—A municipal zoning ordinance can:

- Limit the amount of steep slopes to be disturbed.
- Require that natural vegetation be maintained in place on most steep sloped areas to minimize erosion.
- Require larger lot sizes and lower impervious coverages if a new principal building is proposed on steep slopes, which encourages a builder to place the home on the less steep portions of a lot. However, the provision also requires that the outer extent of the proposed building location be shown on the subdivision plan.

***Wetlands***—Municipalities should require a professional wetland delineation and certification whenever a wetland is suspected on-site. Applicants can be required to certify that a site contains no wetlands. A municipality can require that new buildings and new parking areas be setback from wetlands. At a minimum, a 20-foot wide setback is valuable to avoid intrusion into the wetland by construction equipment.

***Transfer of Development Rights (TDR)***—The optional TDR process can be included in a zoning ordinance. Certain rural areas are designated as “sending areas” where the goal is to encourage permanent preservation. Other areas are designated as “receiving areas” that are suitable for a higher density. The ordinance would allow a developer in a receiving area to buy a conservation easement from an owner of land in a sending area. The developer would privately negotiate a price for the easement with a willing seller in the sending area. The developer then transfers the number of homes that would have been allowed on the sending parcel to achieve a higher density on the receiving parcel. For example, if 10 homes would otherwise be allowed on the receiving parcel, and 8 homes would have been allowed on the sending parcel, the receiving parcel could be developed with 18 homes.

TDR is valuable land preservation process because:

- The TDR process is voluntary.
- TDR helps preserve land in a way that fairly compensates property owners.
- The TDR process helps to concentrate development in more suitable locations.
- TDR directs development away from important natural areas and farmland.
- The TDR process, as currently structured in Pennsylvania, preserves land without any expenditure of tax dollars.
- TDR does not increase the total number of homes allowed in a municipality.
- TDR greatly minimizes the land consumed by each new home.

TDR can also occur across municipal borders if authorized by both municipalities.

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***Recreation Land and Fee Requirements*** — The MPC provides municipalities with the authority to require that new developments include public recreation land. If agreed by the municipality and the developer, fees can be required in place of land. The fees can only be used to acquire recreation land or to construct recreation facilities. A recreation plan must be adopted by resolution before land or fees can be required, although the plan is not required to be detailed or elaborate.

When feasible, recreation land should be required to be placed at the edge of a new development next to a potential future development site. External placement allows the first recreation land to be combined with future recreation land when the adjacent site is proposed for development.

Proper standards are vital to make sure that required recreation land is suitable for recreation. A municipality can require that more recreation land be provided if the developer proposes land that is not prime for active recreation. For example, if most of the land is flood-prone, then the municipality could require, say, three times the amount of recreation land as would apply if the land was not flood-prone.

***Trail Requirements***—Some municipalities include requirements in a SALDO for developers to install recreation trails as part of subdivisions. The trail requirement is often in place of a sidewalk requirement. Sometimes the trail is designed with a more rural setting behind houses. In other cases, the trail may involve an asphalt bicycle path that runs parallel to a road, but is separated from the road by a green strip. When trails are planned as part of a residential development, construction of the trail should be required before any adjacent homes are sold. Otherwise, new residents may try to interfere with trail construction.

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## Appendix C

### TRAIL DESIGN

Trails proposed in *Adams County Greenways Plan* may vary from primitive earthen tracks to paved, graded pathways. Some trails exist in the form of bicycle lanes, bicycle routes, and sidewalks. Trail users will vary from hikers and equestrians to road bicyclists and in-line skaters. When designing a trail, layout, surface, road crossings, signs, landscaping, and other infrastructure are all important considerations.

The following information should serve as a guide for municipalities, which will be spearheading the implementation of the *Adams County Greenways Plan* and developing greenways within municipal borders and multimunicipal regions. The municipalities should work closely with the Adams County Office of Planning and Development to develop a cohesive, countywide greenway system that includes some trails, where appropriate.

