An aerial, black and white photograph of a rugged, mountainous landscape. The terrain is characterized by steep, rocky slopes and a winding road or path that traverses the area. The image is high-contrast, with deep shadows and bright highlights, emphasizing the texture and topography of the land. The overall scene conveys a sense of a remote, mountainous region.

---

***SECTION A: OVERVIEW***

---



---

# 1. INTRODUCTION

---

## 1.1 *Why this plan is being prepared*

As a follow-up to the LIMC's 1993 *Regional Park and Open Space Plan*, the Lancaster Inter-Municipal Committee (LIMC) prepared this plan as part of a cooperative effort to develop greenways along or near sections of the Conestoga River, the Little Conestoga Creek, and the West Branch of the Little Conestoga Creek. A map illustrating the project waterways is contained on page 5.

The *Regional Park and Open Space Plan* defined greenways as linear parks and open space corridors of all kinds, recognizing greenways as diverse as broad natural areas intended primarily to insure proper river conservation measures, hiking trails which connect parks and natural areas, and bike-ways along existing roads. It defined water oriented greenways, recreational greenways, rivers conservation greenways, and both publicly accessible and non-accessible greenways. However, the *Regional Park and Open Space Plan* merely made general recommendations for greenways which were either delineated on maps or recommended by narrative guidelines.

Thus, in order to implement the recommendations in the *Regional Park and Open Space Plan*, a more detailed greenways plan was needed. The decision to move forward with a detailed greenways plan was

stimulated in part by a meeting convened by State Representative P. Michael Sturla and the support provided by representatives of government agencies and non-profit organizations at that meeting.

It was decided that the plan would be for greenways along or near the Conestoga River and two of its major tributaries: the Little Conestoga Creek and the West Branch of the Little Conestoga Creek. (Throughout this report, the term "Conestoga" will refer to these three water bodies; see Project Waterways map on page 5). The three waterways flow in or near all municipalities in the LIMC area, and through a variety of urban, suburban, farmland, and natural areas. They provide an excellent opportunity to plan and develop three types of greenways:

### *Resource Conservation Greenways*

Which promote rivers conservation measures and to protect areas with rare, endangered, or ecologically sensitive resources.

### *Scenic Preservation Greenways*

Which protect valuable scenic landscapes, including both natural areas and historic sites.



*Inter-municipal coordination is key to the success of this greenways plan.*

*Linear Park and Trail Greenways*

Which provide for activities such as walking, horse-back riding, bicycling, and hiking.

This plan was prepared as a guide for the LIMC, municipalities, non-profit organizations, business entities, and others who wish to work cooperatively to designate and develop various types of greenways in central Lancaster County. It is also intended to serve as a basis for grant applications for greenway projects and for listing the waterways in the study area on the Pennsylvania Rivers Conservation Registry.

*1.2 The Lancaster Inter-Municipal Committee*

The Lancaster Inter-Municipal Committee, coordinator of this planning project, is a council of governments consisting of twelve municipalities that encompass the urban and suburban area in central Lancaster County:

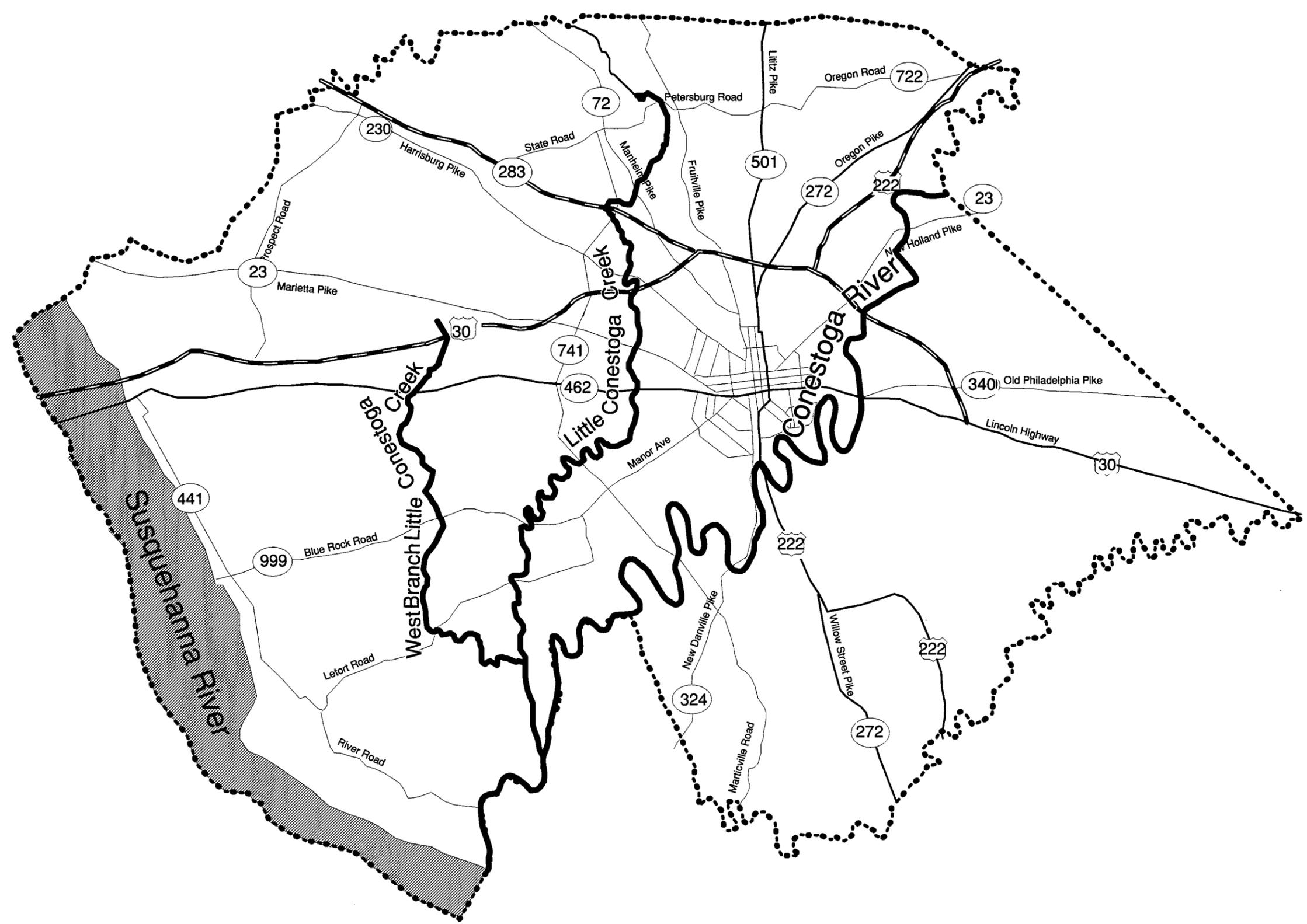
- East Hempfield Township
- East Lampeter Township
- East Petersburg Borough
- Lancaster City
- Lancaster Township
- Manheim Township
- Manor Township
- Millersville Borough
- Mountville Borough
- Pequea Township
- West Hempfield Township
- West Lampeter Township

A map of member Municipalities can be found on page 7).

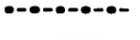
The municipalities have an area of 167.8 square miles, comprising 17.7% of Lancaster County. Total population for the municipalities in 1990 was 183,936, or 43.5% of Lancaster County's residents.

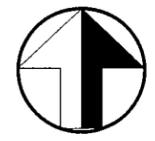
The LIMC's municipalities joined together to cooperate on a variety of local government activities. In addition to park and open space planning, which has

# Project Waterways



## Legend

-  Project Waterways
-  U.S. Highway
-  State Highway
-  LIMC Boundary
-  Open Water



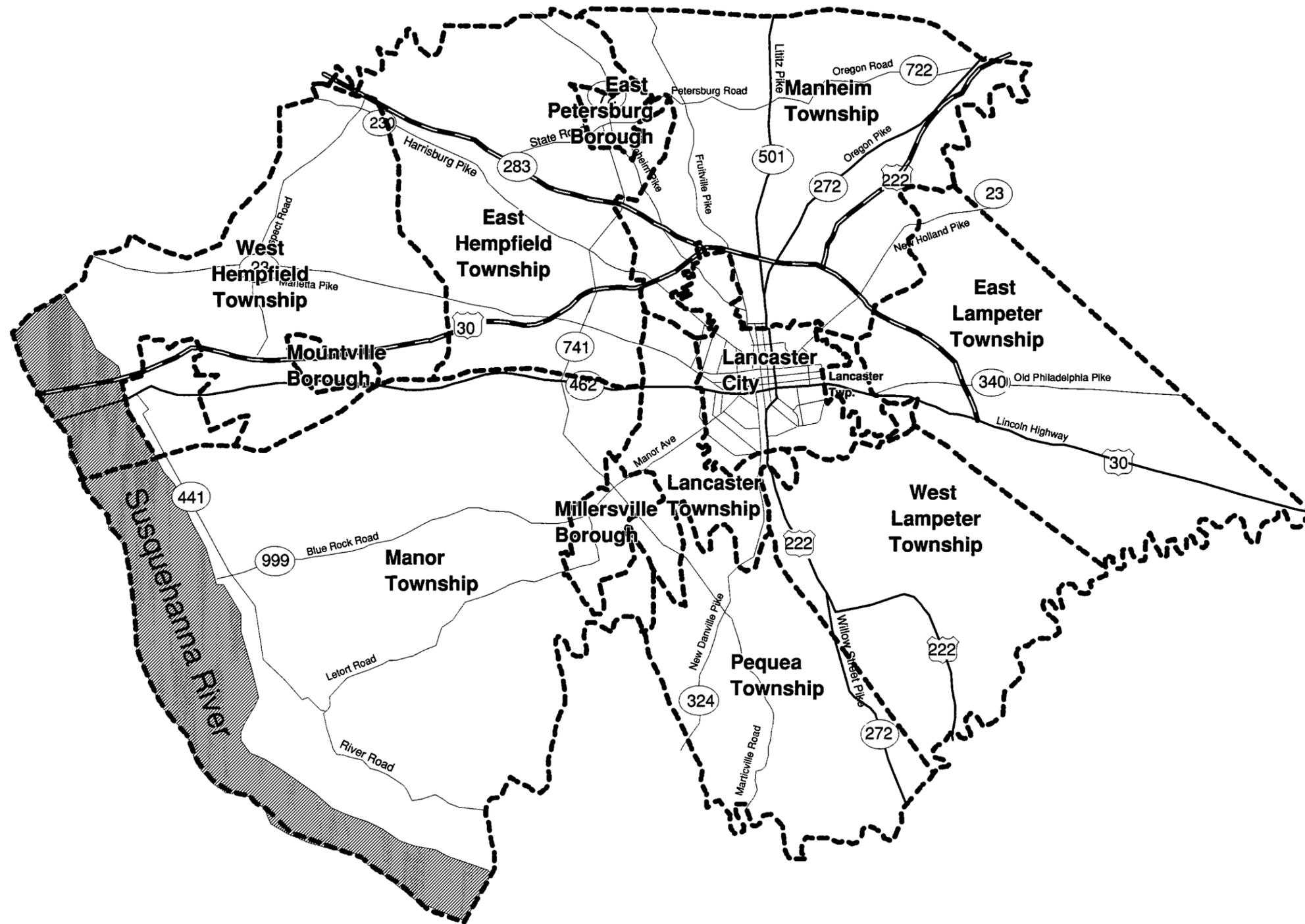
*Conestoga Greenways:*  
A River Corridor Conservation Plan

Lancaster Inter-Municipal  
Committee Area  
Lancaster, Pennsylvania  
1999

*Land Ethics, Inc.*  
P.O. Box 4310  
Ann Arbor, MI 48106  
734.426.3111 fax 3120  
pkumble@landethics.org

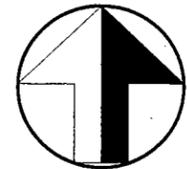


# Municipalities



## Legend

- Municipal Boundary
-  U.S. Highway
-  State Highway
-  Open Water



Conestoga Greenways:  
A River Corridor Conservation Plan

Lancaster Inter-Municipal  
Committee Area  
Lancaster, Pennsylvania  
1999

*Land Ethics, Inc.*  
P.O. Box 4310  
Ann Arbor, MI 48106  
734.426.3111 fax 3120  
pkumble@landethics.org



# Soils

from: U.S. Department of Agriculture,  
Soil Survey of Lancaster Co., PA

## Legend

-  Soil boundary
- D** Duffield-Hagerstown
- M** Manor-Chester-Glenelg
- L** Letort-Pequea-Conestoga

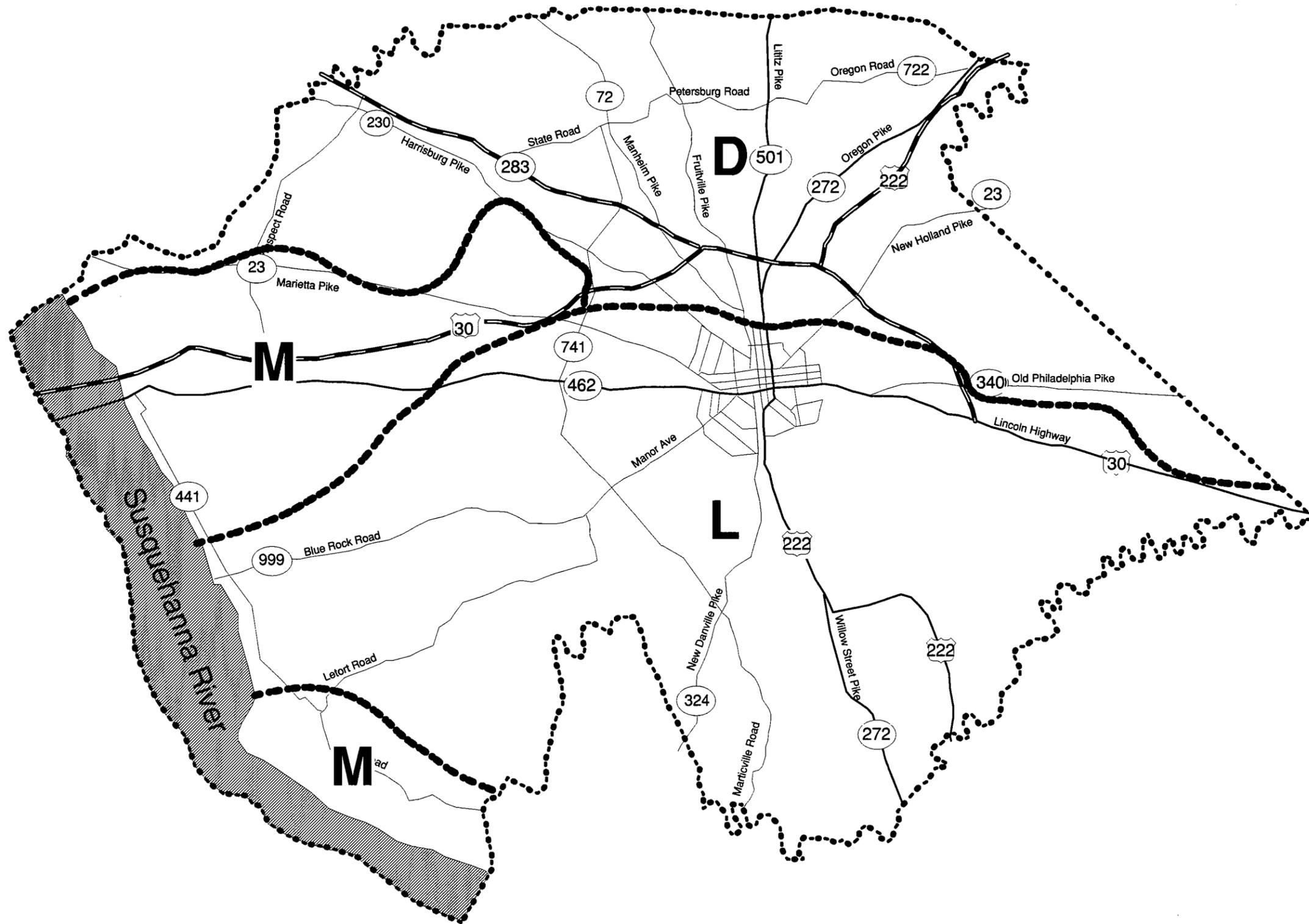
-  U.S. Highway
-  State Highway
-  LIMC Boundary
-  Open Water



Conestoga Greenways:  
A River Corridor Conservation Plan

Lancaster Inter-Municipal  
Committee Area  
Lancaster, Pennsylvania  
1999

Land Ethics, Inc.  
P.O. Box 4310  
Ann Arbor, MI 48106  
734.426.3111 fax 3120  
pkumble@landethics.org



been a major focus, activities have been as varied as working toward uniformity in municipal ordinances, coordinating workshops for municipal personnel, sharing information, taking positions on proposed legislation, making recommendations for meeting Lancaster County’s highway needs, and coordinating a drug and alcohol testing program. The LIMC’s program is the most extensive example of intermunicipal cooperation in Lancaster County.

The LIMC holds regular monthly meetings to conduct business and to provide an opportunity for municipal officials to share information and discuss issues. Meetings are attended primarily by municipal elected officials and key staff personnel; representatives of other organizations and interests are occasionally invited to discuss specific issues. The LIMC appoints committees to work on individual work program items and receives staff services from a consulting Executive Director.

*a. The Greenway and Park Advisory Board*

In 1994, the Lancaster Inter-Municipal Committee appointed a Greenway and Park Advisory Board (GPAB). The GPAB’s initial mission was threefold:

- ❶ to assist with implementing the *Regional Park and Open Space Plan*,
- ❷ to coordinate a “Celebrate the Conestoga” program to focus community attention on the value of the Conestoga River and its tributaries, and
- ❸ to encourage a greater community commitment to future preservation and enhancement.

As part of its responsibility for implementing the *Regional Park and Open Space Plan*, the GPAB undertook the preparation of this plan.

The GPAB, which meets monthly, has 20 members who represent the 12 LIMC municipalities, 2 of the 6 school districts in the LIMC area, and other agencies, organizations, and interests. The following list includes those who served on the GPAB during preparation of this plan. Where there are two or three names, the last name is the current representative.

- East Hempfield Township  
Thomas Ernharth, George Resh
- East Lampeter Township  
J. Jacob Bare
- East Petersburg Borough  
Cappy Panus, James R. Williams
- Lancaster City  
James E. Gross
- Lancaster Township  
Carl Kline, Benjamin Bamford, Jack McCoy, Suzanne Teske
- Manheim Township  
Darrell Lovelette
- Manor Township  
Barry L. Smith
- Millersville Borough  
Dorothy Bender, Michael F. Dickert
- Mountville Borough  
George Middleditch
- Pequea Township  
John Tyndall, Martin P. Hughes
- West Hempfield Township  
Nancy Fackler
- West Lampeter Township  
Lisa K. Wright
- Conestoga Valley School District  
Kerrie C. Snavelly
- Hempfield School District  
George A. Resh, John Smith
- Manheim Township School District  
Jere Herr (former member)
- Lancaster County Planning Commission  
Allan E. Granger

Lancaster County Parks Department  
Jerome E. Przystup, John P. Mikowychok

Lancaster County Conservancy  
John W. Symonds

Conestoga Valley Association  
William K. Ebel, Jr.

Agricultural Preservation  
Thomas Daniels, Travis Martin,  
Gerald Whiteside

Recreation Organizations  
Susan E. Abele

Dickert, Michael A. Domin, William K. Ebel, Jr., Nancy Fackler, James E. Gross (former Chair), Cheryl Holland, Sandy Kime, Barry L. Smith, and John W. Symonds.

*Public Awareness Committee* - George A. Resh (Chair), Susan E. Abele, Mike Elliott, Martin Hughes, Jack McCoy, Richard Shoemaker, and Lisa Wright.

*Technical and Regulatory Committee* - Allan E. Granger (Chair), William K. Ebel, Jr., M. Darrell Lovelette, George Middleditch, Jerome E. Przystup, and Gerald Whiteside.

The GPAB has three committees which meet as needed to assist with three major aspects of the GPAB's work:

- ❶ the Planning Committee, which served as the steering committee for this project;
- ❷ the Public Awareness Committee; and
- ❸ the Technical and Regulatory Committee.

Both the Public Awareness Committee and the Technical and Regulatory Committee provided input to the project within their areas of interest. Members of the three committees in spring 1999 included members of the GPAB and others, as follows:

*Planning Committee* - James R. Williams (Chair), J. Jacob Bare, Perry Clay, Michael F.

### 1.3 Funding

Three sources provided funding for this project. The LIMC received \$20,000 in assistance from the Chesapeake Bay Commission; two of Lancaster County's State legislators, Representative P. Michael Sturla and Senator Noah W. Wenger, were members of the Commission at the time the assistance was obtained. The LIMC received a \$25,000 Keystone Recreation, Park and Conservation Fund Program grant from the Bureau of Recreation and Conservation, previously in the Pennsylvania Department of Conservation and Natural Resources. The remaining \$5,000 in project costs was funded in the form of planning services provided by the LIMC's Executive Director.

---

## 2. A GREENWAYS SYSTEM

---

### 2.1 What Are Greenways?

"Greenways are linear parks and open space corridors of all kinds, such as urban and suburban walkways, bikeways, hiking trails, jogging paths, nature trails, and wildlife habitats. Greenways may provide for recreation (either active or passive), education, environmental preservation or any combination of these. Some, such as walkways in urban settings and bicycle routes along existing roads, may not be 'green' at all. However, they are all addressed as greenways."<sup>1</sup>

### 2.2 Types of Greenways

For the purpose of this plan, greenways will be categorized by the following three groups: Resource Conservation Greenways, Scenic Preservation Greenways, and Linear Park and Trail Greenways. It is important to note that, while a particular greenway segment may primarily serve one of these functions, the types of greenways and their goals are not mutually exclusive.

#### a. Resource Conservation Greenways

Resource Conservation Greenways are intended to protect waterways and their surrounding environment.

Resource conservation greenways share many similar objectives with rivers conservation plans, serving the dual purpose of protecting important sensitive natural resources while establishing strategies for maintenance and restoration of waterways.

Resource conservation greenways are areas that require protection from development due to the fact that they have a high degree of ecological value or contain rare, endangered or ecologically sensitive resources. When planned and designed to connect wildlife corridors throughout the region, greenways can provide safe access to protect habitats that are often fragmented by man-made development. As a protected corridor, such as a stream valley, a resource conservation greenway can provide nearly uninterrupted corridors where wildlife can flourish and travel between areas of the ecosystem without human intrusion. Similar to that of a scenic preservation greenway discussed below, a resource conservation greenway is designed to protect and preserve sensitive resources by limiting the amount of human intrusion that can occur.