#### Trail Layout

Trail layout should be sensitive to the environment the greenway intends to preserve. The trail should be compatible with the natural landscape and follow elevation contours where possible. If the trail cannot accommodate the intended user groups without having a negative impact on surroundings, the location and design of the trail should be reevaluated. The trail should also be routed to increase environmental awareness, and be built and maintained in a sustainable, cost-effective, and timely fashion. Improper trail implementation can lead to long-term maintenance problems, which are often difficult to fix.<sup>34</sup>

Trails should also be compliant with design criteria established by the *Americans with Disabilities Act (ADA)*. At this time, trails must meet the following technical provisions in order to be considered accessible:

- Surface - the trail surface shall be firm, stable and slip resistant
- Clear Tread Width - 36" minimum
- Tread Obstacles - 2" high maximum (up to 3" high where running and cross slopes are 5% or less)
- Cross Slope - 5% maximum
- Passing Space - provided at least every 1,000' where the trail width is less than 60" (5'-0")
- Signs - shall be provided indicating the length of accessible trail segment
- Running Slope (trail grade) shall meet one or more of the following:

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<sup>34</sup>Flink, Charles A. and Robert M. Searns. *Greenways, A Guide to Planning, Design and Development*. Island Press, Washington, D.C. 1993. P 198.

- 5% or less for any distance
- Up to 8.33% for 200' maximum with resting intervals no more than 200' apart
- Up to 10% for 30' maximum with resting intervals no more than 30' apart
- Up to 12.5% for 10' maximum with resting intervals no more than 10' apart.
- No more than 30% of the total trail length may exceed a running slope of 8.33%

Trail tread width recommendations have been developed for bicycle trails in urban, suburban and rural settings. Furthermore, the American Association of State Highway Transportation Officials (AASHTO) provides recommendations for trail widths (Table C-1).

**Table C-1  
Standard Trail Width Recommendations<sup>35</sup>**

| <i>AASHTO Standard Tread Width for Bicycle-only Trails</i>      |                                  |                 |              |
|-----------------------------------------------------------------|----------------------------------|-----------------|--------------|
| <i>AASHTO Standards</i>                                         | <i>Recommended Minimum Width</i> |                 |              |
| One way, single lane                                            | 5'                               |                 |              |
| Two way, dual lanes                                             | 10'                              |                 |              |
| Three lanes of bicycle travel                                   | 12.5' minimum                    |                 |              |
| <i>Recommended Trail Tread Widths for User-Specific Trails</i>  |                                  |                 |              |
| <i>Trail User Type</i>                                          | <i>Recommended Tread Width</i>   |                 |              |
| Bicyclist                                                       | 10' (2-way travel)               |                 |              |
| Hiker/walker/jogger/runner                                      | 4' rural; 5' urban               |                 |              |
| Cross-country skier                                             | 8-10' for 2-track trail          |                 |              |
| Equestrian                                                      | 4' tread; 8' cleared width       |                 |              |
| <i>Minimum Recommended Tread Widths for Multiple Use Trails</i> |                                  |                 |              |
| <i>Tread Type</i>                                               | <i>Urban</i>                     | <i>Suburban</i> | <i>Rural</i> |
| Pedestrian, non-motorized                                       | 12'                              | 10'             | 10'          |
| Pedestrian, equestrian                                          | 16'                              | 12'             | 10'          |

Source: AASHTO

In certain environments, certain user groups, such as cyclists and equestrians, may require some restrictions to minimize environmental impacts. Trail design details may also be warranted to reduce the impacts caused by specific site characteristics. Boardwalks near wetlands are one example of a restrictive trail option that attempts to minimize environmental impacts.

<sup>35</sup>Flink, Charles A. and Robert M. Searns. *Greenways, A Guide to Planning, Design and Development*. Island Press, Washington, D.C. 1993. P 200-201.

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## Trail Construction

A highly-developed trail is made of three components: the sub-grade, the sub-base and the trail surface. The sub-grade is the trail's foundation, which is made up of the native soils that bears the load generated by trail users. The sub-base distributes the weight of the trail surface and users to the sub-grade. The trail surface is the point of contact between the trail and the users. The surface can be either soft or hard, depending on its ability to absorb or repel water.

### Sub-grade

The sub-grade provides the foundation for the trail to be developed. Any imperfections in the sub-grade will eventually become apparent in the final trail surface. The characteristics of the sub-grade that provide a good foundation are susceptibility to freezing, weight bearing, and shrink/swell characteristics. Adequate drainage is a requirement to maintain a sound sub-grade and can be accomplished with surface or sub-surface drainage systems, or a combination of the two.<sup>36</sup>

### Sub-base

The sub-base distributes the load of the trail surface and trail users to the sub-grade and provides drainage. The design load of the trail, or the maximum weight able to be carried by the trail, along with the type of material used for the sub-base and the use of geotextiles, will determine the depth of the sub-base necessary.

### Trail Surface

The surface of the trail can be constructed of either soft or hard materials. Soft materials are defined as those that are able to absorb moisture, such as earth and wood chips. Hard materials repel moisture and include crushed stone, bituminous concrete, soil cement, resin-based stabilized material and concrete. The type of trail surface can encourage or discourage different types of use. Trails surfaced with soft materials are preferred by equestrians because horses are less susceptible to injury on soft materials. Hard materials with a smooth finished surface such as bituminous concrete are preferred by inline skaters as more conducive to the sport. The surface of the trail (Table C-2) should be chosen conservatively when first installed and can be upgraded as use and demand increase.

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<sup>36</sup>Flink, Charles A., Kristine Olka and Robert M. Searns. *Trails for the Twenty-First Century*. Island Press, Washington, D.C. 2001. P 62-65.

**Table C-2  
Trail Surface Synopsis**

| <i>Surface Material<br/>(longevity)</i>                          | <i>Advantages</i>                                                                                                                                                       | <i>Disadvantages</i>                                                                                                                                                                                 |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Hard Materials</i>                                            |                                                                                                                                                                         |                                                                                                                                                                                                      |
| Soil Cement, medium                                              | Uses natural materials, more durable than native soils, smoother surface, low cost, accommodates multiple use                                                           | Surface wears unevenly, not a stable all-weather surface, erodes, difficult to achieve the correct mix                                                                                               |
| Granular Stone, medium-long (7-10 years)                         | Soft but firm surface, natural material, moderate cost, smooth surface, accommodates multiple use                                                                       | Surface can rut or erode with heavy rainfall, regular maintenance needed to keep consistent surface, replenishing stones may be a long-term expense, not for areas prone to flooding or steep slopes |
| Bituminous Concrete (asphalt), medium-long (7-15 years)          | Hard surface, supports most types of use, all-weather, accommodates most users simultaneously, smooth surface to comply with ADA guidelines, low maintenance            | High installation cost, costly to repair, not a natural surface, freeze/thaw an crack surface, heavy construction vehicles need access                                                               |
| Concrete, long (20 years plus)                                   | Hardest surface, easy to form to site conditions, supports multiple use, lowest maintenance, resists freeze/thaw, best cold weather surface, most resistant to flooding | High installation cost, costly to repair, not a natural-looking surface, construction vehicles will need access to the trail corridor                                                                |
| Boardwalk, medium-long                                           | Necessary in wet or ecologically sensitive areas, natural-looking surface, low maintenance, supports multiple use                                                       | High installation cost, costly to repair, can be slippery when wet                                                                                                                                   |
| Resin-stabilized, medium-long depending on type of application   | Aesthetics, less environmental impact, possible cost savings if soil can be used, can be applied by volunteers                                                          | Need to determine site suitability and durability, may be more costly in some cases                                                                                                                  |
| <i>Soft Materials</i>                                            |                                                                                                                                                                         |                                                                                                                                                                                                      |
| Native Soil, short to long depending on local use and conditions | Natural material, lowest cost, low maintenance, can be altered for future improvements, easiest for volunteers to build and maintain                                    | Dusty, ruts when wet, not an all-weather surface, can be uneven and bumpy, limited use, possibly not accessible                                                                                      |
| Wood Chips, short (1-3 years)                                    | Soft, spongy surface good for walking, moderate cost, natural material                                                                                                  | Decomposes under high temperature and moisture, requires constant replenishment, not typically accessible, limited availability, not appropriate for flood prone areas                               |
| <i>Other</i>                                                     |                                                                                                                                                                         |                                                                                                                                                                                                      |
| Recycled Materials, varies                                       | Good use of recyclable materials, surface can vary depending on materials                                                                                               | Design appropriateness and availability varies.                                                                                                                                                      |

Source: Flink, Charles A., Kristine Olka and Robert M. Searns. *Trails for the Twenty-First Century*. Island Press, Washington, D.C. 2001. P 74-75.