#### b. Scenic Preservation Greenways

Scenic Preservation Greenways are used to protect valuable scenic landscapes. Typically, scenic preservation

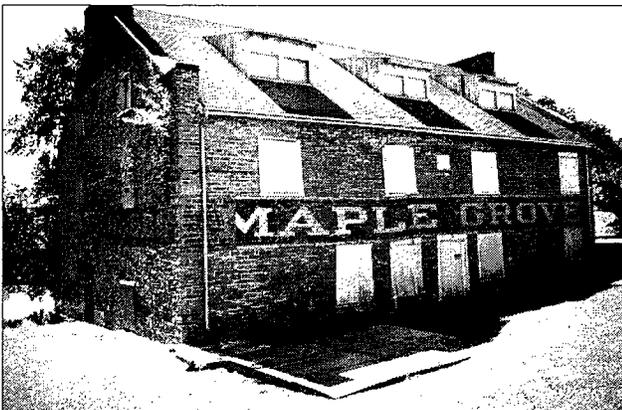
1 Urban Research and Development Corporation, *Regional Park and Open Space Plan*, 1993, p.i.



*Resource conservation greenways are intended to protect the waterways of the Conestoga system and their surrounding environment.*



*Scenic preservation greenways are intended to protect the important scenic landscapes that surround the Conestoga system.*



*Scenic preservation greenways include historically significant buildings and archaeological sites found throughout the region.*

greenways contain high quality scenic views from a public road, parkway, or waterway. They are important for the visual character and quality of the community because they consist of public and private lands that are protected primarily for the views they possess. Important scenic views may be views of a pristine natural landscape or may encompass a nostalgic or historic landscape. Other scenic preservation greenways may protect historically significant buildings, either in town or alone in the countryside.

An important distinction between greenways for scenic preservation and those used for linear parks and trails centers around limiting access. Whereas the linear park and trail greenways are used for active recreation, scenic preservation greenways are used to preserve and protect important scenic views and may in fact contain no point of access for people. Thus, the greenway is a mechanism that promotes the enjoyment of scenic views rather than providing pedestrian linkages.

### *c. Linear Park and Trail Greenways*

*Linear Park and Trail Greenways*—also called public access greenways—are intended to provide public access to active and passive recreational opportunities such as walking, jogging, horseback riding, bicycling, canoeing, or kayaking. Often, these greenways are used to link a series of parks or other destinations such as historic sites, schools, libraries, shopping areas, residential areas, and employment centers. Trails usually follow a natural feature such as a stream, a canal, or a mountain ridge, although in more urbanized areas they can also follow streets, cut through school grounds or parks, or follow abandoned railroad beds.

## *2.3 Why the Planning Area is an Excellent Location for a Greenways System*

### *a. Existing Features*

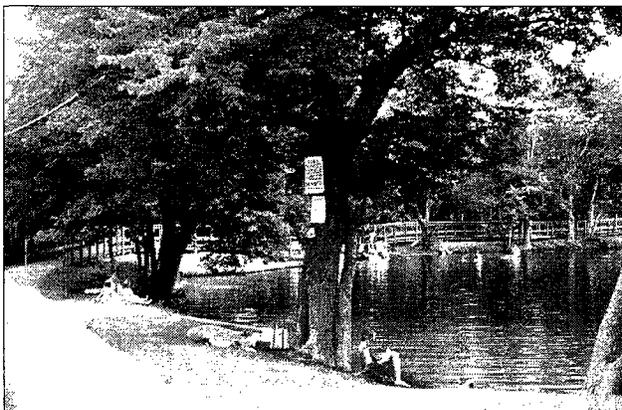
The portion of the Conestoga River watershed included in this plan already has many of the basic components of a comprehensive greenway system in place:



*As part of an overall recreational or alternative transportation system, linear park and trail greenways can include on-road bicycle routes.*



*Linear park and trail greenways can include canoe routes and other forms of recreation within natural areas.*



*Linear park and trail greenways can link existing park facilities, providing an interconnected recreational system throughout the region.*

- existing community and public facilities such as school and library properties;
- existing parks;
- protected open space (under easement, or owned by a land trust or municipal government);
- significant natural areas;
- significant scenic areas;
- significant historic areas; and
- existing walking or bicycling trails.

Some of these features are indicated on the 8 Conestoga Greenways maps in Appendix 5, page 177.

This plan will provide the guidance to create the linkages which will in effect integrate many of these features through a network of trails, protected open spaces, and natural resource conservation plans.

### *b. Recreation Opportunities*

Lancaster County has experienced a tremendous amount of growth and development in recent years. Statistics indicate that population in the LIMC area increased by approximately 63% in the four decades between 1950 and 1990. With this influx of new families and the associated loss of open space resources, opportunities for passive and active recreation have become more and more limited. A system of interconnected greenways would augment existing park facilities and readily provide additional locations where residents and visitors could go to enjoy many of the outstanding natural, scenic and cultural resources associated with the Conestoga River and its tributaries.

### *c. Transportation Alternatives*

A network of inter-connected bicycle and pedestrian routes which link schools and park facilities with residential neighborhoods and commercial areas can offer an alternative mode of transportation to municipal roads that are choked with automobile traffic. Additionally, the inter-connected routes can link employment centers, commercial areas, and other activity centers.



---

## 3. GOALS FOR THE CONESTOGA GREENWAYS

---

### *Primary Goal:*

- The primary goal for the Conestoga Greenways is to develop a mechanism by which municipal governments, non-profit organizations, businesses, and individual landowners can protect and preserve the environmental quality, scenic attributes, and recreational and transportation opportunities of the Conestoga River, Little Conestoga Creek, West Branch of the Little Conestoga Creek, and their surrounding for future generations.

The goals for the Conestoga Greenways are more specifically described as follows:

### *Natural Resources Goal*

- Develop an interconnected system of natural areas through the Conestoga watershed that protects green space, natural habitat and water quality of the Conestoga River, the Little Conestoga Creek, and the West Branch of the Little Conestoga Creek.

---

### *Objectives for Resource Conservation Greenways*

- ❶ Protect the Conestoga from further water quality degradation caused by urban runoff, agricultural/rural runoff, and adjacent land development;
- ❷ Improve the water quality of the Conestoga;
- ❸ Provide linkages between significant habitat areas;
- ❹ Minimize habitat fragmentation;
- ❺ Maximize the size of the protected habitat areas; and
- ❻ Work with the appropriate natural resource protection organizations to develop management programs that will protect rare species of plants and threatened animals.

### *Scenic Resources Goal*

- Preserve and maintain existing open space, natural and cultural resources, and scenic views of the Conestoga and its tributaries.

---

### *Objectives for Scenic Preservation Greenways*

- ❶ Protect significant scenic views and vistas within the municipalities in the LIMC;
- ❷ Protect significant historical resources within each of the municipalities in the LIMC;
- ❸ Protect significant green space within the LIMC area; and
- ❹ Protect views of the Conestoga and its tributaries at important points of public access to the waterway and along roadways and trails.

### *Public Access Goal*

- Provide an interconnected system of walkways, bicycle paths, and water routes that link destinations and recreation areas within the LIMC municipalities. Public access means providing residents and visitors the ability to travel to and along the waterways, trails and parklands abutting the

Conestoga River, Little Conestoga Creek, and West Branch of the Little Conestoga Creek.

---

### *Objectives for the Linear Park and Trail Greenways*

- ❶ Provide safe, easily accessible trails for multiple, non-motorized uses;
- ❷ Plan for capital outlay to construct trails and trail support facilities;
- ❸ Develop consistent Conestoga Greenways signage and kiosk plans for use throughout the region;
- ❹ Develop a stewardship program that encourages neighbors and volunteer groups to take responsibility for the oversight and maintenance of the Conestoga Greenways; and
- ❺ Actively implement a Conestoga Greenways promotion plan, recognizing the potential economic benefits to the community through tourism, job creation, and increases to property values.



---

***SECTION B: BACKGROUND***

---



---

## 4. EXISTING RESOURCE INVENTORY AND ZONING PATTERNS

---

The following section describes the zoning and significant resources found within the study area: soils, rare and endangered species, woodlands, and water quality. The tables and small scale maps provide detail on soil types and their general locations, DCNR ratings for rare and endangered species, and significant woodland areas within the study area. The generalized zoning maps characterize patterns of land use within the study area.

Other existing resources are indicated on the eight Conestoga Greenways maps included in the appendices of this report. They include some of the following:

- ✓ topography at 20' intervals;
- ✓ geological sites;
- ✓ historic and cultural sites;
- ✓ existing parks and recreation facilities;
- ✓ school sites;
- ✓ roadways;
- ✓ property lines;
- ✓ easements;
- ✓ structures; and
- ✓ major waterways.

### 4.1 Soils

The following summary of soils in Lancaster County—and more specifically within proximity of the waterways—is based on data in the Soil Survey for Lancaster County (U.S. Department of Agriculture, May, 1985). The purpose of this summary is to briefly explain the properties of these soils for their appropriateness to general development uses. The Soil Survey for Lancaster County contains annotated aerial photographs, illustrating soil types within close proximity to the stream and greenway corridors. Please refer to the Soil Survey for detailed mapping of each soil type and specific combinations of soil types.

The study area is divided into three general soil types (see Soils map, page 21). The basis of this division is linked to the distribution of these soils and the geologic time period during which they were formed. The soils of Lancaster County are the result of a complex series of geologic events which date back over 600 million years. Manor-Chester-Glenelg soils were created during the Precambrian and Lower Paleozoic ages from parent material made up of schist, serpentine, quartzite, and other metamorphic and igneous rocks. These soils cover roughly 31% of the county. Within this coverage, 32% are Manor soils, 30% are Chester soils, 23% are Glenelg soils, and 15% are a variety of minor soils types. Manor soils tend to be steep sloped, but in some places are gently sloped, and are well-

Table 1: *Suitability of Soils for a variety of open space and recreational activities.*

<b>Soils</b>	<b>Prime Ag. Soil</b>	<b>Woodlands Productivity</b>	<b>Suitability for Recreation</b>	<b>Suitability for Trails</b>	<b>Woodland Wildlife</b>	<b>Wetland Wildlife</b>
<b>Duffield</b>	yes	very high	high	high	good	-
<b>Hagerstown</b>	yes	very high	high	high	good	-
<b>Manor</b>	yes	high	medium	low	good	-
<b>Chester</b>	yes	high	medium	high	good	-
<b>Glenelg</b>	yes	high	high	high	fair-good	-
<b>Letort</b>	yes	high	high	high	good	-
<b>Pequea</b>	no	mod. high	medium	low	fair	-
<b>Conestoga</b>	yes	very high	medium-high	high	good	-

Note: Appropriateness for the eight different types of soil associations to support wetland and wildlife varies greatly throughout the study area. Please refer to the Soil Survey for Lancaster County for a detailed examination of specific soil associations found within stream and greenway corridors.

drained. Chester soils are gently sloping to flat and are also well-drained. The Glenelg soils are steeper, usually gently to moderately steep. Most of the Manor-Chester-Glenelg soils are in cropland, but some are in woodland, and some are dedicated to urban use. Step slopes can be a limitation to nonagricultural use.

Duffield-Hagerstown soils were created from dolomite and limestone in the Cambrian period. They cover 28% of the county. Duffield-Hagerstown soils are well-drained. Duffield soils are nearly level to gently sloping (0% to 3%), while Hagerstown soils are nearly level to sloping, but can be steep (0% - 30%). Most Duffield-Hagerstown soils are in cropland, as they are well-

sited to this use. The soils are limited from many uses because of instability of soils (sinkholes), potential for groundwater contamination, and steep slopes.

Letort-Pequea-Conestoga soils are the result of the weathering of crystalline limestone, dolomite, and thin graphitic and micaceous bands. These soils cover 12% of Lancaster County, are well-drained, and are present on the side slopes of ridges. Letort soils make up 27% of this group and are gently sloping. Pequea soils cover 17% of the group and are gently sloping to moderately steep. Conestoga soils cover 17% of the coverage and are also gently sloping. Most of the Letort-Pequea-Conestoga soils are in cultivation, but

Table 2: *Soils suitability for a variety of development activities.*

<b>Soils</b>	<b>Suitability for Excavations</b>	<b>Suitability for Small Building</b>	<b>Suitability for Roads</b>	<b>Suitability for Septic Tanks</b>
<b>Duffield</b>	high	high	low	medium
<b>Hagerstown</b>	medium	low-medium	low	low-medium
<b>Manor</b>	low-high	low-high	low-medium	low-medium
<b>Chester</b>	high	high	medium	medium
<b>Glenelg</b>	low-high	low-high	medium-low	low-medium
<b>Letort</b>	high	medium-high	medium	medium-high
<b>Pequa</b>	low-medium	low-medium	medium-low	low
<b>Conestoga</b>	medium-high	medium-high	low	medium

some are either wooded or urban. Slope is the main constraint for this soil group.

Each of these eight different kinds of soil associations is coded in tables 1 and 2 for its appropriateness for ten different types of development.

Some general conclusions can be drawn from the data presented. The soils of Lancaster County are rich and well-drained. These soils are well suited to a variety of agricultural applications, most notably corn, tobacco, wheat, and livestock feed. These soils are well suited for tree species such as oaks, Black Cherry, White Ash, Hickory, Scotch Pine, Pitch Pine, Virginia Pine and Eastern Redcedar. Consequently, these soils are productive as woodland habitat as well. These soils are not productive for wetland wildlife, as there is little wetland within these well-drained soils.

A great majority of Lancaster County contains soils which are highly appropriate for recreation. Good drainage and gentle slopes create good conditions for campsites, trails and parks.

## 4.2 Rare and Endangered Species

The Pennsylvania Department of Conservation and Natural Resources (DCNR) has prepared an extensive listing of species of special concern reported to occur within the Conestoga River watershed. The listing—commonly known as the Pennsylvania Natural Diversity Index (PNDI)—is a site-specific data base which describes significant natural resources found in Pennsylvania. The PNDI includes data on plant and animal species of special concern, exemplary natural communities and unique geological features. The PNDI is actually a cooperative project of DCNR, The Nature Conservancy, and the Western Pennsylvania Conservancy.

The listing of species of special concern in this chapter, prepared in 1998 by DCNR, contains all rare and endangered species reported to occur within the Conestoga River watershed. This is the most up-to-date listing of its kind. The information is abstracted from the DCNR database and is presented in table 3 beginning on page 26. Both the scientific name and common name for each species are provided, along with its global element ranking, state element ranking, state protection status, and Pennsylvania Biological Survey suggested protection status. The date in which each

plant or animal was last observed is updated on an annual basis.

The following summarizes the coding that has been used to rate each of the rare and endangered species contained in the table below:

### *Global Element Ranking*

G1= Critically imperiled globally because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.

G2= Imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.

G3= Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g. a single western state, a physiographic region in the East) or because of other factors making it vulnerable to extinction throughout its range; in terms of occurrences, in the range of 21 to 100.

G4= Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.

G5= Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.

### *State of Pennsylvania Ranking*

S1= Critically imperiled in Pennsylvania because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extirpation from the state.

S2= Imperiled because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to elimination from Pennsylvania.

S3= Rare or uncommon in Pennsylvania (on the order of 21 to 100 occurrences).

S4= Apparently secure in Pennsylvania.

S5= Demonstrably secure in Pennsylvania.

SH= Of historical occurrence in the Pennsylvania, perhaps having not been verified in the past 20 years, and suspected to be still extant.

SU= Possibly in peril but status uncertain; need more information.

SX= Apparently eliminated from Pennsylvania.



### *Pennsylvania Status*

#### Native Plant Species:

PE= *Pennsylvania Endangered* - Plant species which are in danger of extinction throughout most of their natural range within this Commonwealth, if critical habitat is not maintained or if the species is greatly exploited by man. This classification shall also include any populations of plant species that have been classified as *Pennsylvania Extirpated*, but subsequently are found to exist in this Commonwealth.

PT=*Pennsylvania Threatened* - Plant species which may become endangered throughout most or all of their natural range within this Commonwealth, if critical habitat is not maintained to prevent their future decline, or if the species is greatly exploited by man.

PR=*Pennsylvania Rare* - Plant species which are uncommon within this Commonwealth. All species of the native wild plants classified as

Disjunct, Endemic, Limit of Range and Restricted are included within the *Pennsylvania Rare* classification.

Disjunct - Significantly separated from their main area of distribution.

Endemic - Confined to a specialized habitat.

Limit of Range - At or near the periphery of their natural distribution.

Restricted - Found in specialized habitats or habitats infrequent in Pennsylvania.

PX=*Pennsylvania Extirpated* - Plant species believed to be extinct within this Commonwealth. These plants may or may not be in existence outside the Commonwealth.

PV=*Pennsylvania Vulnerable* - Plant species which are in danger of population decline within the Commonwealth because of their beauty, economic value, use as a cultivar, or other factors which indicate that persons may seek to remove these species from their native habitats.

TU=*Tentatively Undetermined* - A classification of plant species which are believed to be in danger of population decline, but which cannot presently be included within another classification due to taxonomic uncertainties, limited evidence within historical records, or insufficient data.

N= No current legal status exists, but under review for future listing.

#### Wild Birds and Mammals:

PE=*Pennsylvania Endangered* - Species in imminent danger of extinction or extirpation throughout their range in Pennsylvania if the deleterious factors affecting them continue to operate. These are: 1) species whose numbers have already been reduced to a critically low level or whose habitat has been so drastically reduced or degraded that immediate action is

required to prevent extirpation from the Commonwealth; or 2) species whose extreme rarity or peripherally places them in potential danger of precipitous declines or sudden extirpation throughout their range in Pennsylvania; or 3) species that have been classified as "Pennsylvania Extirpated," but which are subsequently found to exist in Pennsylvania as long as the above conditions 1 or 2 are met; or 4) species determined to be "Endangered" pursuant to the Endangered Species Act of 1973, Public Law 93-205 (87 Stat. 884), as amended.

PT=*Pennsylvania Threatened* - Species that may become endangered within the foreseeable future throughout their range in Pennsylvania unless the changeable factors affecting the organism are abated. These are: 1) species whose populations within the Commonwealth are decreasing or have been heavily depleted by adverse factors and while not actually endangered, are still in critical condition; 2) species whose populations may be relatively abundant in the Commonwealth but are under severe threat from serious adverse factors that have been identified and documented; or 3) species that are rare or peripheral and in possible danger of severe decline throughout their range in Pennsylvania; or 4) species determined to be "Threatened" pursuant to the Endangered Species Act of 1973, Public Law 93-205 (87 Stat. 844), as amended, that are not listed as "Pennsylvania Endangered."

N= No current legal status, but is under review for future listing.

#### Fish, Amphibians, Reptiles, and Aquatic Organisms:

PE=*Pennsylvania Endangered* - All species declared by: 1) the Secretary of the United States Department of the Interior to be threatened with extinction and appear on the Endangered Species List of the Native Endangered Species List published in the Federal Register; or 2) have been declared by the Pennsylvania Fish and Boat Commission,

Executive Director to be threatened with extinction and appear on the Pennsylvania Endangered Species List published by the Pennsylvania Bulletin.

PT=*Pennsylvania Threatened* - All species declared by: 1) the Secretary of the United States Department of the Interior to be in such small numbers throughout their range that they may become endangered if their environment worsens, and appear on a Threatened Species List published in the Federal Register; or 2) have been declared by the Executive Director of the Pennsylvania Fish and Boat Commission to be in such small numbers throughout their range that they may become endangered if their environment worsens and appear on the Pennsylvania Threatened Species List published in the Pennsylvania Bulletin.

PC=Animals that could become endangered or threatened in the near future. All of these are uncommon, have restricted distribution or are at risk because of certain aspects of their biology.

N=No current legal status, but is under review for future listing.

#### *Pennsylvania Biological Survey Suggested Status*

The Pennsylvania Biological Survey (PBS) is a non-profit scientific organization of professional and dedicated amateur scientists who volunteer their expertise and energies to increase the knowledge and foster the perpetuation of the natural biological diversity of the Commonwealth of Pennsylvania.

PX=*Pennsylvania Extirpated* - Species that have disappeared from Pennsylvania since 1600, but still exist elsewhere.

PE=*Pennsylvania Endangered* - See Pennsylvania Endangered classification beneath Wild Birds and Mammals group.

Table 3: *Species of special concern and their rankings reported to occur in the Conestoga River study area.*

<i>Scientific Name</i>	<i>Common Name</i>	<i>Global/State Element Rank</i>	<i>PA Protection Status</i>	<i>PA Biological Survey Protection Status</i>
<i>Aplectrum hyemale</i>	Puttyroot	G5/S3	PR	PR
<i>Arabis hirsuta</i>	Western Hairy Rock-cress	G5/S1	TU	PE
<i>Arethusa bulbosa</i>	Swamp-pink	G4/S1	PE	PE
<i>Aristida purpurascens</i>	Arrow-feathered Three Awned	G5/S2	PT	PT
<i>Asplenium pinnatifidum</i>	Lobed Spleenwort	G4/S3	N	PR
<i>Aster ericoides</i>	White Heath Aster	G5/S3	TU	TU
<i>Bartramia longicauda</i>	Upland Sandpiper	G5/S1-S2	PT	PT
<i>Bouteloua curtipendula</i>	Tall Gramma	G5/S2	PT	PT
<i>Buchnera americana</i>	Bluehearts	S5/SX	PX	PX
<i>Caecidotea pricei</i>	Price's Cave Isopod	G3/S3-S2		
<i>Carex lasiocarpa</i>	Slender Sedge	G5/S3	PR	PR
<i>Chasmanthium latifolium</i>	Wild Oat	G5/S1	TU	PE
<i>Chenopodium capitatum</i>	Strawberry Goosefoot	G5/SH	TU	TU
<i>Corallorhiza wisteriana</i>	Spring Coral-Root	G5/S1	TU	PE
<i>Cuscuta polygonorum</i>	Smartweed Dodder	G5/SU	TU	TU
<i>Cyperus lancastris</i>	Many-flowered Umbrella Sedge	G5/S2	N	TU
<i>Desmodium clabellum</i>	Tall Tick-trefoil	G5/Su	TU	TU
<i>Desmodium humifusum</i>	Trailing Tick-trefoil	G1-G2/SU	PE	TU
<i>Dodecatheon amethystinum</i>	Jeweled Shooting Star	G4/S2	PT	PT
<i>Draba reptans</i>	Carolina Whitlograss	G5/SH	PX	PX
<i>Echinacea laevigata</i>	Smooth Coneflower	G2/SX	PX	PX
<i>Ellisia nyctelea</i>	Ellisia	G5/S2	PT	PT

<i>Scientific Name</i>	<i>Common Name</i>	<i>Global/State Element Rank</i>	<i>PA Protection Status</i>	<i>PA Biological Survey Protection Status</i>
<i>Equisetum X ferrissii</i>	Scouring-rush	HYB/S1	N	PE
<i>Erigenia bulbosa</i>	Harbinger-of-spring	G5/S2	PT	PT
<i>Gaylussacia dumosa</i>	Dwarf Huckleberry	G5/SH	PE	PE
<i>Lampropeltis cetula</i>	Common Kingsnake	G5/SX		
<i>Melica nitens</i>	Three-flowered Melic Grass	G5/S2	PT	PT
<i>Muhlenbergia capillaris</i>	Short Muhly	G5/SX	PX	PX
<i>Myotis septentrionalis</i>	Northern Myotis	G4/S3		CR
<i>Neotoma magister</i>	Allegheny Woodrat	G3-G4/S3	PT	PT
<i>Nyctanassa violacea</i>	Yellow-crowned Night Heron	G5/S1	PT	PE
<i>Panicum flexile</i>	Wiry Witchgrass	G4-G5/S2-S3	TU	TU
<i>Panicum oligosanthos</i>	Heller's Witchgrass	G5/S3	N	TU
<i>Panicum scoparium</i>	Velvety Panic-grass	G5/S1	PE	PE
<i>Phaseol polystachios</i>	Wild Kidney Bean	G4/S1-S2	N	TU
<i>Phyllanthus caroliniensis</i>	Carolina Leaf-flower	G5/S1	PE	PE
<i>Polygala cruciata</i>	Cross-leaved Milkwort	G5/S1	PE	PE
<i>Ranunculus fascicularis</i>	Tufted Buttercup	G5/S1-S2	PE	PE
<i>Salix petiolaris</i>	Meadow Willow	G5/S2-S3	TU	PE
<i>Scleria triglomerta</i>	Whip Nutrush	G5/S3	TU	TU
<i>Spiranthes magnicamporum</i>	Ladies'-tresses	G3-G4/SX	PX	PX
<i>Stygebromus pizzinii</i>	Pizzini's Cave Amphipod	G2/S1		
<i>Polygala cruciata</i>	Twisted Yellow- eyed Grass	G5	N	PT

PT=*Pennsylvania Threatened* - See Pennsylvania Threatened classification defined beneath Wild Birds and Mammals group.