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## Simple Hiking Trails

More rugged trails developed in Adams County need not follow all of the above-mentioned design guidelines. Trails intended for walking (and in some cases, equestrian, mountain bike, and bicycle use) could be kept in a primitive state, with natural surfaces three to four feet wide. The trail surface may be completely unimproved, consisting of native soil, grasses, forest litter, and occasional bed-rock. Muddy sections may be treated with wood mulch or small, compacted logs.

Unlike the highly-developed recreation trails, simple hiking trails can be built largely with volunteer labor. Regular maintenance will ensure that the hiking trails are not blocked by fallen trees, overgrown with vegetation, erosion, or flooding.

## Crossings<sup>37</sup>

Trails may cross roads or rail lines at-grade, above-grade or below-grade. At-grade crossings are the most common although certain situations may present the opportunity to provide a bridge or tunnel. Crossings are site specific and require careful evaluation and planning.

### At-Grade

The most ideal at-grade road crossing will experience very light traffic or provide a traffic signal that can be activated by trail users to allow for safe passage. A professional should be employed to evaluate the intersection and establish a safe method of crossing. Ideally, the crossing should take place as close to an intersection as possible, preferably in the location of the crosswalk. "Trail Crossing" signs should be installed along the road and, if necessary:

- A painted crosswalk should be installed.
- Curb cuts should be as wide as the trail itself.
- Access to the trail can be controlled if the need arises. The most common method is the installation of bollards, which can be removable or hinged to allow access for authorized vehicles, such as emergency and maintenance vehicles, while preventing unauthorized vehicle access to the trail. Another effective vehicle barrier are gates extending completely across the trail. Barriers preventing unauthorized vehicle access must be easily visible under all conditions to avoid becoming a hazard and otherwise conflicting with trail use. Barriers should be placed on straightaways instead of curves in order to maintain satisfactory sight distance. Barriers should meet current ADA guidelines and allow for ease of trail use by users with disabilities.

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<sup>37</sup>Flink, Charles A., Kristine Olka and Robert M. Searns. *Trails for the Twenty-First Century*. Island Press, Washington, D.C. 2001. P 85-88.

Alternative methods to alert users of an intersection include warning signs, a change in surface pavement, or a centerline along paved trails. Stop signs should be placed 4–5 feet from the road to allow time for users, especially cyclists, to stop. Site stopping distances should be evaluated by a professional, and adequate warning should be given to allow cyclists to stop. AASHTO guidelines, which incorporate curves, slopes, and other factors, have been developed to help determine the necessary warning distances needed for cyclists to stop.

### Above- or Below-Grade Crossings

Crossing above- or below-grade minimizes conflicts between trail users and vehicles but can also be very costly. When dealing with roadways that have a large volume of high-speed traffic, the only feasible alternative may be an above- or below-grade crossing. Above-grade crossings, such as pedestrian overpasses, are perceived to be less threatening and safer by users than below-grade crossings, or tunnels. Above-grade crossings can be extremely expensive and may require long access ramps in order to meet ADA requirements.

### Railroad Crossings

Any proposed railroad crossings must be safe. If an at-grade railroad crossing is necessary, the trail should cross perpendicular to the tracks to prevent the front tire of a bicycle or in-line skate from becoming lodged in the track. If a right angle crossing is not possible, another safety alternative should be used, such as:

- A compressible flangeway filler could be installed to reduce the chance of an accident for a cyclist.
- The trail could be widened, giving cyclists the opportunity to approach the crossing at a right angle to the tracks.

Signs requiring cyclists to dismount when crossing the tracks, which would be used in conjunction with track crossing warning signs, should also be installed. The railroad company must be consulted prior to installing any crossing.

### Signs for Greenway Trails<sup>38</sup>

Signs portray vital information and play an important role in the success of greenway trails. Signs can serve to regulate, warn, inform, and educate trail users. The U.S. Department of Transportation's Federal Highway Administration (FHWA) has outlined the size, shape and color criteria for signs in the *Manual on Uniform Traffic Control Devices* (MUTCD). Where feasible, and to reduce

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<sup>38</sup>Flink, Charles A., Kristine Olka and Robert M. Searns. *Trails for the Twenty-First Century*. Island Press, Washington, D.C. 2001. P 88-93.

exposure to liability and promote safe trail use, the standard color and shapes should be followed. Signs need to be designed and placed appropriately within the greenway but done so in a manner that does not lead to cluttering of the landscape. The materials chosen for a sign system should be consistent and take into account budget, aesthetics, durability, and maintenance costs. Some options for materials include plastics, fiberglass, wood, aluminum, steel, brass, bronze, stone, fabric and recycled products. Selected materials should give the sign prominence but still blend well with the surrounding environment.

## Identification and Directional Signs

Creating a uniform signage system will help define the identity of the trail system. The county, through the Adams County Office of Planning and Development, should help municipalities develop uniform identification signage for the greenway trails within the municipality. Numbers are recommended for Adams County trails because PennDOT has already established *Bicycle PA*, a statewide network of bicycle routes with letters assigned to the routes. Directional signs should be used in conjunction with route identification signs, providing distances and directional arrows to nearby destinations.<sup>39</sup>

## Regulatory Signs

Regulatory signs describe the laws and regulations that apply within the greenway, such as stop signs, speed limit signs, and permitted use signs. Regulatory signs are usually posted where the regulation applies.

## Warning Signs

Warning signs inform the users of existing or potentially hazardous conditions along the trail and are mounted prior to the condition to allow time to make the necessary preparations, such as reducing speed. Signs should be used near intersections, bridges and tunnels. Warning signs can also be used to bring attention to changes in the trail's grade or surface.

## Educational Signs

Educational signs point out areas of interest that make the trail unique, including natural or cultural features. Interpretive displays for greenways can provide educational information about the significant environmental or historic qualities of the area. Educational signs, often more detailed and ornate than other signs, should be made of weather-proof materials. Sign placement along the trail is important because a poorly located sign may not properly inform the trail user and could become hazardous. Signs located on posts should be at least three feet off the edge of the trail and be raised four to five feet off the ground. Information or education signs that do not contain traffic-oriented

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<sup>39</sup> One good example of a plan for consistent signage is the signage manual developed for the Schuylkill River Heritage Area in Montgomery and Berks Counties, Pennsylvania.

material should be placed a minimum of four feet off the edge of the trail, allowing people to view the sign while keeping a clear travel area on the trail.

## Support Facilities

Support facilities are the additional amenities in the greenway network to provide users with a pleasant experience. The location and amount of support facilities provided will depend on the trail's popularity, the resources of the managing agency, and the infrastructure that is already in place. Restrooms and large trailhead parking areas should not be initial investments, but may become warranted as trail popularity increases.

### Access Points, Trailheads, and Parking Facilities

Access to the greenway trail system can occur from a variety of locations, the most common being road crossings. Access points may contain identification signs, trail maps, and other signs. Road crossings, especially in urban and suburban environments, can provide an easily accessible means for local residents to reach greenway trails. Trailheads can be located near public parks, shopping centers or other prominent sites near the greenway trail system. Access points, trailheads, and parking areas are often the first and last impression of the greenway, so design, appearance, and function are all important. Facilities should be convenient for people to use the trail system.

Virtually all of the greenways proposed in the *Adams County Greenways Plan* will involve private property. Whenever a private landowner is involved in the process of establishing access points, or any part of a greenway, establishing a positive working relationship by making contact early and often in the process is crucial to the success of the greenway.<sup>40</sup> Conversely, the lack of strong communication will make a public/private greenway partnership much more difficult.