PR=*Pennsylvania Rare* - See Pennsylvania Rare classification under Native Plant Species.

N=No current legal status, but is under study for future listing.

### 4.3 Woodlands

Woodlands in the LIMC planning area contain a mixture of old-growth tree stands, floodplain forests and second-growth forests. Woodland covers approximately 98,500 acres of land in Lancaster County, most of which is privately owned. The U.S. Forest Service classifies the commercial woodland in Lancaster County as 76% oak types and 24% northern hardwood types. Separate data for areas contained only within the study area does not exist.

Woodlands in the study area are primarily located along major waterways and steep slopes. They are indicated on the Woodlands map on page 29. Significant woodland areas are located along the Conestoga River and the Little Conestoga Creek.

Some of the larger tracts of woodlands in the study area can be found in the Chestnut Hill region in East Hempfield Township, Landis Woods Park in Manheim Township, and the Winter Estate and Gable Park Woods in Lancaster Township.

### 4.4 Water Quality

Impacts to existing water quality—throughout the study area—are caused primarily by nutrient and sediment accumulation as a result of runoff from farming and land development. In addition, industrial discharge, seepage from landfill areas, and leakage from underground storage tanks all can have an adverse impact upon water quality, some more than others. Much of the potable water used in the portion of the study area not served by public water comes from individual wells and underground springs. Many of these wells and underground springs are recharged from groundwater.

#### a. High Quality Waters within the Study Area

This term, according to the Pennsylvania Department of Environmental Protection (DEP), refers to areas containing excellent water quality and other features, such as plant and animal habitat, which require special protection. Within the study area, DEP has designated Mill Creek (source to PA A-352) as “cold water fishes”; this designation extends protection to fish species that are native to a cold water habitat. The Little Conestoga Creek and the West Branch of the Little Conestoga Creek are “trout stocking waters”; this DEP designation means that these waterways qualify to be stocked with trout from the Pennsylvania Fish and Boat Commission and federal hatcheries.

### 4.5 Zoning

There are approximately 100 different zoning districts in the LIMC area. Titles for similar districts differ from one municipality to another, and districts with the same titles are not necessarily the same from one municipality to another. Therefore, the accompanying 8 zoning maps beginning on page 33 were prepared to show the general zoning patterns in the Conestoga Greenways study area.

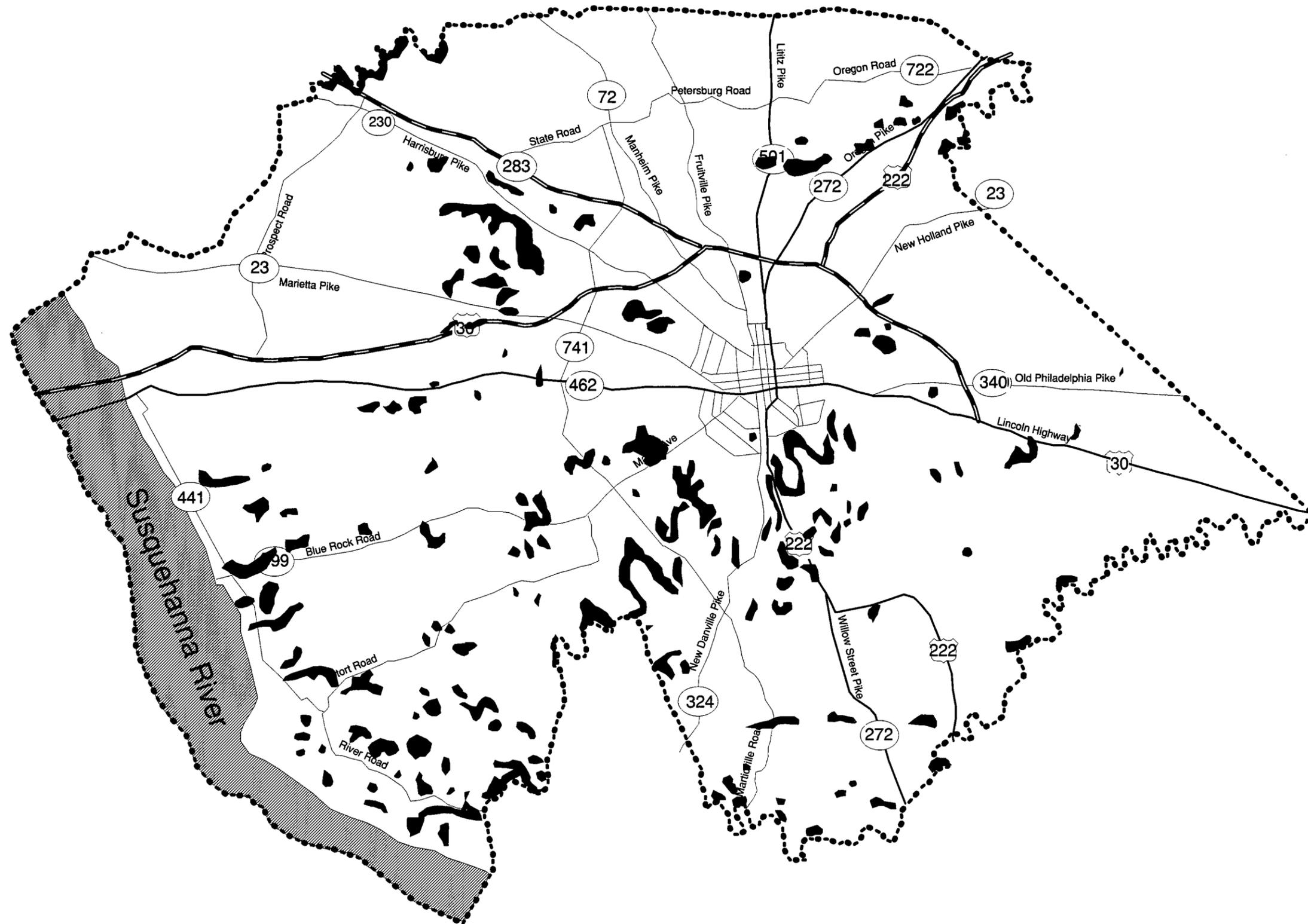
The eight maps delineate three broad categories of zoning districts:

- ① The lightest gray areas are those zoned primarily for agriculture and other open space uses.
- ② The medium gray areas are those zoned primarily for residential uses.
- ③ The darkest gray areas are those zoned for commercial, industrial, and other kinds of development.

Table 4 on page 32 explains which of the zoning district from each municipality are included in the three categories. Seven municipalities have zoning districts that lie entirely outside the Conestoga Greenways study area; those districts are not included on the table. Table 4 does not include overlay districts—such as floodplain and historic districts—because they do not appear on municipal zoning maps.

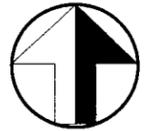
# Woodlands

from: Regional Park and Open Space Plan  
Lancaster Inter-Municipal Committee Area



## Legend

-  Woodlands
-  U.S. Highway
-  State Highway
-  Open Water
-  LIMC boundary



**Conestoga Greenways:**  
A River Corridor Conservation Plan

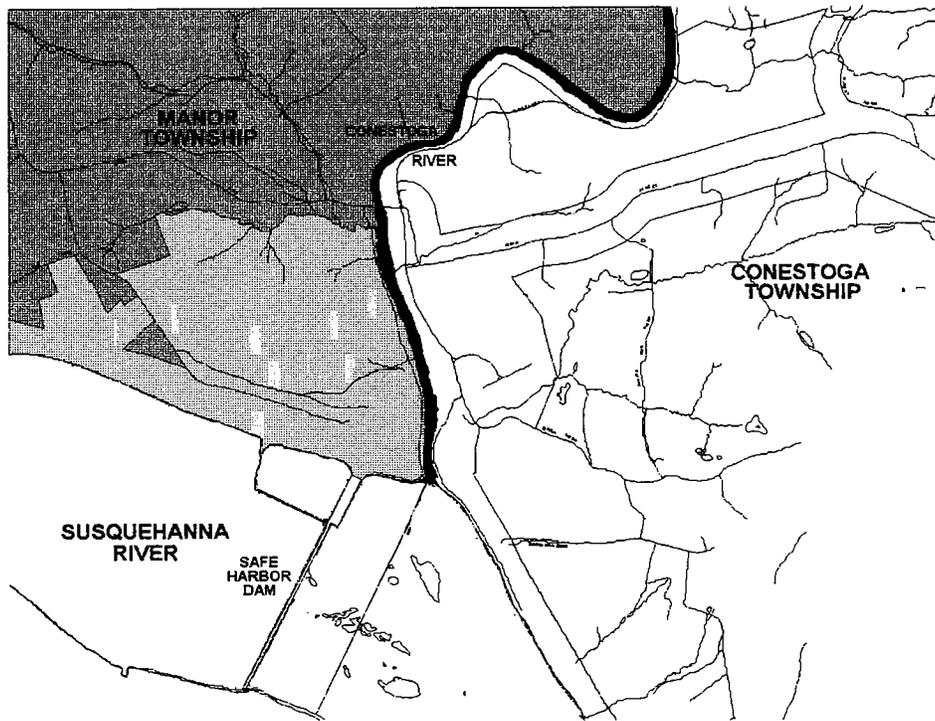
Lancaster Inter-Municipal  
Committee Area  
Lancaster, Pennsylvania  
1999

*Land Ethics, Inc.*  
P.O. Box 4310  
Ann Arbor, MI 48106  
734.426.3111 fax 3120  
pkumble@landethics.org



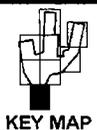
Table 4: *Zoning Districts included in each general category for the composite zoning maps.*

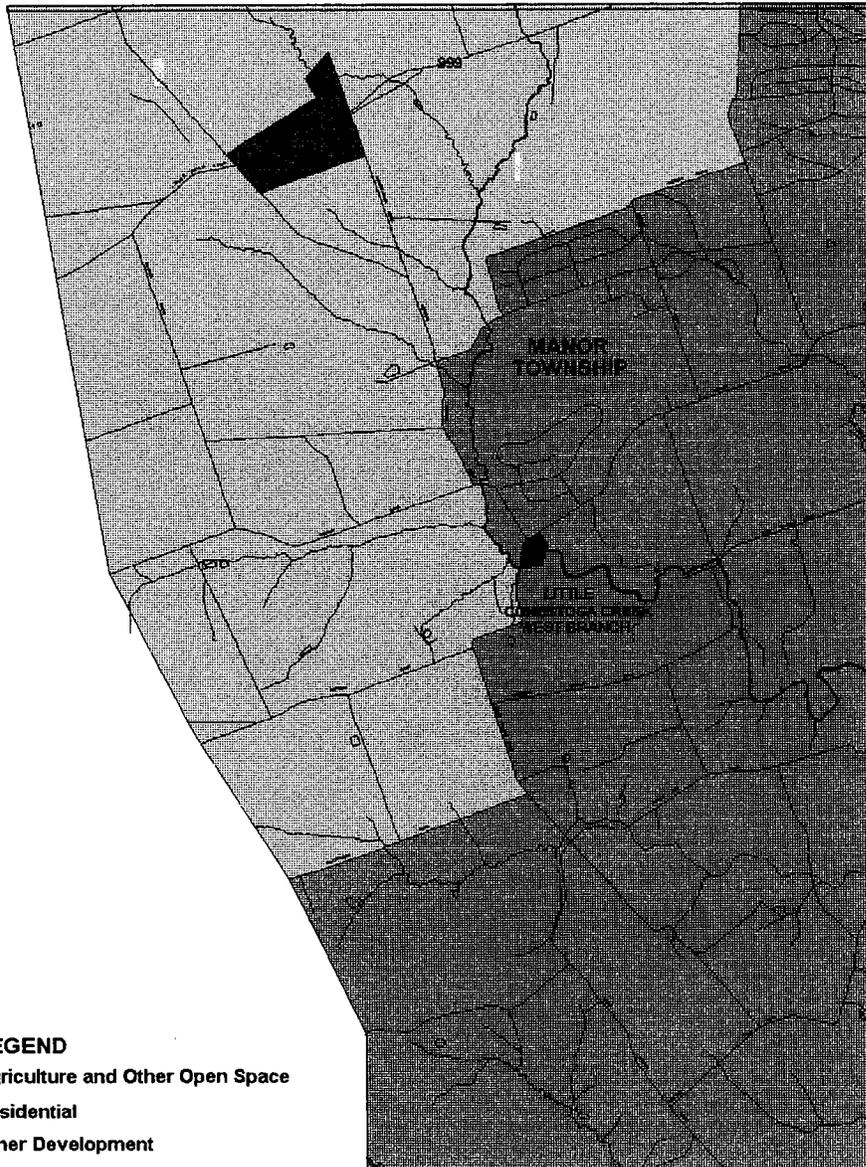
Municipality	Agriculture and Other Open Space	Residential	Other Development
East Hempfield Township	A - Agricultural	AH - Agricultural Holding	C-1 - Local Commercial C-2 - Community Commercial C-3 - Highway Commercial HC - Health Care I-1 Light Industrial I-2 - General Industrial I-3 - Industrial Office Q - Quarry
East Lampeter Township	R - Rural	R-1 - Residential R-2 - Residential S - Conservation	C-1 - Commercial C-2 - Commercial I - Industrial
East Petersburg Borough	REC - Recreation	R-1 - Residential R-2 - Residential R-3 - Residential	NC - Neighborhood Commercial HC - Highway Commercial I - Industrial
Lancaster City	PO - Park and Open Space	R1 - Residential Detached R2 - Residential Semi-Detached R3 - Residential Medium Density R4 - Residential High Density and Commercial Services	RO - High Density Residential, Office and Institutional Uses MU - Mixed Use C2 - Urban Commercial C3 - Regional Commercial SM - Suburban Manufacturing HC - Hospital Complex
Lancaster Township	S - Campus/Open Space	RS - Residential RS-1 - Residential R-2 - Residential R-3 - Residential	C-1 - Commercial C-2 - Commercial C-3 - Commercial O/P - Office Professional I - Industrial
Manheim Township	A - Agricultural	R-1 - Residential R-2 - Residential R-3 - Residential R-4 - Residential	B-3 - Business B-4 - Business I-1 - Industrial I-2 - Industrial
Manor Township	A - Agricultural C - Conservation	R - Rural RL - Low Residential RM - Medium Residential RH - High Residential	CO - Commercial Office CC - General Commercial LC - Local Commercial LTD - Limited Commercial MRC - Mixed Residential/Commercial I - Industrial
Millersville Borough		R-1 - Residential R-2 - Residential	RP-3 - Residential Professional R-1A - Residential Academic C-4 - Commercial C-5 - Commercial
Mountville Borough	OS - Open Space	R-1 - Low Density Residential R-2 - Medium Density Residential	R-C - Residential-Commercial C-1 - Commercial I-1 - Industrial
Pequa Township	A - Agricultural	R-1 - Residential	
West Hempfield Township	R - Rural Agricultural	RR - Rural Residential R-1 - Residential R-2 - Residential R-3 - Residential	C-1 - Neighborhood Commercial C-2 Commercial I-2 - General Industrial
West Lampeter Township	A - Agricultural OS - Open Space	R - Rural Residential R-1 - Residential R-2 - Residential R-3 - Residential	I - Industrial HC - Highway Commercial NC - Neighborhood Commercial



**Conestoga  
Greenways**  
Lancaster County, Pa.

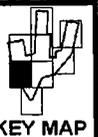
**ZONING  
DISTRICTS**  
SCALE: 1" = 3,000'

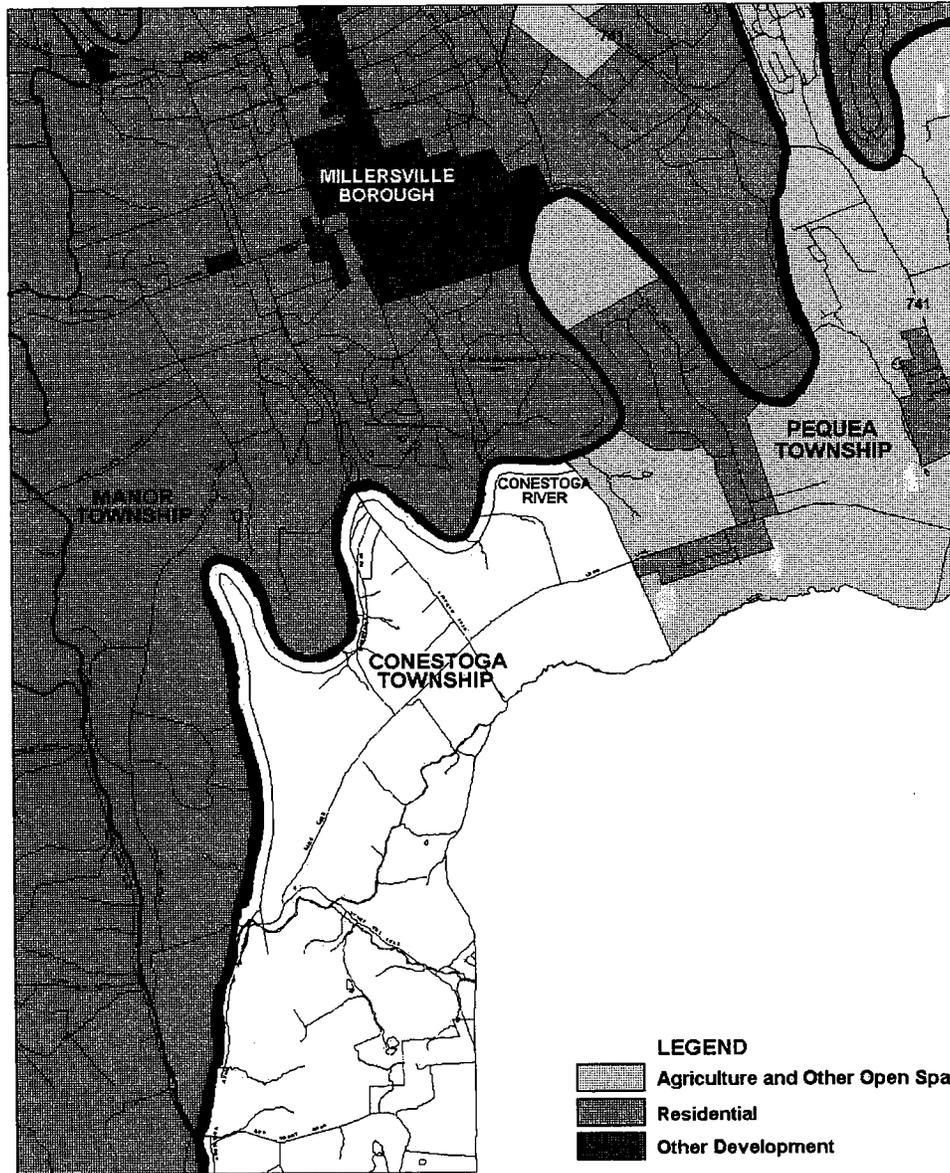




Conestoga  
Greenways  
Lancaster County, Pa.

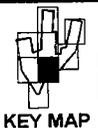
ZONING  
DISTRICTS  
SCALE: 1" = 3,000'





**Conestoga  
Greenways**  
Lancaster County, Pa.

**ZONING  
DISTRICTS**  
SCALE: 1" = 3,000'

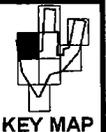


- LEGEND**
-  Agriculture and Other Open Space
  -  Residential
  -  Other Development

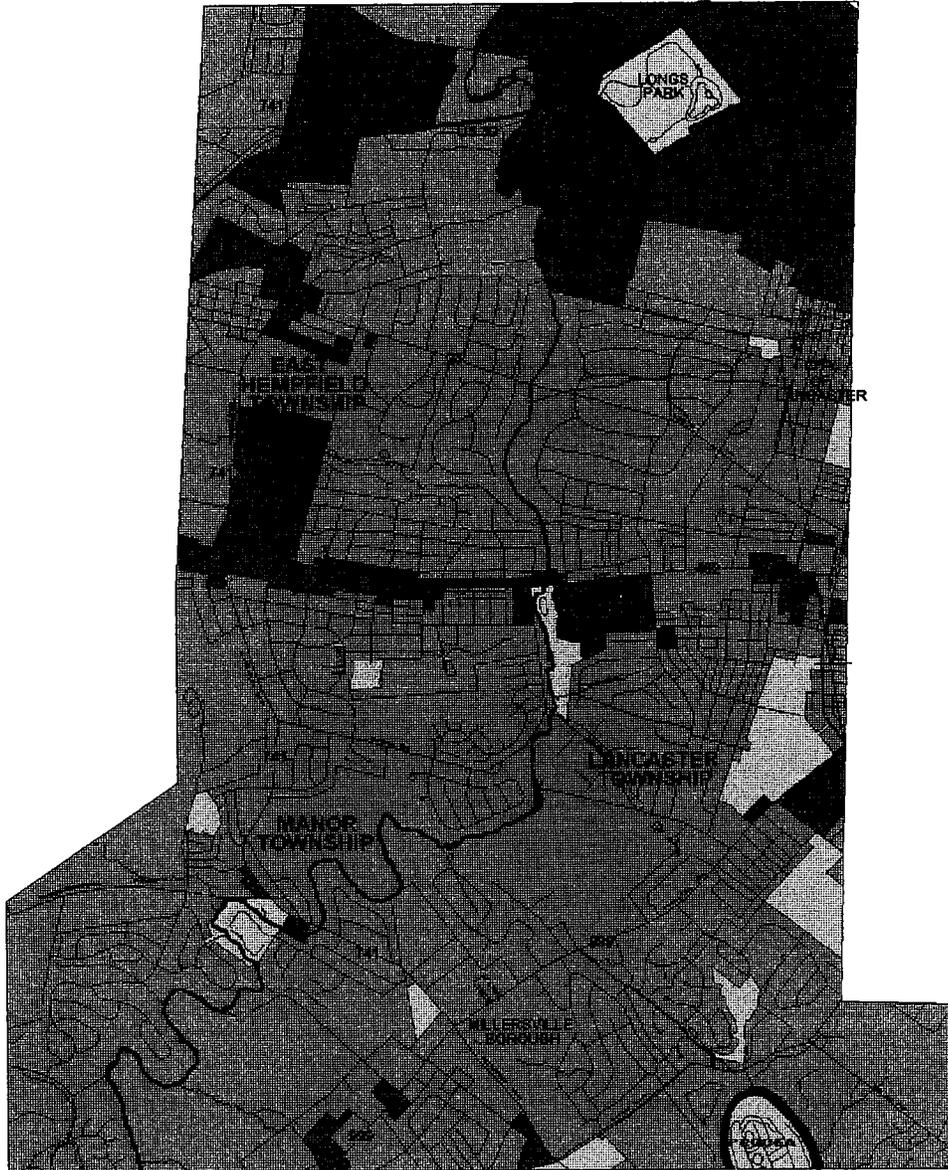


**Conestoga  
Greenways**  
Lancaster County, Pa.

**ZONING  
DISTRICTS**  
SCALE: 1" = 3,000'



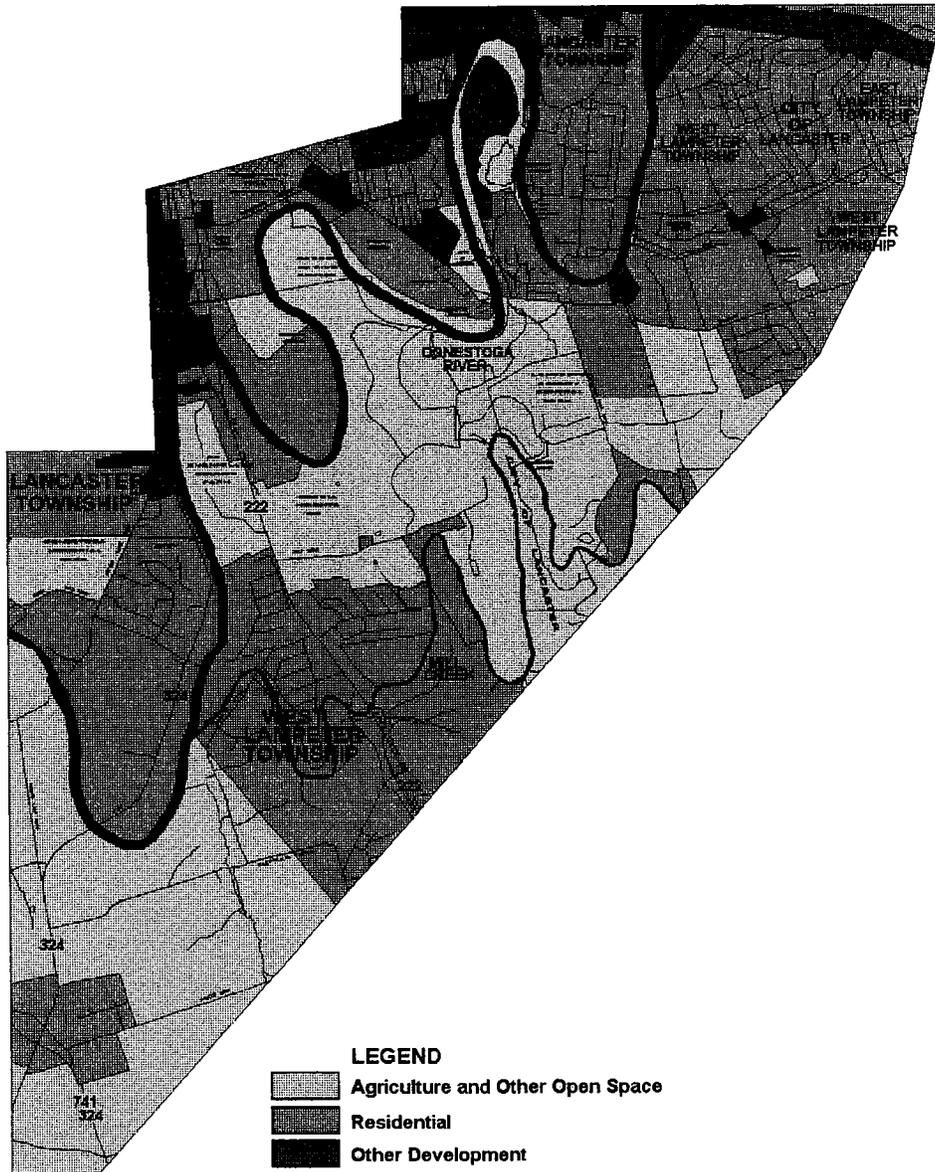
- LEGEND**
-  Agriculture and Other Open Space
  -  Residential
  -  Other Development



**Conestoga  
Greenways**  
Lancaster County, Pa.

**ZONING  
DISTRICTS**  
SCALE: 1" = 3,000'





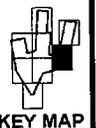
**LEGEND**

-  Agriculture and Other Open Space
-  Residential
-  Other Development

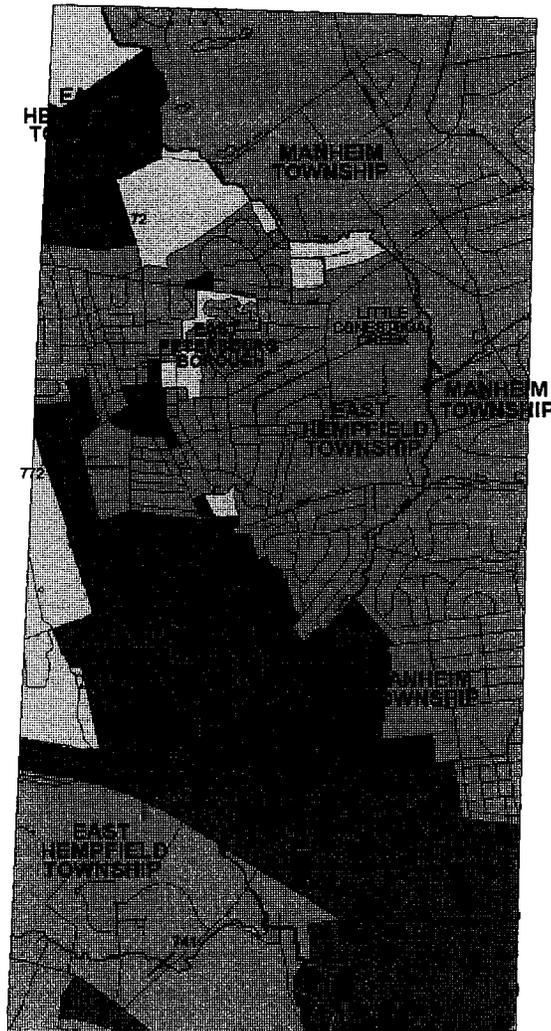


**Conestoga  
Greenways**  
Lancaster County, Pa.

**ZONING  
DISTRICTS**  
SCALE: 1" = 3,000'



- LEGEND**
-  Agriculture and Other Open Space
  -  Residential
  -  Other Development

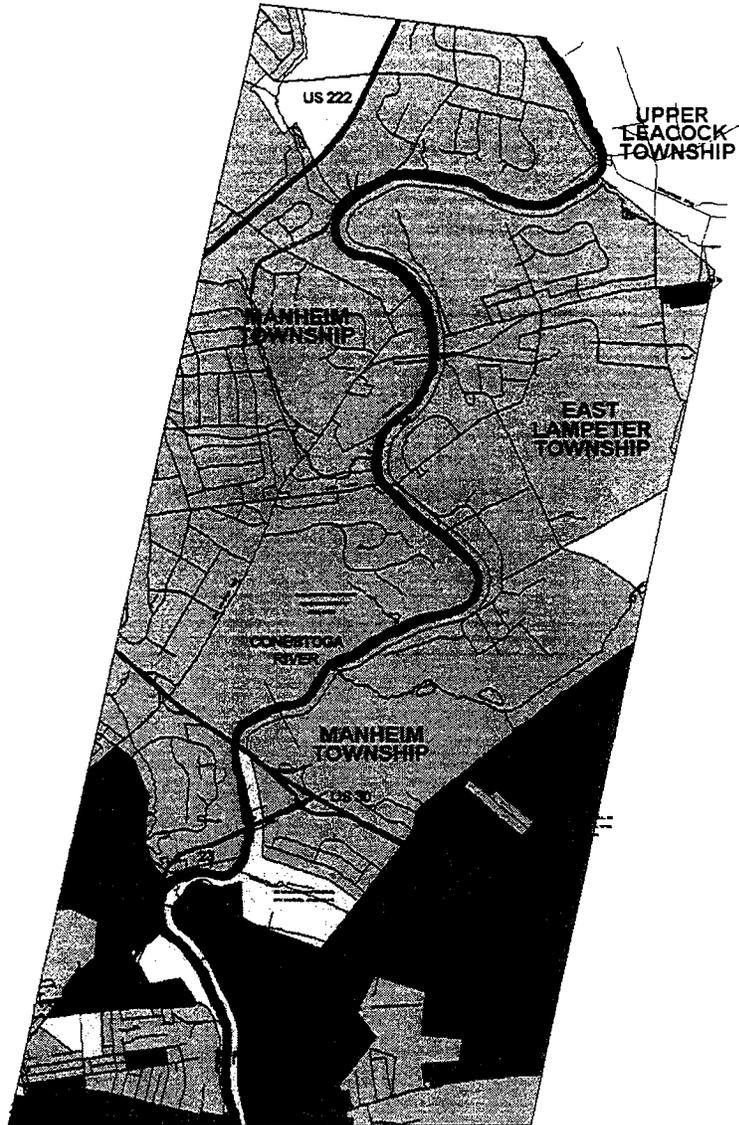


**Conestoga  
Greenways**  
Lancaster County, Pa.

**ZONING  
DISTRICTS**  
SCALE: 1" = 3,000'

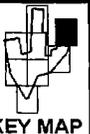


**LEGEND**  
[White Box] Agriculture and Other Open Space  
[Stippled Box] Residential  
[Black Box] Other Development



**Conestoga  
Greenways**  
Lancaster County, Pa.

**ZONING  
DISTRICTS**  
SCALE: 1" = 3,000'





---

## 5. ISSUES, CONCERNS, OPPORTUNITIES AND POTENTIAL THREATS

---

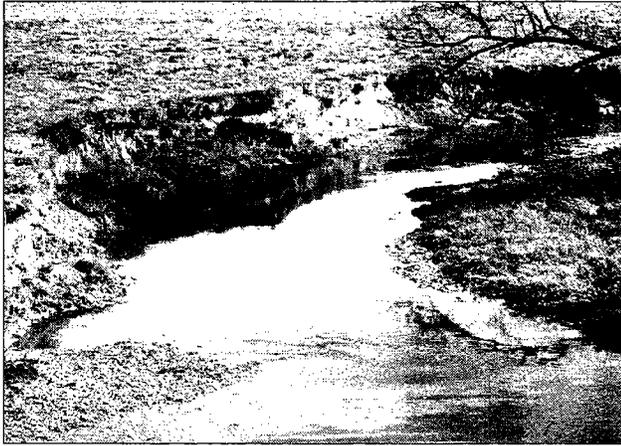
This chapter identifies and discusses issues and concerns regarding greenways in the Conestoga system, opportunities for greenway development, and potential threats to the successful development of an interconnected greenway system. All points are grouped according to their relevance to each of the three types of greenways proposed in this plan.

Many of the topics of concern stem from discussions with members of the public—beginning with a series of community events that were held as part of the “Celebrate the Conestoga” program during the spring of 1995. Additional topics of concern were gleaned from the visioning session at the Conestoga Greenways project kick-off meeting in February 1996. Other areas of concern and corresponding opportunities were derived from interviews with local groups, questionnaires answered by LIMC municipal officials, and discussions with the Greenway and Park Advisory Board and its Planning Committee, Public Awareness Committee, and Technical and Regulatory Committee, and representatives of the Department of Conservation and Natural Resources (DCNR).

### *5.1 Resource Conservation Greenways and Rivers Conservation Planning*

#### *a. Sediment and Nutrients from Agricultural Areas*

Sedimentation and nutrient runoff from agricultural areas has played a major role in degrading the water quality and ecological integrity of the Conestoga waterways. Meeting participants and committees who were interviewed stated that efforts to reduce the overall sediment and nutrient load to the waterways of the Conestoga should be considered as a key part of the ongoing work to develop resource conservation greenways and river conservation plans. Analogous to efforts to curb sedimentation from agricultural areas is the problem of cattle grazing in and crossing through waterways. Although cattle need a source of drinking water, it is possible to accomplish this in pastures while restricting access to waterways.



*An example of eroding stream banks along the West Branch of the Little Conestoga Creek.*

### *b. Eroding Stream Banks*

At all the public meetings, citizens expressed concern about the degraded water quality of the Conestoga River and its tributaries. A significant factor in this degraded water quality is eroding stream banks which can have a serious impact upon the water quality of any river system such as the Conestoga.

In a number of segments of the waterways contained in the greenways planning area, the stream banks have become severely eroded as a result of various man-made and naturally occurring conditions. This erosion has resulted in significant amounts of sediment in the down-stream reaches of the waterways. Some citizens have called for dredging the sediment from the waterways. Dredging, also known as sand-mining, is the deepening of waterways by removing sediment with various machines using scooping or suctioning devices. Although this may appear to be the best solution, dredging a waterway can pose dire consequences upon existing aquatic habitat, as it disrupts the stable ecosystem in addition to simply displacing the sediment further down-stream.

### *c. Loss of Tree Canopy and Critical Habitat Areas for Birds and Fish*

The loss of critical habitat areas for birds and fish is a key issue that must be addressed on both a short and long term basis if the plan for the Conestoga Greenways is to be considered successful in protecting and restoring natural resources. Resource conservation greenways can effectively protect areas that contain



*Cattle grazing and crossing through the waterways causing erosion and sedimentation.*

critical habitat through limiting access and devising management plans.

An important part of the loss of critical habitat areas is the loss of tree canopy along segments of the waterways. The loss of this naturally occurring buffer of streamside plant communities, also known as the riparian forest, can contribute to a variety of detrimental effects in the Conestoga system, including stream bank erosion, siltation of fish spawning areas, and excessive heating of the water.

Streamside vegetation reduces bank and floodplain erosion by slowing the stream and reducing its erosive energy. Additionally, riparian vegetation filters out excessive sediment which can carry excess nutrients into the waterway and smother rocky or gravelly streambeds with silt. This silt in turn blankets the gravel beds in which eggs and young fish develop and, likewise, destroys habitats for aquatic invertebrates such as insects, crustaceans, and shellfish.<sup>1</sup>

The riparian forest canopy provides shading of the waterways, thus preventing water temperatures from becoming too warm to carry oxygen and, in turn, to decompose organic material and waste. This naturally occurring tree canopy provides a habitat for bird and terrestrial species. Finally, this cover helps to improve the overall aesthetic quality and recreational potential of land adjacent to the waterways.

#### *d. Dumping of Trash into Waterways*

Problems related to trash and debris in the waterways of the Conestoga were also raised at the public forums. Citizens believed that in spite of education programs and posted signs, the illegal dumping of trash into waterways continues to occur. There is a lack of enforcement and prosecution on the part of the local governments.

#### *e. Lack of Adequate Protection for Areas Containing Rare Plant Species*

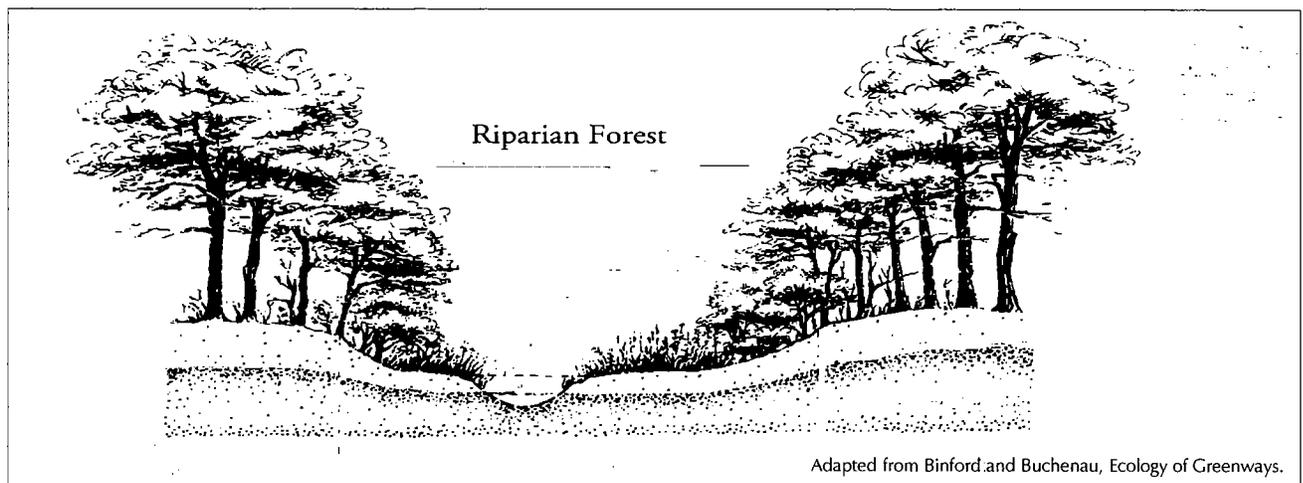
Resource conservation greenways can also effectively protect areas containing rare plant species that are found on the upland areas in close proximity to the waterways of the Conestoga.

#### *f. Mowing to the Edge of Waterways and Misuse of Lawn Fertilizers*

One of the most effective ways to help reestablish the forest canopy and important habitat along the edge of the waterways is to encourage both private property owners and municipal governments to refrain from mowing their lawns to the edge of the waterways. The change in maintenance and yard upkeep results in a strip of natural vegetation along the waterway that can trap sediment contained in stormwater runoff. In addition, judicious use of lawn fertilizers can lead to significant improvements in water quality. In all of the public forums, citizens stated that municipal governments are not doing enough to educate homeowners on methods to reduce the impact of lawn fertilizers upon receiving waterways and raised the concern about excessive mowing.

#### *g. Filling of Wetlands*

Citizens at nearly all of the public meetings voiced a concern over the filling and loss of wetland areas. The loss of wetlands can be closely tied to the loss of critical habitat for aquatic and terrestrial animal species and areas that contain rare plant species.



*Example cross section of a riparian forest. The definition of a riparian forest is that of a relatively narrow strip of land that borders a stream or river, often coinciding with the water surface elevation of the 100-year storm.*

1 Binford, Michael and M. Buchenau, *Ecology of Greenways*, Minneapolis: University of MN Press, 1993, p. 69.



*Habitat is destroyed when grass is mowed to the edge of the stream bank.*

#### *h. Dams or Structures that Inhibit Fish Migration*

It has long been recognized that dams or structures on the waterways of the Conestoga inhibit fish migration and should either be removed entirely or modified to allow fish species to spawn upstream from the Susquehanna River. The recent removal of the dams at Rock Hill between Manor and Conestoga Township, near Maple Grove between Lancaster and East Hempfield Townships, and at the American Paper Mill property between Manheim and East Lampeter Townships are examples of such efforts.

#### *i. Urban Pollutants Contained in Stormwater Runoff*

A significant threat to the integrity of resource conservation greenways is that of the urban pollutants contained in stormwater runoff and their impact upon waterways. As important as it is to use techniques to reduce the impacts to the waterways from agricultural runoff, it is equally as important to mitigate the pollutants contained in stormwater runoff from paved surfaces such as streets and rooftops. This is particularly the case for the LIMC municipalities which are experiencing a high rate of growth and development. Without designing and building devices that will assure stormwater quality and quantity improvements, any efforts towards restoration of the waterways will be less than successful.

#### *j. Need for Effective Ordinances*

Finally, one of the most effective means to begin reducing or eliminating the threats to resource conservation greenways and efforts toward rivers restoration is to modify, or where appropriate, establish municipal ordinances or state laws that will support the success of conservation practices such as conservation zoning (e.g. one dwelling unit per 3-10 acres) and agricultural zoning (e.g. one dwelling unit per 25 acres).

*Section 705. Standards and Conditions for Planned Residential Development* of the *Pennsylvania Municipalities Planning Code* could be amended to include such planning and conservation tools as buffers, standards for protecting native vegetation, limits on the amount of impervious surface on a site, open space dedication through subdivision process, site grading and clearing, overlay zoning, cluster development ordinances, storm-water best management practices (BMPs), and criteria for locating new development on a site.

Additionally, exploration should be made into amending *Section 702.1. Transferable Development Rights* to require the inclusion of sending and receiving areas where necessary to protect sensitive resource areas in planned residential development. This amendment would work in conjunction with *Section 619.1*, which addresses the creation, declaration, and recording of the development rights.

For a more in-depth discussion of these planning tools and their current use in the LIMC municipalities, please refer to Chapter 10: Regulatory Options.

## *5.2 Scenic Preservation Greenways*

### *a. Loss of Open-Space Vistas*

Lancaster County is widely known for its outstanding scenic landscape. Many visitors come to Lancaster County to enjoy what is perceived to be a rural-agricultural landscape. In turn, the regional economy experiences many benefits from the attraction of tourism to the region. Yet in recent decades, Lancaster County has experienced a boom in residential, commercial and industrial development. With this growth has been a significant decline in the amount of rural open

space and associated scenic vistas. Scenic preservation greenways have the potential to help preserve and protect against the loss of open space vistas, particularly those within close proximity to the waterways of the Conestoga.

### *b. Poorly Sited Residential Development*

A principal detractor to preserving open space vistas and consequently protecting scenic character occurs when residential development is poorly sited in a development zone. New building lots should be laid out with proper forethought given to how their orientation will have the least impact upon the existing scenic landscape. Without design guidelines oriented towards preserving open space views, particularly those in proximity to the waterways of the Conestoga, the region becomes vulnerable to losing an irreplaceable resource. The loss of scenic open space as a result of poorly sited development can ultimately impact more than just the Conestoga Greenways. The associated impacts of declining scenic open space resources will be felt by the local economy through a decline in tourism dollars and through diminishing property values.

### *c. Need for Interpretive Programs*

Scenic preservation greenways provide an important opportunity for incorporating sites that contain significant historical structures or markers, rail and trolley routes, or other locations of historical significance that are not included in any other type of interpretive program. Many of these important sites, although contained as part of a scenic preservation greenway, can be linked to each other via linear park and trail greenways, or they could simply be noted on an interpretive kiosk located on the historic site.

## *5.3 Linear Park and Trail Greenways*

### *a. Concern Regarding Eminent Domain and Condemnation of Land*

The principal issue or concern that was consistently raised at all the public forums is that of public access to greenways on private land. Specifically, there is great concern that the plan for the Conestoga Green-

ways will force landowners to allow the public to cross their property when using greenway trails. The fear is that this will be accomplished through the taking of private property by eminent domain by municipal governments. Without a doubt, this is one of the most important issues that must be clarified if the plan for the Conestoga Greenways is to be considered a success. It must be made clear to the general public that there will in no way be any condemnation of land by municipal governments for the purpose of greenways development unless there is full consent on the part of the owners of the land.