Prior to undertaking the construction of additional parking areas, an evaluation of existing facilities should be completed. Existing parking areas should be used wherever possible, which reduces the need to develop new parking areas and promotes a “preserve and conserve” concept of establishing greenways. New parking facilities, when required, should be located at the edge of the greenway, away from environmentally sensitive areas. Providing a small number of parking spaces will minimize initial development impacts and costs and allow for future expansion, if demand increases. Parking areas should be no larger than 10–20 spaces. Parking areas should be constructed using natural materials, such as stone, or from surfaces such as porous asphalt or concrete and grid pavers. Handicap-accessible spaces will be required to have firm, stable, and slip-resistant surfacing. Parking areas should have an obvious connection to the trail. Convenient pedestrian access to the trails is important and can be in the form of an accessible route from the handicap spaces and drop-off area.

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<sup>40</sup>The importance of communication in public/private greenway projects is almost universal. See, for example, Flink, Charles A. and Robert M. Searns. *Greenways, A Guide to Planning, Design and Development*. Island Press, Washington, D.C. 1993. P 268.

Obvious access minimizes the desire to create shortcuts to the trail, which can result in negative environmental impacts or trespassing on private property. In parking areas where equestrian use is allowed, larger spaces must be provided for horse trailers.

### Bicycle Parking

No network of bicycle trails would be complete without safe, secure places to lock bikes. In fact, most people will not consider using the bicycle as a mode of transportation unless some form of bicycle parking is provided at destination points. As bicycle trails become more common throughout Adams County, municipalities, either individually or in multimunicipal regions, perhaps coordinated with the help of the Adams County Office of Planning and Development, should seek funding and negotiate with landowners to provide bicycle racks at common destinations, such as the following:

- Parks and recreation centers (Table 2.5)
- Municipal buildings
- Public and private schools (Table 2.2)
- Libraries
- Post offices
- Major shopping destinations (Table 2.3)

For maximum security and effectiveness, a *fixed* bicycle rack design should be used, either bolted or embedded in concrete. Where possible, sheltered areas (awnings, breezeways, etc.) can help keep bicycles dry during inclement weather. Many municipalities have incorporated bicycle racks into streetscape designs, and in some cases, employed unique bicycle rack shapes as public art.

### Benches, Rest Areas, and Receptacles

Benches and rest areas along the greenway trail system provide a place for users to rest, gather, picnic, or view nature. Benches come in numerous designs and, along with rest areas, should be located at regular intervals along the trail, as well as at trailheads. Benches, like signs, should be located three feet from the trail's edge.

The issue of receptacles on trails is a matter of policy. Trails that are strongly oriented toward environmental preservation and nature observation, such as those envisioned in the *Adams County Greenways Plan*, should have a strict “carry in-carry out” policy: whatever the user carries in to the trail, the user should also carry out. Therefore, no receptacles should be provided along the trails.

### Landscaping<sup>41</sup>

Landscaping helps to beautify the trail, provide visual screening of adjacent land uses, and enhance the ecological value of the greenway corridor. Using native vegetation can help strengthen the environment and restore areas that have been degraded, such as riparian buffers. The type of

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<sup>41</sup>Flink, Charles A., Kristine Olka and Robert M. Searns. *Trails for the Twenty-First Century*. Island Press, Washington, D.C. 2001. P 105-109.

landscaping implemented along the greenway trail depends on the desired goals and the conditions of the area. An inventory of the environmental features of the area will help to determine if remediation measures are necessary. Site conditions will help to determine the types of plants most suitable, such as wetland or drought-tolerant species. Furthermore, using native plants in designs compatible with site characteristics can help to minimize maintenance costs.

Large trees and shrubs can be used to create shade, define spaces, provide a visual screen for adjacent properties, block wind, and frame views. Smaller shrubs and plants help to reduce maintenance by crowding out weeds and provide additional visual interest for the trail users. Ground cover, in the form of native grasses, vines, and other perennial plants provides food and cover for wildlife. A maintenance schedule should be established in urban, suburban, and rural settings for mowing and trimming to keep the trail corridor free of encroaching plant material. Safety is an important element along any trail and visibility is an important factor regarding safety. A safe sight distance should be maintained along urban and suburban trails.