### *b. Need for Public Outreach Programs*

Based on the responses garnered at the public meetings, there is a general agreement that municipal officials must conduct an ongoing public information program which explains how linear park and trail greenways are created. To ensure the success of the Conestoga Greenways, this information program must clearly explain that public access onto private land will take place on a volunteer basis only. Where public access is granted by donation of an easement, private land owners will be encouraged to establish a conservation trail easement specifying a legal set of criteria for access. (Refer to sample easement language in appendices.) Should the private land owner be willing to sell his or her property, or a portion, for a trail, municipalities should have a well-developed acquisition plan and policy.

### *c. Safety and Security on Trails*

Another key issue and concern that was raised at many of the public forums is that of safety and security on the linear park and trail greenways. Whereas it is unlikely that municipal governments will be able to provide security on the entire network of greenway trails, a plan for some level of security, be that by park police or through an organized coalition of trail users, should be explored to help ensure the success of the Conestoga Greenways. If issues related to safety on public trails are not adequately addressed, the success of the entire greenways program might be threatened.

### *d. Liability*

Liability is a central concern of landowners who worry that a trail user will wander onto their property, be-

come injured, and hold the landowner liable. Fortunately, liability has not been much of a problem on multi-use trails, primarily because recreational use statutes (RUS) are on the books in 49 states (Alaska and District of Columbia excluded). Under these statutes, no landowner is liable for recreational injuries resulting from mere carelessness. To recover damages, an injured person has to “prove willful and wanton misconduct on the part of the landowner.” The landowner, however, may not use the recreational use statute if he/she is charging a fee for access to the property.<sup>2</sup>

#### *e. Adequate Parking at Trail Access Points*

Based on comments made by local groups such as recreation providers and by LIMC committee members, it has generally been recognized that municipalities must provide adequate automobile parking at trail access points. Without safe and adequate room for automobile parking at trail access points, trail users will be forced to illegally park on private property or on road shoulders, thus becoming a nuisance to private land owners and a safety hazard to motorists. In addition, random automobile parking on sensitive areas or on private land threatens to undermine the very purpose of the Conestoga Greenways—that being protection of sensitive resources while providing an opportunity for the public to enjoy existing natural areas.

#### *f. Trash and Debris*

Similarly, there must be adequate trash and debris cleanups at trail access points and along segments of the trails themselves. This is part of a “good neighbor” approach which must be part of the Conestoga Greenways program so as to foster a positive public image and ultimately help in the promotion of future greenway segments.

#### *g. Access for Boaters*

The need for adequate access points to the waterways for boaters was a topic raised in public forums and also identified by the groups who were interviewed. Currently, there are few locations where canoeists and kayakers may launch or retrieve their boats on the Conestoga waterways. Yet, similar to the need for adequate automobile parking for trail users, random parking on streets or on private property by boaters poses the potential for safety and nuisance problems, and ultimately threatens the success of the Conestoga Greenways.

#### *h. Loss of Access to Waterways from Land Development*

Analogous to the loss of scenic open space from poorly sited residential development, the loss of potential access to the waterways as a result of new subdivision development poses a very similar threat. This occurs when new subdivision lots are laid out adjacent to the waterways without the provision for conservation trail access easements along a narrow portion of the lot(s). Municipalities should require the dedication of such easements as part of their subdivision process, thus ensuring future access prior to the sale of the individual lots.

#### *i. Safe Roads and Trails for Bicycling*

Linear park and trail greenways are very effective in providing linkages between existing parks, schools, neighborhoods, historic sites and other destinations. This kind of greenway relies on safe roads and trails for bicycling as a means by which users of the greenway can get from one point to another. Yet many of the roads that are safe for bicyclists are generally located in less developed or more rural portions of Lancaster County and away from many of the population centers that would be best served by the Conestoga Greenways. Municipalities must begin to provide for safe roads—with bicycle lanes—and trails for bicyclists and

<sup>2</sup> Ryan, Karen-Lee, ed. *Design and Management Manual for Multi-Use Trails*, Washington, D.C.: Rails-To-Trials Conservancy, 1991, p.30.

hikers to ensure the success of the plan for the Conestoga Greenways. This issue was raised by many of those attending the public meetings and by representatives of specific user groups during the interview

process. The principal concern is that if a safe means of access is not provided for users of the greenways, each destination will remain isolated, accessible only by car.





---

***SECTION C: GREENWAY  
DEVELOPMENT AND  
PROTECTION OPTIONS***

---



---

## 6. OPTIONS FOR GREENWAY DEVELOPMENT AND PROTECTION

---

This chapter contains more than 90 specific recommendations that should be used for greenways development and rivers conservation. Ambitious as it may seem, this compilation of recommendations represents just the beginning of what is possible. There are many important sites and projects that should be considered in future years. It is recommended that an annual work plan be prepared listing projects that can be realistically accomplished each year. Such a work plan should be updated on an annual basis. Administration, management, implementation, and maintenance of each project should be assigned to different municipal governments, state and federal agencies, private organizations, students, and citizen-led groups. Chapter 11 contains a detailed matrix of key organizations and individuals who should be involved in implementing the plan.

### *6.1 Assembling the Greenway*

Acquiring some form of control to important tracts of land is generally one of the most effective long term approaches for greenway development and conserving sensitive resources. The key point to remember is that greenway development is not about taking personal property. It is, however, about assuring some form of stewardship over the use of that land, either through a negotiated access easement similar to the way a utility easement crosses private property, or by acquiring

property through purchase or donation (see Appendix 2 for more information on greenway assembly options).

Whereas acquiring land or negotiating conservation and access easements on important pieces of property is often the preferred method for greenway development, acquisition may not be feasible on all segments or attainable over the short run. Perhaps grant funding such as short-term revolving loans described in Chapter 9 are not available or municipalities' current fiscal budgets can not provide the needed 50/50 match necessary to qualify for loan assistance. In other instances, a property owner may not be willing to sell his or her property or provide any form of easement. In other cases, the land which fronts the waterway is comprised of many smaller lots which were developed many years ago, and negotiating a consistent easement across all of the parcels is unlikely.

There are any number of issues that may inhibit the process of establishing a network of inter-connected greenways within the planning area. These obstacles are not uncommon and should be expected to occur. It is important to remember that many greenways can take a generation or longer before they become fully implemented. Given range and variety of detriments that can occur when attempting to secure important linkages in a greenway or river conservation plan, a variety of approaches, such as those described in the fol-

lowing sections, must be considered in achieving the goals of greenway acquisition and protection.

## *6.2 Implementation strategies for Resource Conservation Greenways and Rivers Conservation Planning*

### *a. Development standards and restrictions*

Development standards and restrictions can serve to protect sensitive environmental areas from the impacts of new development. Enacted and enforced by the local municipality, these standards and restrictions are described in greater detail in Appendix 1: Development Standards and Restrictions:

- ❶ open space dedication through subdivision process;
- ❷ cluster development ordinances;
- ❸ overlay zoning;
- ❹ transfer of development rights;
- ❺ criteria for locating new development on a site;
- ❻ site grading and clearing standards;
- ❼ standards for protecting native vegetation;
- ❽ limits on the amount of impervious surface on a site;
- ❾ stormwater best management practices (BMPs); and
- ❿ buffers.

### *b. Donate conservation easements*

The voluntary donation of conservation easements for a property, in whole or in part, to a local governmental

or non-profit entity is a critical mechanism for developing an interconnected system of resource conservation greenways. In order to promote the use of conservation easements, local municipalities (individually or in concert) should develop educational programs that explain the environmental and tax benefits of placing a conservation easement on private property. These educational programs should include literature which explains the necessary steps a property owner should follow in donating a conservation easement. Brochures might also include a directory of individuals and organizations to contact for assistance. In addition, literature should detail the economic benefits associated with conservation easements, such as increased market value. (See Appendix 2 parts A2.2 Conservation Easements, A2.3 Negotiated Limited Use Agreements and A2.4 Revocable Trail License Agreements for more information.)

### *c. Acquire public resource conservation greenways*

One of the most useful methods for establishing resource protection greenways and achieving rivers conservation planning is through acquisition of important and environmentally sensitive land. Acquisition should be accomplished with public funds by the local municipality, another public entity, the state or a federal agency. Acquisition ensures that significant and critical environmental areas will be protected in perpetuity, and ensures management and supervision of the property.

In order to develop a coordinated acquisition program, the organization responsible for implementing the plan should do the following:

- ❶ Develop criteria for selecting priority resource protection greenways for acquisition. This criteria might include such items as size of property, threat of development, willing seller, presence of wetlands, rare plant and animal communities, wildlife habitat, passive recreation, and aesthetic values;
- ❷ Use the criteria to prioritize parcels for acquisition in the region; and
- ❸ Circulate the acquisition plan to local municipalities and other governmental

agencies for review and adoption to ensure coordination of acquisition efforts in the region.

Municipalities may wish to consider establishing a multi-year bond issue or other long term financing mechanisms which could leverage state, county, and other municipal funds to acquire significant resource areas as they become available. (See Appendix 2 part A2.1 for more information on Acquisition.)

---

#### *Specific Implementation Recommendations for Public Acquisition*

- The Natural Lands Inventory in the Lancaster County Natural Heritage Project identified locations of rare and endangered species along portions of the right bank of the Conestoga River south of River Road in Manor Township. This plan includes these areas within resource conservation greenways.

#### *d. Establish a riparian forest program*

Municipalities should establish a riparian buffer program that identifies segments of waterways where the riparian forest cover no longer exists. From this assessment, a list of priority restoration sites should be developed and funding sources identified. (See Appendix 1 part A1.10 for more information on buffers.)

---

#### *Specific Implementation Recommendations for Riparian Buffers*

- Example sites include portions of the Little Conestoga Creek and the West Branch of the Little Conestoga Creek where the practice of agriculture and cattle grazing has denuded much of the riparian corridor.
- Public access should be limited along portions of the West Branch of the Little Conestoga Creek. Much of this area is in need of reforestation, stream bank stabilization, and wildlife habitat development; public intrusion may hinder these restorative programs.

- As part of the greenway and rivers conservation plan, municipalities should explore all grant funding opportunities that are available from DCNR such as Community Forestry Grants available through the Bureau of Forestry as a means to begin riparian buffer restoration.

#### *e. Stabilize eroding stream banks*

One of the most effective methods for improving water quality and the quality of the stream bed is to stabilize eroding stream banks and return them to natural vegetative cover.

---

#### *Site Specific Implementation Recommendations to Stabilize Eroding Stream Banks*

- Municipalities should actively solicit funding and technical expertise from the Pennsylvania DCNR. Specific technical guides include *A Streambank Stabilization and Management Guide for Pennsylvania Landowners* published by the Pennsylvania Department of Environmental Resources in 1986 and *The Watershed Restoration SourceBook* published by the Metropolitan Washington Council of Governments in 1992.
- Stream bank stabilization techniques include the following:
  - Bioengineering (also referred to as soil bioengineering) whereby live stakes, brush mattresses, branch packings, brush layering, vegetated geo-grids, and live cribwalls are used which allow live plant material to take root and grow into mature shrubs that stabilize stream banks.
  - Bank armoring which places stone filled gabions, rip rap, joint plantings, and root wads to form erosion control along the stream bank.
  - Brush mattresses are six foot willow switches wired together to form a mat which is then secured to the stream bank by stakes, fascines, poles, or rock fill. The



*Stream banks that are devoid of trees and shrubs are prone to erosion.*

mat establishes a complete cover for the bank and captures sediments while rebuilding the bank. The plants provide long term durability and erosion control. Brush mattresses allow for dense riparian growth and for the invasion of vegetation.

- Branch packings are alternating layers of live branches and soil used to fill a hole or washed out area in a streambank. Branches are used above and below the water. The branches above the water will root to provide permanent protection, while those below the water provide initial stability. This technique provides an immediate barrier and redirects the water away from the washed out area. It also provides immediate habitat cover.
- Vegetated geogrids use geotextile materials to support and fill sections of a streambank. Similar to brush layering, the material is used in between the layers of live branches and along the face of the slope. The geogrids immediately reinforce the newly constructed bank and protect the steep angles. Additionally, the geogrid produces rapid growth for habitat improvement.
- Live cribwalls are rectangular frameworks of logs, rocks, and woody cuttings. They are used to protect eroding streambanks, especially at outside bends of main channels where strong currents are present and where eroding may eventually form a split channel. The log framework provides

immediate protection from erosion, while the planting provides durability.

- ☑ Limit access to the general public in areas where stream bank stabilization projects are being developed. Any access to these sites should be limited for educational purposes only.
- ☑ The Chesapeake Bay Program conducts nutrient and sediment monitoring on the Conestoga River near its confluence with the Susquehanna River. In addition, the Alliance for the Chesapeake Bay conducted water quality sampling on the Little Conestoga Creek and the West Branch of the Little Conestoga Creek during the fall of 1997. The sampling provided data on sedimentation, water temperature, and macro invertebrates. Similar sampling will be done in the future to determine the effectiveness of various streambank stabilization processes. Additional monitoring locations should be established throughout the planning area to determine where sediment loading levels are greatest.

#### *f. Promote wild flower and native grass plantings*

The restoration of natural habitat and native plants in the Conestoga River system can be achieved in part by plantings of wild flowers and native grasses. Educational programs can enhance public awareness of native plants and provide sources and methods whereby local property owners can support the effort of improving the Conestoga ecosystem. Plantings enhance the beauty and scenic quality of the greenways while providing soil stabilization.

#### *Specific Implementation Recommendations*

##### *Promoting Wildflowers and Native Grass Plantings*

- ☑ There is a segment of property located north of Rockhill that is an excellent wildflower habitat with one of the best displays of columbines in the County. This site should

be part of a resource conservation greenway and scenic preservation greenway.

### *g. Promote wetland protection and wetland creation*

Wetlands have historically been an integral part of the natural cleansing system of the Conestoga waterways, and they provide important habitat area for wildlife and waterfowl. By restoring wetlands in and along the river corridor, the natural ecosystem of the Conestoga can be enhanced and local habitat areas improved.

---

#### *Specific Implementation Recommendations for wetland Protection and Creation*

- Designate the Radio Marsh north of Conestoga House as a site for wetlands restoration.
- Designate the wetland located between R.R. Donnelley and Long's Park (once part of the drainage system for the Dillerville Swamp) as a possible site for wetlands restoration.

### *h. Remove blockages to fish migration*

An important aspect of a healthy ecosystem for the Conestoga River is the ability of native fish to migrate and spawn up the river. Dams and other man-made impediments have in many instances made this difficult. In order to return the Conestoga ecosystem to a healthy balance, blockages to fish migration must be removed or circumnavigated.

---

#### *Specific Implementation Recommendations to Remove Blockages to Fish Migration*

- Modify the spillway at the Lancaster City Water Works to facilitate fish migration.
- Develop a resource conservation greenway extending along the West Branch of the Little Conestoga Creek from Route 999 to the Little Conestoga Creek for trout fishing.

### *i. Organize regular trash and debris clean-up events.*

Municipalities should work with local civic associations to promote and organize regular trash and debris clean-up events. Municipalities will need to provide assistance in hauling away and recycling the collected material. Community leaders could work with local business owners to develop an adopt-a-river/creek program aimed at cleaning up segments of the Conestoga Greenways on an ongoing basis.

### *j. Develop educational programs for students and others*

Work with local school systems to develop environmental education programs specific to techniques for rivers conservation and the Conestoga Greenways, providing information on the greenway concept and the features and resources that the greenway protects. By educating the public about the environment and its need for conservation, the resources conservation greenway program will be more supported by the public, and in turn more successful. See Chapter 10 for more details including techniques for promoting effective educational programs for the general public.

---

#### *Specific Implementation Recommendations to Foster Education for Students and Others*

- Develop educational programs about river conservation planning, greenways, recreation, and related issues for all levels of students.
- Create "living classrooms" programs within the planning area for stream studies and other activities.
- Develop educational programs related to water quality and similar issues at Lancaster County Central Park or other locations. Involve all residents.
- Educational programs should also explain, from a historical perspective, how industry, commerce and recreation were dependent



*Educational programs about river conservation planning, greenways, recreation, and related issues for all levels of students should be developed.*

upon the River. This information need not be exclusive to educational programs for students, but should also be made available for other residents and visitors.

- At the north end of the old quarry on County owned lands on the Sunnyside Peninsula is an emergent wetland surrounded by numerous butterfly bushes. This area offers many opportunities for nature studies which should complement the Lancaster County Parks Department's educational programs.
- There are wetlands adjacent to the Little Conestoga Creek in Lancaster and Manor Townships (south of Maple Grove Park & Greenway) and East Hempfield Township (in the Wheatland Hills Park). These two sites should be used for environmental education studies with local schools.
- A long-term goal for the Conestoga Greenways might be construction of an environmental education center. The center could house exhibits explaining what rivers conservation planning and greenway development mean, and the importance of preserving natural, cultural, scenic and recreational resources. The center could also function as the main office of the LIMC.

- Develop an educational slide program(s) for use in local schools that explains what a greenway is and the importance of river conservation.
- Place educational displays at key points along the Conestoga Greenways, focusing on themes such as historic bridges, the old amusement parks, mills, trolley lines, canal systems, environmental issues, early settlement by Europeans, and Native American culture. Students could assist in preparation of these displays and could act as interpreters at sites on specific days. These activities for students could relate to a variety of school subjects such as science, history, writing, art, industrial arts, and photography.
- Work with school clubs and the Boys Club and Girls Club of Lancaster to involve them in educational programs related to the Conestoga Greenways.

#### *k. Develop educational programs for home owners*

Pesticides from home lawns have been shown to be a major pollutant in water quality studies nationwide. Efforts to reduce fertilizer use by homeowners will be necessary in order to clean up and improve the quality of the Conestoga River water. In order to achieve this, local municipalities can promote educational programs specific to residential lawn fertilizer management, such as brochures or demonstration projects. Existing literature from sources such as the U.S. Fish and Wildlife Service that explain what home owners can do to manage fertilizer application can be utilized. (See Chapter 10, part 10.2 for more information.)

---

#### *Specific Implementation Recommendations for the Homeowner*

- Develop an educational program that provides examples of which plants home owners should use to avoid introduction of invasive or non-native plant species.

- ✓ Prepare a brochure that lists which plants are most beneficial for attracting wildlife.
- ✓ Prepare educational materials that explain why home owners should not mow their lawns down to the edge of the water. Literature should provide examples of what the typical home owner can do to stabilize eroding banks and minimize sediment runoff from their property.
- ✓ Review local ordinances that, as presently written, may be detrimental to promoting proper stream bank stabilization. These municipal ordinances should be amended to require riparian buffers. In addition, local weed ordinances that require property owners to mow stream banks should be amended.
- ✓ Educate property owners why it's not a good idea to dump grass clippings into the River. Material could explain proper techniques for composting of yard waste.

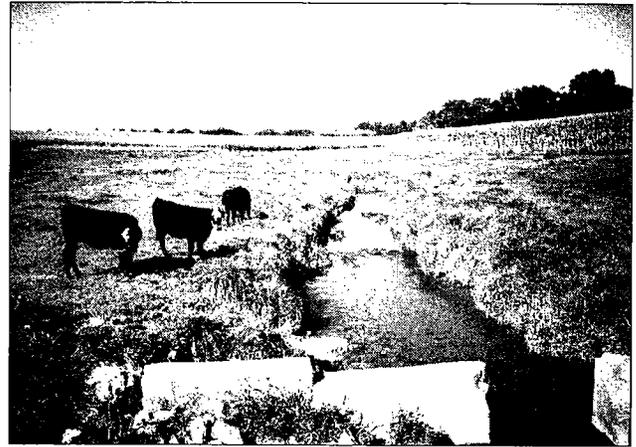
### *1. Develop educational programs for the agricultural community*

The Lancaster County Conservation District, in conjunction with the Chesapeake Bay Foundation, the Lancaster Farmland Trust, the Lancaster County Agricultural Preserve Board, and local schools, should actively work with land owners to promote stream bank fencing to keep cattle out of the waterways as a primary method for improving water quality. Where cattle must cross the waterways, concrete crossing devices should be installed to minimize sediment displacement. (See Chapter 10, part 10.4 for more information.)

---

#### *Specific Implementation Recommendations for the Agricultural Community*

- ✓ Model streambank fencing projects and removal of obstructions that prevent the upstream migration of fish projects after a project on the Donegal Creek. Other model



*Cattle grazing in and crossing waterways significantly impacts water quality.*

examples include a project on Lititz Run by the Chesapeake Bay Foundation, and the Pequea-Mill Creek watershed project.

- ✓ Promote techniques such as soil bioengineering for stabilizing eroding stream banks on land used for agriculture.

### *m. Coordinate the Conestoga Greenways efforts with other regional authorities and organizations*

Municipal officials should coordinate the effort to establish the Conestoga Greenways with river and watershed management plans being conducted by other agencies and organizations. Other organizations such as the Lancaster County Conservation District could coordinate their education and outreach programs to include information on stream bank fencing, riparian reforestation, and overall promotion of rivers conservation and the Conestoga Greenways.

## *6.2 Implementation Strategies for Scenic Preservation Greenways*

Lancaster County possesses many scenic and picturesque landscapes. These pastoral settings include images of gently rolling farm land, meadows framed by mature trees, historic structures such as covered

bridges and stone buildings, and numerous scenes of the Conestoga waterways. These rural scenic landscapes are in part responsible for attracting visitors and tourism dollars to this region of Pennsylvania. In addition, rural scenic open space contributes to the quality of life for residents. For these reasons, municipal governments should take an active role in protecting these important resources through acquisition and designation as scenic preservation greenways.

### *a. Establish criteria for selecting priority scenic greenways for acquisition*

For scenic greenways, the most important aspect of a parcel is the effect that it has on the overall scenic quality of the county, municipality, segment of the Conestoga, or neighborhood.

Prioritizing parcels for designation as a scenic preservation greenway should be based on the following criteria:

- ❶ Size of viewshed affected;
- ❷ Connectivity—whether the scenic area connects to other priority greenways;
- ❸ Proximity to existing preserved open space—whether the scenic area is adjacent to already preserved areas;
- ❹ Proximity to proposed development—when the area is under imminent development pressure; and
- ❺ Serves more than one greenway.

### *Site Specific Implementation Recommendations for Acquiring Scenic Greenways*

- ☑ Protecting and interpreting cultural resources is equally as important as protecting ecological features of resource protection greenways. Certain sites should be recommended for inclusion in the National Register, an honorific official list of districts, buildings, sites, structures, and objects significant in American History,

maintained by the National Park Service, Department of Interior. Historic railroads and trolley lines, lumber piers, grist mills, saw mills, old amusement parks (Rocky Springs, Peoples, or Maple Grove), covered bridges, canal/locks, lime kilns, Native American sites, President Buchanan's grave, and early colonial settlement sites are some examples of those that should be considered for nomination. The Heritage Center, Lancaster County Historical Society, Historic Preservation Trust, and Rockford Foundation could provide assistance in kiosk exhibits by assuring their authenticity. In addition, an internship program should be established with local colleges and universities whereby students would assist in researching information for the exhibits. An urban historian at Franklin and Marshall College specializes in park history and would be an important resource to include in the effort.

- ☑ In the Rock Hill area, the bridge, hotel, and remnants of the former dam are important historic and scenic components of the region. These locations should be included in the plan for the Conestoga Greenways as both scenic preservation and linear park and trail greenways.
- ☑ Remnants of the historic iron industry in the Safe Harbor area should be included as focal points in the scenic preservation greenways. Where appropriate and feasible, some of these locations should be included as points of interest in a linear park and trail greenway.
- ☑ Many of the old trolley routes should be highlighted in Conestoga Greenways promotional literature. At selected locations, these old trolley lines could be included as scenic preservation greenway features or as portions of linear park and trail greenways.
- ☑ A long-term goal for the Conestoga Greenways plan should be to designate the



*This old iron bridge at Rock Hill is an important feature that should be included in a Scenic Preservation Greenway.*

entire portion of the River from Rock Hill to its confluence with the Susquehanna River as a scenic preservation greenway.

*b. Include historically significant archaeological sites as part of the scenic greenways*

- Sites containing historically significant archaeological remains should be included as elements within scenic preservation greenways, with the understanding that their specific locations should not always be made known to the public, as archaeological artifacts can be vulnerable to disturbance if left unsupervised.

### *6.3 Implementation Strategies for Linear Park and Trail Greenways*

*a. Dedicate easements from residential, commercial, industrial, and governmental owners*

Where possible, voluntary access easements across commercial, industrial, residential, and governmental property should be sought from existing property owners. Priority locations to begin seeking easements might be sections along the River with relatively few property owners (large parcels of land with river frontage) and totaling approximately 2 miles or greater in length. Commercial and industrial property owners may be more willing to create easements on their land than will residential property owners. (See Appendix 2, parts 2.2, 2.3 and 2.4 for additional information on easements.)

---

*Specific Implementation Recommendations for Acquiring Easements*

- There are properties which front on the Conestoga River extending from Lancaster City to its junction with the Little Conestoga Creek where the length of each individual property is 200' or greater. These sites could provide important segments in the Conestoga Greenways network. Downstream from these sites is Safe Harbor Park and other properties owned by public utility companies who have already expressed an interest in the Conestoga Greenways.
- There are relatively few properties located along the segment of the Conestoga River between Route 30 and Route 462. These properties include the Conestoga Pines site and the former CBS site; the next major parcel is County land located on the Sunnyside Peninsula.

- It would be advantageous to seek properties adjacent to sites where conservation and/or trail easements already exist.

### *b. Alternative Routes*

When one or more pieces of a greenway trail are separated by parcels of land—which are for a variety of reasons discussed above not available for access within the foreseeable future—alternative routes should be considered as a viable approach to achieve greenway goals. Such routes may be necessary to circumvent an entire neighborhood when easements or purchase agreements can not be accomplished. For example, a pedestrian or bicycle trail which extends along the banks of the Conestoga River on publicly owned or private land with access easements in place might have to leave the edge of the waterway, following a route along a public road, thus bypassing one or more parcels of land where access could not be obtained.

### *c. Use existing public open space to achieve important greenway trail linkages*

Many areas of existing publicly owned land such as schools, municipal government centers, parks, athletic fields, and recreation centers—whether state, county, or locally owned—offer opportunities to create and to extend public access to recreation trails. These locations are identified on the greenway maps and form the basis of the greenways trail system. The plan for the Conestoga Greenways indicates:

- ❶ Where trail linkages can be achieved immediately on publicly owned lands.
- ❷ Where trail linkages can be achieved on existing easements, land held by private land trusts, or land owned by other similar organizations.
- ❸ Other linkages—in concept—which must be identified on a parcel-by-parcel basis.
- ❹ Examples of key linkage points include Maple Grove Park or the Lancaster County Central Park and Lancaster County Buchmiller Park.



*Future designs for bridges such as this one at Columbia Avenue, should accommodate a pedestrian walkway under the bridge adjacent to the waterway.*

### *Specific Implementation Recommendations for Using Public Open Space for Trail Linkages*

- Restore the foot bridge at Maple Grove Park to provide access to the north along the Little Conestoga Creek and across Columbia Avenue at the traffic signals.
- At present, the Columbia Avenue bridge across the Little Conestoga Creek is not ready for replacement. Meanwhile, it is not feasible to provide a pedestrian walkway under the bridge. The design of a new bridge should include a pedestrian underpass.

### *d. Provide for dedicated open space in new residential subdivisions or developments*

Trails are an important resource for Lancaster County, for both recreation and non-motorized transportation. When land is dedicated under the subdivision process, municipal elected officials and planning commissions should refer to this Conestoga Greenways plan and the Regional Park and Open Space Plan. This will enable municipalities to prioritize open space dedication within a subdivision, and to negotiate trail easements wherever possible to connect with existing and planned trails in the greenways system.

As with parkland dedication, when land is being designated as open space under a cluster provision, the mu-

municipal elected officials and planning commissions should refer to this Conestoga Greenways plan and the *Regional Park and Open Space Plan*. Open space should be designated with greenways linkages in mind, and trails easements should be negotiated at the time of subdivision. (See Appendix 1, part A1.9 for more information on dedicated open space.)

*e. Establish bicycle routes to link neighborhoods to the Conestoga Greenways*

Bicycle routes provide important linkages between existing neighborhoods and linear park and trail greenways. Municipalities should develop bicycle routes that are separated from existing roadways in urbanized or densely developed areas where existing roads are either too narrow to accommodate a bicycle lane, or traffic volumes are at such a level that they create unsafe conditions for bicycle riding. (See Appendix 3, part A3.1 for bicycle lane standards.)

It is recommended that municipalities install adequate signage and pavement striping on designated bicycle routes. Municipalities should place bike racks in safe locations. (See Appendix 3, part A3.4 for more information on signage standards.)

---

*Specific Implementation Recommendations for Bicycle Routes*

- Establish a bikeway/trail corridor on the portion of an abandoned railroad that extends from Engleside to Eckman Road.
- Manheim Township School District has bikeways/walkways on its campus in cooperation with the Manheim Township Parks and Recreation Department. There are plans to connect Reidenbaugh Elementary School with nearby residential developments with greenway trails so that students can walk or bicycle to school. The Conestoga Greenways should incorporate these linkages with the plan for linear parks and trails greenways.



*In selected areas, bicycle routes can be used as a scenic greenway and as a linear trail greenway.*

*f. Provide trails for off-road bicycle riding*

Most of the linear park and trail greenways will be designed to accommodate off-road bicycles (also known as mountain bikes). Yet in some select instances, designated bicycle-only trails could be established to provide riders with challenging and exciting terrain. At present, there has been interest expressed in creating such a trail by the Lancaster City Housing Authority on property owned by the City.

---

*Specific Implementation Recommendations for Creating Off-Road Bicycle Trails*

- There should be bicycle paths along the Conestoga River in the Sunnyside Peninsula area.
- Coordinate trail design and maintenance to be consistent with the National Off Road Bicycle Association (NORBA).

*g. Establish guidelines for signage throughout the corridor*

Signs serve important functions in trail design. Signs, divided into regulatory, warning, and guidance categories, give direction and offer needed information along trails.

Regulatory signs include stop, yield, right-of-way, speed limit, and exclusion signs.

Warning signs point out hazardous conditions on or near the trail and caution users to reduce speed or dismount a bicycle, as well as indicate changes in grade, upcoming traffic signals and changes in surface conditions.

Guidance signs provide trailside information. Directional signs, usually with arrows, identify a change in direction or point to support facilities or points of interest. Informational signs typically display distance markers, locations or events, or areas of ecological significance, as well as indicate “you are here” within a larger area.

Signs used to aid or instruct users along a trail can help define the trail’s image. Using the Conestoga Greenways logo, a sense of continuity and consistency is created along the corridor’s length. Additionally, the logo highlights the uniqueness of the trail and the landscape. (See Appendix 3, part A3.4 for more information on signage.)

#### *h. Provide automobile parking at access points*

Safe, clearly marked parking areas are essential to ensure the success of the Conestoga Greenways. In addition, clearly designated parking locations for users of linear park and trail greenways can help to foster good relations with owners of adjacent private property. As such, the Conestoga Greenways logo sign should be prominently displayed at all access points for linear park and trail greenways with clearly designated parking areas.

#### *Specific Implementation Recommendations for Automobile Parking at Greenway Trail Heads*

- Designate parking areas along Conestoga Drive or on land owned by Lancaster County located to the north.
- Items such as stone barriers or gates could be used to prevent random parking or access of motorized vehicles onto the trails.
- Locate informational kiosks that describe the Conestoga Greenways, the location of the



*Guidance signs are important components of a greenways network.*

trails, general rules for users, and where to call for additional information.

- Place trash containers at all parking locations. Municipal governments should be responsible for emptying these containers.

#### *i. Provide adequate locations for launching and retrieving canoes or kayaks*

Municipalities should provide boat launching docks or similar structures at activity areas and access points to the water. These boat launching and access points should be located at fairly regular sites along the Conestoga River and clearly marked with the Conestoga Greenways sign. Bridge crossings and public land that is readily accessible from a road or parking area are good locations for launching or retrieving boats. Snubbing posts should be provided at the appropriate locations for securing canoes and kayaks in order to prevent them from floating down-stream.

Signs that identify boat portage routes or points of interest, such as historic sites or environmental amenities should be placed at locations visible to boaters from the water. Portage paths should be clearly marked and where appropriate, wooden or rock steps installed.



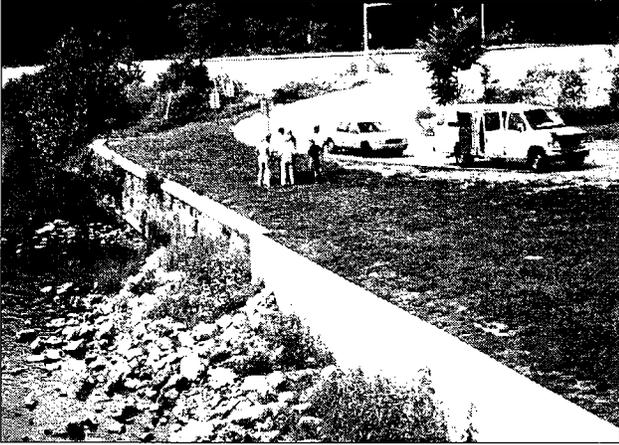
*Existing signage along the Conestoga River.*

#### *Specific Implementation Recommendations for Launching and Retrieving Canoes and Kayaks*

- Potential locations for boat access areas include the following:
  1. Perelman Park at Binkley's Mill, north of Route 23 in Manheim Township;
  2. Right bank of the River near Eden Road;
  3. Conestoga Pines Park;
  4. Old North Sewage Treatment Plant site immediately south of Route 23 on the right bank of the River;
  5. Right bank of the River, along Conestoga Drive North, north of East King Street;
  6. Right bank of the River around Sunnyside Peninsula (3 access points);

7. Lancaster County Central Park, east of Strawberry Street bridge;
8. West of bridge at Engleside;
9. D.F. Buchmiller County Park;
10. Windolph Landing Park
11. South of Creek Drive on Millersville University property;
12. West of Slackwater Road bridge south of Millersville;
13. On Pennsylvania Fish and Boat Commission property at Rock Hill; and
14. Left bank of River in Safe Harbor area.

- Provide improved canoe portage areas along the waterways where obstructions prevent safe passage. For example, the Lancaster City Water Treatment Plant has a spill-way which spans the entire width of the Conestoga River. A canoe/kayak portage could be accomplished by relocating the fence on the east side of the Conestoga River and clearly marking the portage access points. (Note: This location has been identified as a blockage to fish migration that should be either removed or modified).
- The portion of the Conestoga River in the Circle M Ranch area contains camp sites and is attractive for boating. This is an example of a private site. There are many other sites along the waterways that are excellent for retrieving canoes/kayaks.
- Pennsylvania Power and Light Company's (PP&L) Lancaster Service Center property located adjacent to the Little Conestoga Creek just east of Manheim Pike already includes a park and fishing areas. It may be possible to have canoe/kayak access at this location on the property owned by PP&L.



*Municipalities should promote safe canoe launching sites in addition to routes for portage.*

- The Conestoga Valley Association's canoe guide to the Conestoga River should be expanded to include information about the Conestoga Greenways and the efforts towards rivers conservation. Included should be information describing the distance in terms of river miles that separates access points.
- An excursion boat should be considered for the River, reminiscent of the "Lady Gay" which had made excursions on the River in the Bridgeport to Rocky Springs area.
- Although East Lampeter Township does own a few easements where sewers cross the Conestoga River, most of the River frontage is privately owned within the Township. As an alternative, the River crossing at the East of Eden Pub could be considered as an access point for boaters.

*j. Provide restroom facilities along portions of the greenway trail*

Where possible, Conestoga Greenways should share restroom facilities with those already existing at public parks. The locations of public facilities should be clearly identified on all informational kiosks, trail maps, and signs noting their locations placed on trails.

*k. Encourage organizations, students and others to maintain greenway trails*

Maintenance for trails includes litter collection, trail blazing and trail maintenance such as instituting erosion control and removing trail obstructions. Municipal governments should take an active role in conducting routine trail maintenance.

*Site Specific Implementation Recommendations for Trail Maintenance*

- A major project of the Lancaster Hiking Club is the Conestoga Trail System. The Club performs maintenance on the Trail on a strictly voluntary basis. The Club could help maintain linear park and trail greenways recommended in the Conestoga Greenways plan. In addition, the Club could assist in distributing literature that provides tips for trail maintenance.

*l. Organize security for public trails*

To ensure the success of linear park and trail greenways, municipalities should assume a leadership role organizing security through a volunteer citizen patrol.

A patrol's primary function could be to provide assistance and information, and to perform positive trail functions including distributing maps and brochures, offering bicycle safety checks, and other service-oriented activities.

The voluntary citizen patrol could be trained by representatives from local police and fire departments and emergency aid service.

A "Friends of the Trail" group could be formed and would function as an important advocate for the trail, defend it when necessary and promote it to the community.

Friends groups could provide other services including physical labor (i.e. litter clean-up, sweeping, painting, etc.), "eyes and ears" surveillance and reporting of problems, dangers, or inappropriate behavior, fundraising, production of maps or newsletters, and promo-

tion of the trail as a tourist destination throughout the state and region.

Security should only be increased on an as-needed basis.

---

#### *Specific Implementation Recommendations for Providing Security on Trails*

- At present, there is limited ability to provide a police presence at facilities and on trails at existing park locations. In addition, it is unlikely that municipal police departments will supervise greenway trails, particularly outside of their municipal boundaries. Currently, Lancaster County parks have park rangers.
- Public-private partnerships could be utilized for security and other aspects of the Conestoga Greenway. Where applicable, a Neighborhood Crime Watch could be expanded to include portions of the Conestoga Greenways.

#### *m. Develop educational programs about the Conestoga Greenways*

It is essential that owners of private property understand that there will be no linear park and trail greenways (publicly accessible greenways) on their property without a negotiated agreement such as a Conservation Trail Easement. (See Chapter 10, part 10.1 for more information on educational programs.)

---

#### *Specific Implementation Recommendations for Educational Programs*

- Municipalities, with assistance from the Lancaster Inter Municipal Committee's Public Awareness Committee, should take the lead in developing public relations programs to promote the Conestoga Greenways, placing emphasis on the fact that public accessible greenways on privately owned land exist only on a voluntary basis; there will be no taking of private property.

- Develop promotional literature explaining the tax benefits of placing a conservation trail easement on your property. Easement donations qualify for favorable income tax and estate tax treatment if deemed exclusively for conservation purposes. Federal income tax benefits include deducting 30% with appreciation or 50% without appreciation of the value of the property donated. Certain donations may perhaps even eliminate future estate taxes.
- Prepare promotional literature that lists parking areas, designated access points, canoe/kayak put-in and take-out locations, public facilities, bike routes, linkages to historic sites, linkages to public parks and schools, locations of scenic preservation and resource conservation greenways, etc.
- Under the leadership of the Public Awareness Committee, continue to print and distribute the *Greenways for Lancaster* brochure.
- Expand the Public Awareness Committee to include an environmental educator who will help coordinate school programs with greenways development. The committee should also include a photographer, copywriter, advertising specialist, and a local journalist.
- Coordinate with the local canoe club to promote education about greenways and river conservation in the Conestoga.
- The LIMC should prepare a short public relations video and slide presentation on Greenway and Rivers Conservation for the Conestoga.
- There should be a toll-free number (1-888-GREENWAY) that provides information on the Conestoga Greenways. Trail users could also use this number to report violations such as illegal dumping, the

use of motorized vehicles, or other violations.

*n. Promote community events which feature the Conestoga Greenways*

*Specific Implementation Recommendations for Greenways Related Community Events*

- Promote recreational events such as walk-a-thons, fun runs, or triathlons (canoe or swim, run, bike) that could take place on linear park and trail greenways. Events such as a triathlon might include running from Penn Square to the Conestoga River, canoeing downstream to Rock Hill, and then bicycling back to Penn Square. The Canoe Club, Bicycle Club, and running club should be involved in such an effort. Funding might be solicited from the local business community.
- Organize seasonal canoe tours of the Conestoga River.
- Representative P. Michael Sturla advocates organizing a seasonal open-air concert and theater series that might use each of the public parks on the Conestoga River for each event. At large parks such as Lancaster County Central Park, a central concession area could be developed to accommodate vendors who might provide food, beverages, and other support services to the public.
- Organize guided tours by local historians or museums to explain the history of the River, its role in local commerce, railroads, etc.

*o. Select priority public access greenway areas for acquisition*

Prior to selecting any areas for linear park and trail greenways, municipalities must recognize that public access greenways may not be possible in areas where there is strong opposition to any public access or easements on private property.

Generally, acquisition should be limited to:

- ❶ those properties which are key to the trail;
- ❷ properties which serve a dual purpose as a trail and recreational area; and/or
- ❸ those properties which are not available for an access easement.

The following steps must be taken to develop a trail acquisition plan:

- i. Develop priority ranking for key segments of trails and trail linkages;
- ii. Add key trails and trail linkages to each municipality's master plan for consideration for open space acquisition;
- iii. Encourage each municipality to develop a five-year trails acquisition plan;
- iv. Investigate funding options for the municipalities to acquire easements or key parcels in fee simple. The LIMC could provide assistance as a facilitator/coordinator. LIMC ownership of easements could be a long-term objective for such an easement acquisition program.

*Specific Implementation Recommendations for Public Access*

Potential locations for future linear park and trail greenways include the following:

Please see Chapter 7: Recommended Locations for a more detailed listing of locations.

- On the peninsula which is located west of Lancaster County Central Park and east of Engleside.
- At the CBS property and the City of Lancaster Water Filtration Plant and Conestoga Pines Park.

- The old American Paper Mill property north of Route 23 would make an excellent environmental center with access to the Conestoga Greenways. There is ample room for groups to gather, safely park cars, launch canoes and kayaks, or enter onto hiking trails.
- Establish a walking trail linking downtown Lancaster with Park City without forcing pedestrians to walk far on Harrisburg Pike.
- Establish a greenway network in the Sunnyside Peninsula area extending from the Williamson Park area of Lancaster County Central Park to the Conestoga View property. This area has the potential for a publicly accessible trail on either side of the Conestoga River. (See Chapter 8 for detailed discussion of the Prototype Greenway)
- There are lime kilns located on the east side of the Little Conestoga Creek near the junction of the Conestoga River and the Little Conestoga Creek. The potential for historic interpretation makes this site important for public access and scenic preservation.
- The abandoned railroad near Buchmiller Park would make a good rail-trail conversion for the Conestoga Greenway. The history of this railroad (and others) in the region could be interpreted with selected information kiosks for trail users.
- The end of Creek Drive on the grounds of the Millersville University campus is currently used for access to the Conestoga River. Boaters could "put-in" at Lancaster County Central Park and "take-out" at the Creek Drive location. This segment of the River would also make an excellent linear park and trail greenway. For further information on the Millersville Relief Route, although inactive at this time, refer to the findings of the environmental study for the Route prepared for the Lancaster County Planning Commission by a private consultant.
- The Millersville University new campus comprehensive plan should include access points to the Conestoga River for boaters as well as dedicating portions of University property for linear park and trail greenways.
- East Hempfield Township is developing a park on the west side of the Little Conestoga Creek north of Boas Market. The Township should incorporate portions of this park as a linear park and trail greenway.
- The Youth for Christ organization currently has trails on its property where it fronts the Conestoga River. Efforts should be taken to include these trails as part of the Conestoga Greenways.
- The Conestoga Valley Association has maps of their efforts in developing a trail through Lancaster County Central Park as well as on the opposite side of the Conestoga River. These preliminary plans should be incorporated into the overall plan for the Conestoga Greenways.
- The Lancaster Water/Sewer Authority (Richard Nissley, Director) manages a number of municipal or authority properties located along the Conestoga River that should be included in the plan for the Conestoga Greenways. These sites include: Conestoga Pines Park; the Lancaster Water Filtration Plant, the west side of the River near the new alignment of Route 23; a strip of land located on the west side of the River and extending from the former wastewater treatment plant south to Orange Street; portions of Groff Development located in the Holly Pointe area; the Sunnyside Peninsula which includes properties owned by Lancaster City and Lancaster County; selected isolated sites located where South Duke Street crosses the River; Lancaster County Central Park; and land at the new wastewater treatment plant. Although some

of these properties would require extensive site work to make them accessible to the public, all are publicly owned and would be of benefit to the plan for the Conestoga Greenways.

- The Suburban Lancaster Sewer Authority (SLSA) owns property at the Lyndon Pumping Station with approximately 200 feet of river frontage. Although the pumping station is surrounded by a fence, the river frontage is not. This site might make a good location for a linear park and trail greenway, or could be used as an access point for boaters. Municipal governments should explore the possibility of placing greenway access points at SLSA pumping stations located through the Conestoga Greenways. Key issues to be addressed are liability and vandalism.
- Pennsylvania Power and Light (PP&L) in conjunction with Safe Harbor Water & Power Company owns consecutive pieces of land located on both sides of the Conestoga River from its confluence with the Susquehanna River upstream to Rock Hill. PP&L also owns both sides of the River to the Little Conestoga Creek along with portions of the south side of the Little Conestoga Creek to Rock Hill. PP&L representative Mark Arbogast cited the potential for a linear park and trail greenway on PP&L property that could extend from the Susquehanna River to River Road. (See large-scale maps which indicate trails for linear parks and greenways.)
- PP&L leases nearly 100 acres to the Lancaster Boys and Girls Club at Camp Hogan, located between the Conestoga River and the Little Conestoga Creek at their confluence. This property would make an excellent segment of a linear park and trail greenway given its size, location, and present use. PP&L also leases farmland on a peninsula between the Conestoga River and Conestoga Boulevard that might be useful as either a linear parks and trails greenway or as a scenic preservation greenway.
- PP&L owns the rights-of-way for transmission lines on some privately owned land. The utility company is generally receptive to working with the Conestoga Greenways program to establish greenways on PP&L property, but wishes to have a clear sense of public sentiment on the Conestoga Greenways.
- The Fish and Boat Commission property at Rock Hill could be incorporated into the Conestoga Greenways for linear park and trail or resource conservation greenways.
- The old barge towpath that runs from Engleside to Safe Harbor on the south shore of the Conestoga River would make an excellent linear parks and trails greenway. This segment could also be designated as a scenic preservation greenway with interpretive information explaining the history of the towpath located at strategically placed kiosks.
- Establish a greenway on the old Quarryville Railroad corridor in Pequea Township. This abandoned railroad could link with a linear park and trail greenway along the Conestoga River in Pequea Township. Portions of this segment are also suitable for a resource conservation greenway to support wildlife.
- Convert the abandoned rail line starting at Route 222 and Route 324 which travels along the east side of the River past Brenneman Road into a linear parks and trails greenway. Informational kiosks explaining the history of the rail line should be placed at strategic locations.
- Establish a linear parks and trails greenway along Rock Ford Road (adjacent to the Conestoga River) south of Duke Street and Williams Road at Lancaster County Central Park. It is possible that the Municipality could experiment with closing Rock Ford Road to automobile traffic at selected times.