## Fencing

In some instances, a vegetative buffer may not suffice to provide the desired separation or barrier between the greenway trail and adjacent land use. If no satisfactory alternative solution can be reached, a fence may be needed. Fences come in different styles, which perform different functions, and can be constructed from various materials, including wood, metal, and stone. Fences should be constructed to enhance the greenway corridor—not to create barriers to wildlife or be visually unattractive.

Sometimes a landowner perceives a need to have a fence installed because of fear related to trail use near the property. Most of the time, the fear dissipates after the trail has been in place for a few months. If an agreement can be reached at the beginning of a project to forego fence construction for a specified period of time, the landowner may relent. After the allotted time, if the landowner is not persuaded otherwise, the fence may be constructed.<sup>42</sup>

## Restrooms

Restrooms require careful consideration prior to installation. Expensive to install and maintain, restrooms are also often the target of vandalism. Access to public, central water and sewer is an important component of the decision to install restroom facilities. If either or neither utility is available, alternatives may include wells, septic systems, portable toilets, or composting toilets, depending on local codes. Restroom facilities can be an opportunity to exercise “green architecture” practices when designing, locating, and constructing the building. As with parking, agreements with adja-

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<sup>42</sup>Flink, Charles A. and Robert M. Searns. *Greenways, A Guide to Planning, Design and Development*. Island Press, Washington, D.C. 1993. P 267-268.

cent establishments to use existing facilities may be negotiable and may reduce or eliminate the need to create new facilities. Signs should be installed indicating the location of the restroom facilities.<sup>43</sup>

## BICYCLE ROUTES

Some portions of the Adams County greenways system require travel on or along roads, where bicyclists will use the roadway and pedestrians will use shoulders or, where available, sidewalks, with a few exceptions. Bicyclists are accommodated in one of three types of facilities, depending on the volume and width of each road segment:<sup>44</sup>

- Bicycle lanes—dedicated lanes on the same cartway as other vehicles.
- Shared roadways—signage indicating joint use of the same cartway without dedicated lanes.
- Sidepaths—separate pathway parallel to the cartway, similar to a sidewalk.

Relative to roads, the only treatment for bicycles recommended in the *Adams County Greenways Plan* is shared roadways. The plan does not propose any separate bicycle lanes on any roadways in the county. Likewise, no separate sidepaths are included in the plan recommendations.

The plan envisions the possibility of bicycles on some of the greenway trails along the major creeks in the county. However, the primary accommodation for bicycle travel in the greenway system will be shared roadways, which are discussed below.

## Shared Roadways

In some cases, the *Adams County Greenways Plan* recommends greenway routes on low-volume neighborhood streets and rural roads, with volumes less than 2,000 vehicles per day, and speeds of 25 MPH or less. Examples include:

- Table Rock Road (PA 394)
- Fish and Game Road (Reading Township)
- Fish and Game Road (Mount Joy Township)
- Orrtanna Road

On most shared roadways, a motorist will have to move partially into the adjacent travel lane in order to pass a bicyclist. Due to the low traffic volumes, the movement is generally not a safety problem.

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<sup>43</sup>Flink, Charles A., Kristine Olka and Robert M. Searns. *Trails for the Twenty-First Century*. Island Press, Washington, D.C. 2001. P 96-97.

<sup>44</sup> Design guidelines for all three types of bicycle accommodations can be developed from the Manual on Uniform Traffic Control Devices (MUTCD), published by the Federal Highway Administration in 2003.

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Paint stripes and pavement markings are not necessary on shared roadways. The roads are simply used in current condition.

### Signage

While many of the borough and township streets and roads could be considered “shared roadways”, the ones that compose the greenway trail network should be marked with identification and directional signage. As described in the section entitled, *Signs for Greenway Trails*, the signs may be unique to the municipality, coordinated with Adams County, or compliant with generic signs found in the MUTCD. On shared roadways with unusually high conflict between automobiles and bicycles, “Share the Road” signs may be installed (Figure C-1).

Figure C-1  
“Share the Road” Signage



Source: FHWA, MUTCD, Sections 2C.40 and 2C.51