- Manheim Township is considering 12 possible sites for non-motorized paths throughout the Township. Municipal government should coordinate these trail plans with the overall plan for the Conestoga Greenways. (See large-scale maps which indicate trail for linear park and greenways.)
- Two important public waterways located in the Hempfield area are Swarr Run and Brubaker Run. East Hempfield Township's plans for a park along Brubaker Run should be coordinated with the plan for the Conestoga Greenways.

*p. Develop additional funding mechanisms for the Conestoga Greenways and rivers conservation plan*

Please refer to Chapter 9 for detailed recommendations on developing funding options for implementation.

*q. Present stewardship awards to recognize leadership in the Conestoga Greenways program*

The annual stewardship award(s) fosters goodwill within the community by recognizing the work of an organization, a business, or an individual for their efforts in natural resource preservation and recreation development specific to the Conestoga Greenways. The Conestoga Greenways - Rivers Conservation Stewardship Program should be presented by municipal officials, the Secretary of the Department of Conservation and Natural Resources, or the Governor of Pennsylvania. Awards could be made at the annual LMC dinner meeting each spring.

Future efforts might include a Conestoga Greenways and rivers conservation scholarship program whereby high school students are recognized for their work and dedication to preserving or restoring natural resources. The scholarship award could be used towards a college education. Such a program should be coordinated with municipal governments and local schools.



---

## 7. RECOMMENDED LOCATIONS

---

The recommended greenway locations along or near the Conestoga River, the Little Conestoga Creek, and the West Branch of the Little Conestoga Creek are illustrated in a series of eight maps at the end of this document. The “Background” section beginning below explains the kinds of greenways that are shown on the maps. The “Description of Greenway Locations” section provides a narrative description of the greenways to be used in conjunction with the maps.

### *7.1 Background*

The maps show three kinds of recommended greenways: resource conservation greenways, scenic preservation greenways, and linear park and trail greenways. Linear park and trail greenways, which are the only ones necessarily open for public use, are divided into pedestrian greenways and multi-use greenways. These kinds of greenways, and the ways they are depicted on the maps, are explained below.

#### *a. Resource Conservation Greenways*

Resource conservation greenways are intended to protect natural areas and encourage proper environmental practices. They are not accessible to the public unless they coincide with linear park and trail greenways. This plan recommends that resource conservation greenways extend the entire length of all 3 major waterways in the study area. They are designated on the plan maps by lines of alternating dashes and “G”s along each side of the waterways. Boat access sites are

recommended within the resource conservation greenways at a number of locations along the Conestoga River; these locations are indicated on the maps by a cross symbol.

#### *b. Scenic Preservation Greenways*

Scenic preservation greenways are intended to protect landscapes, natural features, and historic sites that are important for their visual beauty. They are designated on the plan maps by (1) arrows that indicate special scenic qualities within or from the greenways or (2) “Scenic Area” notations that indicate broad areas with scenic qualities.

#### *c. Linear Park and Trail Greenways*

Linear park and trail greenways are intended to provide for recreational activities such as walking, bicycling, and horseback riding. They are not recommended for development on private land without the property owner’s permission. However, some linear park and trail greenways are shown on undeveloped private land within urban growth boundaries because it is anticipated that the land may be developed at some time in the foreseeable future; in that case, the greenways should be developed when the land is developed, and not sooner, unless the landowner agrees voluntarily to do so.

For the purposes of this Plan, linear park and trail greenways are divided into two categories: (1) pedestrian greenways and (2) multi-use greenways.

Pedestrian greenways are intended for walking, hiking, jogging, and other foot traffic only. Because they are generally the easiest to develop, they are often closest to the waterways. They are shown on private property within the urban growth boundaries in a number of locations, indicating that pedestrian greenways should be developed in those locations if and when the land is developed.

Multi-use greenways are intended for foot traffic and bicycling and—where appropriate—other recreational uses. They are shown along or near the entire length of all 3 major waterways in the study area.

Activities such as jogging and horseback riding may be encouraged on some sections of the multi-use greenways, where there are appropriate conditions, such as a wide shoulder on a lightly traveled road; however, they may be discouraged on other sections, where conditions such as winding roads or heavy traffic make them unsafe or otherwise undesirable for activities such as jogging.

Many multi-use greenways are located along existing roads. This will allow greenways to be designated relatively rapidly and inexpensively. However, some of the multi-use greenways may be more fully developed at a later date to provide, for example, bicycle paths, pedestrian trails, and/or equestrian trails parallel to, rather than on, the existing roads. The location of multi-use greenways along roads means that by necessity they often depart quite a distance from the waterways. If they are developed more fully at a later date, some of the components, such as pedestrian trails, may be able to be relocated closer to the waterways.

There is currently an informal bicycle route around much of the Lancaster City area. It passes through Manheim Township, Lancaster City, Lancaster Township, Manor Township, East Hempfield Township, West Hempfield Township, and East Petersburg Borough. The degree to which it is officially designated and well signed varies from one municipality to another. The text describing greenway locations indicates where the multi-use greenways intersect or coincide with the bicycle route.

Each of the pedestrian or multi-use greenways is shown as either (1) existing, (2) proposed for public properties, or (3) proposed for private properties.

The existing ones are located on roads, public lands, or other locations where the proposed greenway use is already possible. They do not, however, necessarily include signage or other features/amenities at the present time; where necessary, these should be added or improved in the future.

The greenways proposed for public properties are on land that is owned by public entities and where greenway development could occur in the relatively near future.

The greenways proposed for private properties are generally anticipated for longer range development. They will be developed only (1) when the property owners voluntarily agree for them to be developed or (2) when land in urban growth areas is proposed for development and greenways are required to be included as part of that development.

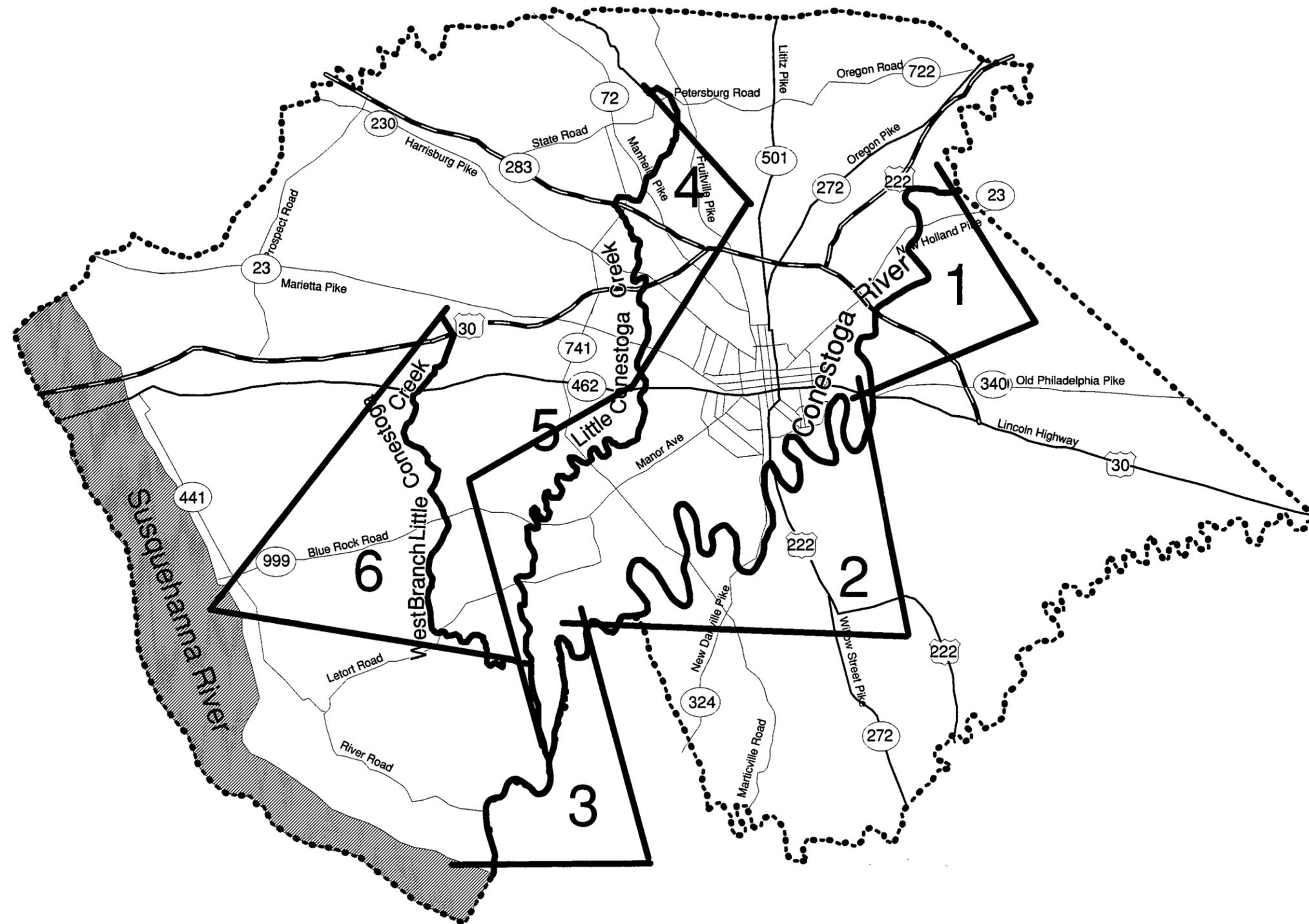
The map legends show the patterns used to distinguish between pedestrian and multi-use greenways and among greenways which are existing, proposed for public properties, and proposed for private properties. A map symbol consisting of a black square with a white "H" inside is used to indicate the locations of historic sites along the greenways.

## *7.2 Description of Greenway Locations*

The remainder of this chapter describes the locations of the proposed greenways. The study area waterways are divided into six sections (as indicated on the map on page 73); three sections are portions of the Conestoga River, two sections are portions of the Little Conestoga Creek, and one section is the entire West Branch of the Little Conestoga Creek.

For each waterway section, there are separate descriptions of the resource conservation greenways, the scenic preservation greenways, and the linear park and trail greenways; the linear park and trail greenway descriptions are further divided into pedestrian greenways and multi-use greenways. Where the terms "left bank" and "right bank" appear in the descriptions, the

# Greenway Segments



## Legend

-  Project Waterways
-  U.S. Highway
-  State Highway
-  LIMC Boundary
-  Open Water
-  Greenway Segment



Conestoga Greenways:  
A River Corridor Conservation Plan

Lancaster Inter-Municipal  
Committee Area  
Lancaster, Pennsylvania  
1999

Land Ethics, Inc.  
P.O. Box 4310  
Ann Arbor, MI 48106  
734.426.3111 fax 3126  
pkumble@landethics.org



“left bank” is the left side of the waterway when going downstream, and the “right bank” is the right side of the waterway when going downstream. It should be noted that the greenway locations are intended to be schematic; their specific locations on individual properties must be determined through more detailed design and coordination with the individual property owner.

### *Section 1 - Conestoga River (Hunsecker Road to East King Street).*

Section 1 extends along the Conestoga River from Hunsecker’s Mill Covered Bridge (Manheim Township/Upper Leacock Township) to Route 462/East King Street (Lancaster Township).

#### *Resource Conservation Greenways*

Resource conservation greenways extend the entire length of the Conestoga River in Section 1, from Hunsecker’s Mill Covered Bridge to Route 462/East King Street.

Many of the conservation practices presented in Chapter 6 can be implemented in this section of greenway. For example, much of the river bank in the segment between the Eden Road bridge and the Route 30 bridge is lacking an appropriate riparian buffer; buffers should be developed. Blockages to fish migration can be alleviated by modification of the spillway at the Lancaster City waterworks.

Pennsylvania recognizes the Conestoga River as a “public highway” for purposes of water use. It is therefore the most important waterway in the study area for canoeing and other boating. The Conestoga Valley Association’s “Canoeing Guide to the Historic Conestoga” suggests portaging at the following points in Section 1: (1) Just downstream from Eden Road, near East of Eden Pub and Gardens of Eden Bed and Breakfast. (2) At the Lancaster City waterworks. Here it is currently necessary to portage twice, most easily on the right bank of the River around the dam and on the left bank of the River around rapids near the railroad bridge. It is suggested that there be improvements on the waterworks property, such as moving the fence farther back from the River, so that a single portage on the left bank of the River is possible.

In order to encourage and facilitate boating, appropriate launch and retrieval areas should be provided for

canoes and kayaks. Within Section 1, these areas could be (1) within Manheim Township’s new Perelman Park at Binkley’s Mill, which is just north of Route 23/New Holland Pike, (2) on the Manheim Township property adjacent to Eden Road, (3) at Conestoga Pines Park, (4) on the old North Sewage Treatment Plant property south of the new Route 23, and (5) along Conestoga Drive, north of Route 462/East King Street, where there is a step-like concrete structure along the right bank of the Conestoga River. Where possible, these sites should be provided with parking, informational kiosks, and trash containers.

#### *Scenic Preservation Greenways*

Scenic preservation greenways are shown at five locations in Section 1:

- In the vicinity of Hunsecker’s Mill Covered Bridge, where there are scenic views of and from the bridge area.
- Where the linear park and trail greenway along Butter Road parallels the Conestoga River.
- In the vicinity of the Route 23/New Holland Pike bridge, where there are scenic views upstream and downstream.
- In the vicinity of the Eden Road bridge, where there are scenic views upstream and downstream, and from Millcross Road.
- In the vicinity of the railroad bridge over the Conestoga River, where the stone arch bridge is the focal point of the scenic landscape.

#### *Linear Park and Trail Greenways*

##### *Pedestrian Greenways*

Pedestrian greenways are shown in several locations, as follows:

- Left bank of Conestoga River from the area of the Waterford development to Route 23/New Holland Pike. This greenway traverses private properties that are largely undeveloped but within the urban growth boundary.

- Right bank of Conestoga River from north of Route 23/New Holland Pike to south of Eden Road. This greenway begins on the former American Paper Mill property, which is being developed as a Manheim Township park, continues south on mostly undeveloped private properties, crosses Manheim Township property on each side of Eden Road, and ends just south of Eden Road.
- Through Conestoga Pines Park and from there along or near the Conestoga River to Route 462/East King Street. The northeast end of this greenway segment is on Lancaster City property within Conestoga Pines Park and the waterworks site. The greenway continues south on both sides of the River, using the bridge on the water works property to connect the two sides. It traverses a variety of land uses, some public and some private, before reaching East King Street. A boat access appears to be feasible on Conestoga Drive North, which is part of the bicycle route mentioned in the background section of this chapter.
- Continues through primarily residential areas on Hunsecker Road, Butter Road, and Landis Valley Road. There is a scenic section along Butter Road, where the road is close to the Conestoga River. The entire segment along Butter Road coincides with the bicycle route mentioned in the background section of this chapter.
- Continues a short distance on Paper Mill Road into a property that was recently purchased by Manheim Township; the property was previously known as the American Paper Mill property, but it is being developed as the Township's Perelman Park at Binkley's Mill. A boat access area is suggested for this park. The original mill on the site, Binkley's Bridge Mill, was built by Christian Binkley c. 1772; it was converted to a paper mill in 1866 and destroyed by fire in 1882; a new four-story grist and saw mill replaced it. South of the mill dam was Binkley's Bridge, the first stone arch bridge in Lancaster County when it was built in 1789; it was replaced by a covered bridge that was later demolished.

#### *Multi-Use Greenway*

The multi-use greenway that goes the entire length of the study area takes the following route, much of which coincides with the CVA (Conestoga Valley Association) Trail:

- Begins at Hunsecker's Mill Covered Bridge, which carries Hunsecker Road across the Conestoga River between Manheim Township and Upper Leacock Township. The nineteenth century covered bridge that originally stood on this site was completely demolished by Hurricane Agnes in 1972. The present bridge is a replica built soon afterward, using wooden trusses, vertical board and batten siding, and stone abutments. Northwest of the Bridge, between Hunsecker Road and the River, is the site of the former Hunsecker's Mill, which was built c. 1800 and continued to be used into the early 20th century. The miller's house, with its 1773 date stone, still stands.
- Connects with Route 23/New Holland Pike to the south and follows that highway across the Conestoga River.
- Continues through residential areas on Willow Road and Pine Drive.
- Near the intersection of Pine Drive with Eden Road and Millcross Road, one can cross the Conestoga River on the Eden Road bridge, travel west on Eden Road, and connect with Manheim Township's network of bicycle routes. Manheim Township owns a small property on the right bank of the River, both north and south of the Eden Road bridge, with a sewage pumping station located on the southern portion.
- Going downstream on the main greenway, the greenway continues through residential areas on Millcross Road. Near the north end of Millcross Road is the Eden Mill. There was a mill on the site as early as 1812. The original portion of the current

building dates from about 1870; it is still in good condition.

- Continues through a combination of residential, industrial, and open space areas on Pitney Road. The largest open space area is the southeastern portion of property owned by the Lancaster Country Club. Also in that area is a right-of-way acquired for a relocated Route 23; grading for the new highway has been completed, but whether the highway will ever be completed is uncertain. This segment of the proposed greenway is particularly far from the Conestoga River. Officials should therefore talk with PADOT about locating the greenway on the right-of-way for the unfinished Route 23; the greenway could follow the right-of-way to a point relatively near the River and then perhaps continue along the river to the south.
- Continues on Pitney Road under Route 30, past Conestoga Pines Park, over the Conrail railroad tracks, and past a property owned by CBS. An alternate route in this area follows an existing drive into Conestoga Pines Park and could continue along the River on Lancaster City property, under the railroad tracks, and through the CBS property back to Pitney Road. Conestoga Pines Park includes a swimming pool that could be a destination on the bicycle route. Early Lancaster City waterworks buildings north of the railroad and near the River are of historic architectural interest and could be the theme for an educational display. The massive stone arch railroad bridge was built in 1888; it is also of historical interest and could be the subject of an educational exhibit. Its predecessor bridge began carrying railroad traffic in 1834; it was 1400 feet long, had ten piers, was 62 feet above the water, and supposedly was the highest bridge in the world at the time. The CBS property is just south of the railroad on the left bank of the River; it is currently being considered for reuse or redevelopment and would therefore be an excellent tract on which to seek a conservation trails easement. Just south of

the CBS property is the site of the former Twin Cities Mill, which was built c. 1763.

- Continues on Pitney Road to Route 462/East King Street, where it crosses the Conestoga River on the Route 462 bridge.

### *Section 2 - Conestoga River (East King Street to Slackwater Road)*

Section 2 extends along the Conestoga River from Route 462/East King Street (Lancaster Township) to Slackwater Road (Manor Township/Conestoga Township)

#### *Resource Conservation Greenways*

Resource conservation greenways extend the entire length of the Conestoga River in Section 2, from Route 462/East King Street to Slackwater Road. Most of the area is within the urban growth boundaries, but some of it is undeveloped, so there are a variety of land uses on which many of the conservation practices presented in Chapter 6 can be implemented.

As discussed in Section 1, Pennsylvania recognizes the Conestoga River as a "public waterway" for purposes of water use. The Conestoga Valley Association's canoeing guide suggests portaging at several points in Section 2: (1) At rapids on the east side of the Sunnyside peninsula, near the site of Lancaster City's first water works. (2) At the site of the old Levan's Mill dam near New Danville Pike. (3) At the site of the Second Lock Bridge which was - at 349 feet - the longest covered bridge in Lancaster County until it burned in 1968. (4) At the site of the former Wabank Mill, south of the Millersville Road bridge.

In order to encourage and facilitate boating, access points are recommended for the following locations in Section 2: (1) on the right bank of the Conestoga River along Conestoga Drive, south of the intersection with Betz Road, (2) on the right bank of the River, across from the northern end of the Sunnyside peninsula, (3) on the right bank of the River on County property just north of the bend on South Broad Street, (4) near the South Duke Street bridge over the River, (5) on the left bank of the River, east of the Strawberry Street bridge entrance to Lancaster County Central Park, (6) on Lancaster City property on the right bank of the River, just downstream from the bridge at Engleside, (7) on the

left bank of the River at Buchmiller County Park, (8) on the right bank of the River at Windolph Landing Park in Lancaster Township, and (9) where Creek Drive goes down to the right bank of the River near Millersville University.

### *Scenic Preservation Greenways*

Scenic preservation greenways are shown at seven locations within Section 2:

- At the site of the old Rocky Springs Park, along the Conestoga River nearly a mile south of East King Street/Route 462. The carousel building still stands; it once housed a carousel made by Dentzel, the top American manufacturer of carousels.
- On the Sunnyside Peninsula.
- On cemetery property to the north of Lancaster County Central Park.
- In the vicinity of Media Heights.
- At Buchmiller County Park.
- In the vicinity of where New Danville Pike crosses the River.
- At the Slackwater Road bridge.

### *Linear Park and Trail Greenways*

The pedestrian and multi-use greenways in Section 2 follow the routes described below with one exception: the prototype greenway discussed in detail in Chapter 8 lies within Section 2, so the pedestrian and multi-use greenways in the prototype area are not included in the following description.

#### *Pedestrian Greenways*

- On Garden City Drive and Holly Lane and for nearly one-half mile along the right bank of the Conestoga River near Holly Lane. The section along the River includes a segment on Lancaster City park property and a 60' wide strip of land owned by the Lancaster County Conservancy.
- Within and south of D. F. Buchmiller County Park, including a section along the left bank of the Conestoga River, a section

connecting with the multi-use greenway in Buchmiller Park, and a section going along the right bank of Mill Creek to the end of the undeveloped area.

- Along or near the right bank of the Conestoga River from the New Danville Pike area to the Windolph Landing development area. Much of this segment is on undeveloped land within the urban growth boundary, so greenways should be incorporated into new development as it occurs.
- Near the east and south sides of Millersville University property from Creek Drive to Shenks Lane.

#### *Multi-Use Greenway*

- Passes through the Conestoga Woods/Conestoga Gardens residential area on Conestoga Drive.
- At this point the greenway enters the prototype greenway area discussed in detail in Chapter 8. It includes a number of alternate routes around and on the Sunnyside peninsula, through Lancaster County Central Park, and on a variety of adjacent public and private properties. See Chapter 8 for details on this section of the greenway network.
- After leaving Lancaster County Central Park, the multi-use greenway continues along Golf Road and Willow Street Pike to D. F. Buchmiller County Park.
- Passes through D. F. Buchmiller County Park.
- Follows an abandoned railroad right-of-way and crosses the Conestoga River at Engleside. The route would initially cross one of the highway bridges at Engleside; eventually it could be re-routed to cross the abandoned railroad bridge, if the bridge can be rehabilitated to handle pedestrian and other non-motorized traffic. (At Engleside, a spur greenway goes to the east and circles a primarily undeveloped peninsula south of Greenwood Cemetery.)

- Continues south on New Danville Pike to the intersection of Second Lock Road.

At this point, and continuing through the study area to Millersville Borough, there are several greenway segments that can be used in various combinations with each other; the segments are as follows:

- Along New Danville Pike, Bean Road, and Millersville Road/Route 741 to its intersection with Wabank Road.
- Along Second Lock Road, Bean Hill Road, and Wabank Road.
- Through the Windolph Landing development on Wilderness Road and then along the right bank of the Conestoga River to Millersville Road. (This segment includes a short spur to connect with Wabank Road.)
- Along Rice Road, along the right bank of the Conestoga River to Creek Drive, and along Creek Drive to its intersection with James Street.
- Along Millersville Road/Route 741 beginning at its intersection with Wabank Road (or across the Penn Manor School District's Comet Field property), along Barbara Street, along Cottage Avenue, through the Penn Manor High School property, and through Millersville University land to the intersection of Creek Drive and James Street.

At this point, the multi-use greenway returns to a single route, where it continues through Millersville University property on James Street, George Street, and Shenks Lane. (A spur goes north on Shenks Lane and passes through the Millersville University campus to connect with the Little Conestoga Creek greenway at the intersection of Duke and Charlotte Streets.)

- Continues through a developing residential area on Shenks Lane and Crossland Pass.
- Follows South Duke Street/Slackwater Road to the Conestoga River, which is the end of Section 2.

### *Section 3 - Conestoga River (Slackwater Road to Susquehanna River)*

Section 3 extends along the Conestoga River from Slackwater Road (Manor Township/Conestoga Township) to the Susquehanna River (Manor Township/Conestoga Township).

#### *Resource Conservation Greenways*

Resource conservation greenways extend the entire length of the Conestoga River in Section 3, from the bridge at Slackwater Road to the Susquehanna River.

Most of the land abutting the Conestoga River along this section of greenway is open space, either agricultural land, small areas of woodland, or park land. Many of the conservation practices for open space land presented in Chapter 6 can therefore be implemented in this area.

This section of the Conestoga River, like the previous two sections, is a "public highway" for purposes of water use. The dam at Rock Hill, which required portaging, was removed in early 1997, making this section of the Conestoga excellent for boating. Access areas for canoes and kayaks should be located at three areas: (1) on Pennsylvania Fish and Boat Commission property adjacent to the Slackwater Road/Stehman Road bridge, (2) on Pennsylvania Fish and Boat Commission property at Rock Hill, and (3) on park land operated by the Safe Harbor Water Power Company just upstream from the mouth of the Conestoga River.

#### *Scenic Preservation Greenways*

This section of the Conestoga River is particularly scenic, as it flows primarily through natural areas and farmland. Specific scenic preservation greenways are shown at five locations:

- At the Slackwater Road bridge, where there are scenic views of the Conestoga River.
- From Slackwater Road where it parallels the Conestoga River in Conestoga Township.
- Along the Conestoga River both upstream and downstream from Rock Hill.

- At a point along Conestoga Boulevard, about 2000' south of Boy Scout Road, where an unnamed tributary flows through a ravine into the Conestoga.
- Along the Conestoga River for about a mile upstream from the Susquehanna River, on lands owned primarily by the Safe Harbor Water Power Company and the Pennsylvania Power and Light Company.

### *Linear Park and Trail Greenways*

#### *Pedestrian Greenways*

Pedestrian greenways are shown on both sides of the lower end of the Conestoga River:

- A pedestrian greenway on the right bank begins on property leased by the Boys Club and Girls Club of Lancaster from PP&L and follows the Conestoga River to the Susquehanna River. This lies entirely within land owned by PP&L and the Safe Harbor Water Power Company.
- A pedestrian greenway on the left bank begins approximately one mile north of River Road and also continues all the way downstream to the Susquehanna River. It includes a connection to Conestoga Boulevard where the northern property line of Safe Harbor Park abuts the Boulevard. It too lies entirely within land owned by PP&L and the Safe Harbor Water Power Company.

#### *Multi-Use Greenway*

The multi-use greenway that goes the entire length of the study area takes the following route through Section 3:

- Crosses the Conestoga River on the Slackwater Road bridge.
- Follows Slackwater Road through an area of scattered development to Long Lane.
- Follows Long Lane to Rock Hill. On the west side of Long Lane is the site of

Postlethwaite's Tavern, where the first courts of Lancaster County met in John Postlethwaite's tavern in 1729. At Rock Hill is the Pennsylvania Fish and Boat Commission access area for fishing and boating, a steel bridge dating from 1923, and the Rock Hill Tavern.

- Follows Conestoga Boulevard to River Road. Just south of River Road a marker gives the history of the Conestoga Road: "As early as 1638 an Indian trail used in the fur trade with the Swedish settlements on the Delaware crossed Conestoga Creek (at Rock Hill). . . This trail later became the road connecting the Conestoga Indian settlements with Philadelphia". At a bend in the River where Conestoga Boulevard is as far as 1000' from the River, the multi-use greenway should be relocated, if possible, along the River bank; most of this would be on Pennsylvania Power and Light Company (PP&L) property. Just north of the junction of Conestoga Boulevard and River Road, near the River, are the remains of a Conestoga Canal lock, dating from c. 1826-1829; this represents an era when the Conestoga Navigation Company constructed a series of nine locks to make the Conestoga navigable for commercial trade; a destructive flood in 1865 effectively ended this activity.

At this point, the multi-use greenway splits into two short segments for the remainder of its length:

- The main greenway continues on River Road and ends in Safe Harbor Water Power Company property; it lies within publicly accessible park land owned by the Company. On both sides of the road at the north end of this greenway segment lies the site of the Safe Harbor Iron Works; a marker gives its history: "In 1846 the Safe Harbor blast furnace, foundry and rolling mill, using anthracite for fuel, were built by Reeves, Abott & Co. Great quantities of iron and rails were produced for the Pennsylvania R.R., incorporated in the same year. During the Civil War, wrought iron cannons were manufactured for the Union Army." Up a drive to the

east of River Road is Safe Harbor Village; this planned community was built c. 1929-1931 and contains offices and half-timber Tudor style workers' residences for the power company.

- A secondary greenway crosses the Conestoga River on River Road and follows a drive down the right bank of the River. An historic marker west of the River includes information about Conestoga Indian Town: "The Conestoga Indians lived in scattered settlements along this stream. They were the last of the once mighty Susquehannocks. Their final location was the Conestoga Indian Town that was along the road leading to Creswell. William Penn visited the Conestoga Indians in 1701. The remnants of this tribe were massacred by the Paxton Boys in December 1763."

#### *Section 4 - Little Conestoga Creek (North of Columbia Avenue)*

Section 4 extends along the Little Conestoga Creek from North of Graystone Road (Manheim Township/East Petersburg Borough) to Columbia Avenue/Route 462 (East Hempfield Township/Lancaster Township/Manor Township)

#### *Resource Conservation Greenways*

Resource conservation greenways extend the entire length of the Little Conestoga Creek in Section 4, from the northeastern section of East Petersburg Borough to Columbia Avenue/Route 462. The Creek flows past a variety of landscapes, including farmland, suburban residential areas of varying densities, public park land, institutional uses, and commercial and industrial areas. A variety of the conservation practices discussed in Chapter 6 are therefore applicable to this area.

Pennsylvania does not recognize the Little Conestoga Creek as a "public waterway" for purposes of water use. This plan therefore does not indicate any access points for boating in this area, with one exception: the southern end of Section 4 and northern end of Section 5 contain three proposed access points on park land owned by East Hempfield, Lancaster, and Manor Townships.

#### *Scenic Preservation Greenways*

Due to the relatively intensive development in this section of the study area, scenic areas are limited. The plan shows just one segment of scenic preservation greenway.

- Where the Little Conestoga Creek flows past the Conestoga House property, under Marietta Avenue, and through a portion of the School Lane Hills area. Conestoga House was originally the Hershey farmstead, with a part dating from c. 1812. It was rebuilt after 1927 in Colonial Revival style by James Hale Steinman, owner of the Lancaster Newspapers and WGAL-TV. It is now owned by the Steinman Foundation and is available for use for community events.

#### *Linear Park and Trail Greenways*

##### *Pedestrian Greenways*

Pedestrian greenways are shown in three areas, as follows:

- Both banks of Little Conestoga Creek from northeastern East Petersburg downstream to Miller Road/Buch Avenue. Most of this land is undeveloped, but within the urban growth boundary, so greenways should be incorporated into any developments that occur.
- Right bank of the Creek on the PP&L property just upstream from Manheim Pike/Route 72.
- Both banks of the Creek from Farmingdale Road south to the railroad. This too is undeveloped land within the urban growth boundary, where greenways should be required if and when development occurs.

##### *Multi-Use Greenway*

The multi-use greenway through Section 4 follows the route described below. Due to the variety of development along most of the waterway, it is necessary for the multi-use greenway to be quite distant from the Little Conestoga Creek in some areas. Furthermore, the

relatively heavy traffic and congestion on some of the roads make them undesirable for bicycling or other non-motorized uses. However, there are no feasible alternatives, so the multi-use greenway follows them in some places; it would be desirable if off-road routes in these areas could be obtained in the future.

- Begins where Graystone Road crosses the Little Conestoga Creek and continues through properties owned by the East Petersburg Borough Water Authority and the East Petersburg Sportsmen's Association.
- Passes through off-road open space in northeastern East Petersburg Borough. Some of this was open space incorporated into recent residential developments and dedicated to the Borough, and some is a park surrounding the East Petersburg Community Center.
- Follows Reeves Road, New Street, and Pine Street through a residential area.
- Passes through the East Petersburg Fitness Park.
- Follows Larch Avenue through one block of residential development until it reaches a point where there is direct access to the East Petersburg Elementary School property.
- Follows Rohrerstown Road/Route 741 to Route 283. This is a particularly poor section of road for use by pedestrians and non-motorized vehicles. A separate lane or path should therefore be provided for the multi-use greenway.
- At this point, a proposed branch of the multi-use greenway goes upstream through commercial and industrial properties to Manheim Pike/Route 72 and then along and through land owned by the Pennsylvania Power and Light Company (PP&L). A section of PP&L's land along the Little Conestoga Creek is already open for public use.
- Returning to the main multi-use greenway, it passes Flory's Mill (East Petersburg Mill), which was built c. 1806. It ceased

functioning as a mill in the 1980's and is now used for offices and shops.

- Follows the Creek through private land within the urban growth boundary to McGovernville Road.
- Follows the Creek through wetlands owned by East Hempfield Township.
- Follows Shreiner Station Road to the Landis Mill Covered Bridge.
- Crosses the Landis Mill Covered Bridge, which was constructed in 1873 and is a frame Kingpost truss bridge covered with vertical board siding.
- Goes around the perimeter of the Park City Shopping Center area and passes under Route 30 adjacent to the railroad tracks.
- Continues through Longs Park, across farmland on the south side of Harrisburg Pike, along the Little Conestoga Creek, through land owned by Franklin and Marshall College, and to the end of River Drive in School Lane Hills. [An additional loop in this area passes through the Franklin and Marshall College property (which includes athletic fields and an observatory), passes Lancaster Country Day School, and connects back to River Drive via (1) Newton Road and Hillcrest Road or (2) Newton Road and the Franklin and Marshall College property.]
- Continues on River Drive through School Lane Hills and past Conestoga House to the intersection of River Drive and Marietta Avenue.

At this point, there are two alternate routes to the end of Section 4 on Columbia Avenue:

- The shorter alternate continues through residential areas on River Drive and Jackson Drive, and then follows Columbia Avenue/Route 462 for a short distance across the Creek.
- The longer alternate goes west on Marietta Avenue, follows Good Drive, goes through a residential area on Glenbrook

Avenue and South Lawn Drive, passes through East Hempfield Township's Wheatland Hills Park along the Little Conestoga Creek (which includes a proposed boat access area), and continues on Conestoga Boulevard to Columbia Avenue.

### *Section 5 - Little Conestoga Creek (South of Columbia Avenue)*

Section 5 extends along the Little Conestoga Creek from Columbia Avenue/Route 462 (East Hempfield Township/Lancaster Township/Manor Township) to its Confluence with the Conestoga River (Manor Township)

#### *Resource Conservation Greenways*

Resource conservation greenways extend the entire length of the Little Conestoga Creek in Section 5, from Columbia Avenue/Route 462 to its confluence with the Conestoga River. The northern part of the section is primarily suburban, and the southern part is primarily rural, so a variety of the conservation practices discussed in Chapter 6 are applicable to this area.

Pennsylvania does not recognize the Little Conestoga Creek as a "public waterway" for purposes of water use. This plan therefore does not indicate any access points for boating in this area, with one exception: the northern end of Section 5 and the southern end of Section 4 contain access points on park land owned by East Hempfield, Lancaster, and Manor Townships. The access points in Section 5 are in the Maple Grove area, just south of Columbia Avenue/Route 462 and just north of the Schoolhouse Road bridge.

#### *Scenic Preservation Greenways*

The plan shows three segments of scenic preservation greenway in Section 5:

- A segment about 0.6 miles long, beginning at Columbia Avenue/Route 462 and continuing downstream past Schoolhouse Road.

There is an historic mill at each end of this segment. At the north end, just southeast of the intersection of

Columbia Avenue and Stonemill Road, is Abbyville Mill, now often referred to as the Maple Grove Mill. This mill has a date stone from 1767 on its north facade and is the oldest grist mill in Lancaster County dated by a date stone. The mill is currently owned by Lancaster Township; it is in a central, easily accessible, and visible location, and it lies within an area of municipal park land that can easily become an early component of the greenway network. The mill should be restored and used for purposes that are associated with the greenway program. The first floor, which is subject to flooding, could be an open area for recreation and picnicking; the second floor could be a display area and facility for community use; the third floor could house offices for organizations whose purposes relate in some way to greenways.

At the south end of this scenic area is Rock Furnace Mill. It was built by Andreas and Veronica Kauffman as a rifle factory in 1770. In 1794 it was converted to a grist mill. The mill is currently being used as a home and is in excellent condition. Adjacent to it is the site of a covered bridge that Hurricane Agnes destroyed in 1972.

- The second scenic greenway location in Section 5 is a very attractive vista of the Little Conestoga Creek from Ironstone Ridge Road south of its intersection with Holly Drive.
- The third scenic greenway location in Section 5 is at the downstream end, where Creek Road parallels the Little Conestoga Creek for more than a mile. The area between the Road and Creek is entirely open space, with an excellent potential for off-road hiking and bicycling.

#### *Linear Park and Trail Greenways*

##### *Pedestrian Greenways*

There are several pedestrian greenways in Section 5, as follows:

- On the Manor Township office and park property off West Fairway Drive. The pedestrian greenway goes through the western part of the property and continues on a strip of Township land to Charlestown

Road, whereas the multi-use greenway stays on a road through the area.

- Right bank of Little Conestoga Creek from Manor Township Community Park to the old Willow Grove Mill building at Millersville Road. This site was probably used for a mill before 1759; the current mill building has modern additions and is part of a fertilizer plant. The pedestrian greenway lies within a 15' wide easement on the fertilizer plant property.
- Through Manor Township Community Park and along the left bank of Little Conestoga Creek from Manor Township Community Park to near Blue Rock Road, where it cuts across farm land to Blue Rock Road. This pedestrian greenway is located primarily on farmland within the urban growth boundary; the greenway should be developed when and if the land is developed. A spur follows an unnamed tributary to Millersville Community Park.
- Along a segment of the right bank of the Little Conestoga Creek in the George town Hills area and connecting to Manor Boulevard.
- Along the right bank of the Little Conestoga Creek beginning about 500' south of Indian Run Road. This pedestrian greenway goes on or along Creek Road, crosses PP&L property leased to the Boys Club and Girls Club of Lancaster, and continues along the Conestoga River on utility property all the way to the Susquehanna River.

#### *Multi-Use Greenway*

The multi-use greenway through Section 5 follows the route described below. Due to the fact that the suburban area is quite heavily developed and the rural area is primarily private land outside the urban growth boundary, the multi-use greenway is quite far from the Little Conestoga Creek in some areas.

- Begins with a loop along both banks of the Creek between Columbia Avenue/Route 462 and Schoolhouse Road. This is primarily on public land and

includes the historic mill discussed in the "Scenic Preservation Greenways" section.

- Continues through residential areas on Stonemill Road and Fairway Drive. (An alternate route through part of this area passes the Conestoga West Apartments, goes through an area south of Temple Area that is proposed for high density residential development, passes through Manor Township's Martin E. Greider Park, and traverses Pheasant Ridge before returning to Stonemill Road).
- Passes through Manor Township property, including the Township offices and a park, and follows Manor Boulevard to Charlestown Road.
- Follows Charlestown Road to Manor Township Community Park, where it passes through the Park, including two bridge crossings of the Little Conestoga Creek. (A spur goes south from the Park, along Richmond Road, Hawley Drive, Buttonwood Farm Road, and Leaman Avenue, to connect to Eshleman Elementary School and Millersville Borough Park.)
- Passes through high density residential development on Brookline Drive, Valley Drive, and Manor Boulevard. (Upon reaching Ironstone Ridge Road, a spur of the greenway goes north on Ironstone Ridge Road to John G. Herr Park and the Manor Middle School; the spur then continues on Charlestown Road to connect with the multi-use greenway along the West Branch of the Little Conestoga Creek.)
- Continues south through a lower density residential area on Ironstone Ridge Road. (At the south end of Ironstone Ridge Road, a spur goes west on Blue Rock Road/Route 999 to connect with the multi-use greenway along the West Branch of the Little Conestoga Creek.)
- Continues east on Blue Rock Road, then through residential areas (some still under development) on Duke Street, West Charlotte Street, Springdale Lane, Burr Oak Drive, and Manor Oaks Drive, and

then west on Letort Road to Sun Lane. (An alternate route in this area follows the left bank of the Little Conestoga Creek from Blue Rock Road to Letort Road and then goes east along Letort Road to Sun Lane. Most of this traverses land where Manor Township has worked with developers to incorporate greenways into their plans.)

- Continues through areas of low density development and open space on Sun Lane and Walnut Hill Road. (A spur from this area, using another section of Walnut Hill Road and South Duke Street, connects with the multi-use greenway along the Conestoga River.)
- Passes through the Boyer Nature Preserve, which lies along the left bank of the Little Conestoga Creek and is owned by the Lancaster County Conservancy.
- Ends with a loop through scattered low density development and rural areas using Creek Road on the west side of the Creek and Walnut Hill Road and Rock Hill Road on the east side of the Creek. (A spur goes east from the south end of Walnut Hill Road and connects with the multi-use greenway along the Conestoga River at Rockhill.)

### *Section 6 - West Branch of Little Conestoga Creek*

Section 6 extends along the West Branch of the Little Conestoga Creek (Entire Length) from Stony Battery Road (West Hempfield Township) to its Confluence with the Little Conestoga Creek (Manor Township)

#### *Resource Conservation Greenways*

Resource conservation greenways extend the entire length of the West Branch of the Little Conestoga Creek, from its source near Stony Battery Road to its confluence with the Little Conestoga Creek.

Most of this section of greenway passes through agricultural areas, so the conservation practices related to the agricultural community are widely applicable. These include stream bank fencing, stream and waterway crossing devices for cattle, environmental farmstead

evaluations, construction of mud-free cattle lanes, and barnyard runoff management. Other conservation practices, such as the establishment of riparian buffers, are applicable in many areas. In the few areas where residential subdivisions or scattered residential lots about the West Branch, management practices relating to residential areas also apply.

Pennsylvania does not recognize the West Branch as a "public waterway" for purposes of water use, and the West Branch is generally not suitable for canoe or kayak use. This plan therefore does not indicate any access points for boating along the West Branch.

#### *Scenic Preservation Greenways*

Scenic preservation greenways are shown at several locations along the West Branch of the Little Conestoga Creek. They include views of the West Branch and of the fine agricultural areas adjacent to it:

- Along a section of Hershey Mill Road.
- Where the West Branch flows under Rohrer Road (two locations), Habecker Church Road, and Blue Rock Road (including views of Windom Mill, which was built in 1810, and the adjoining complex of limestone buildings dating from as early as 1769).
- Along a short section of Owl Bridge Road which parallels the West Branch and includes a scenic stone arch bridge.

There are also scenic preservation greenways along several of the roads that are indicated as multi-use greenways. These focus primarily on scenic agricultural areas that are outside the urban growth boundary and within or along the boundary of Manor Township's agricultural zoning district:

- Along Rohrer Road between the West Branch and Forrey Road. On the north side of Rohrer Road, just east of the intersection with Forrey Road, is an excellent area for wild flowers.
- Along Habecker Church Road between Forrey Road and the West Branch.

- Along Donerville Road between Habecker Church Road and Blue Rock Road.

### *Linear Park and Trail Greenways*

#### *Pedestrian Greenways*

No separate pedestrian greenways are shown in this section of the study area. The land adjoining the West Branch is generally private land outside the urban growth boundary, where further development is not anticipated. However, if the situation changes, and development is ever proposed along the West Branch, all plans should be evaluated and greenways required where appropriate.

#### *Multi-Use Greenway*

The multi-use greenway that follows the West Branch of the Little Conestoga Creek takes the route described below. Much of the West Branch flows through expansive agricultural land that is not expected to be developed in the foreseeable future. Furthermore, the nearest roads are often relatively far from the waterway. The multi-use greenway is therefore sometimes quite distant from the West Branch, at one point going nearly a mile to the west. The greenway takes the following route:

- Begins with a loop in Mountville on Lemon Street, Clay Street, and College Avenue, and going through the Mountville Borough Park and the grounds of the Mountville Elementary School.
- Follows Main Street/Columbia Avenue/Route 462 east to Hershey Mill Road. It is recognized that this is not a good road segment for bicycle or pedestrian use, but there is no other feasible alternative at this time, if the greenway is to connect with Mountville.
- Continues past a mix of uses on Hershey Mill Road. This segment passes Hershey's Mill, which dates from c. 1814 and is in excellent condition.
- Continues through fine farmland areas on Rohrer Road, Forrey Road (at one point nearly a mile from the West Branch), and Habecker Church Road. The Habecker

Mennonite Church is near the intersection of Forrey Road and Habecker Church Road.

- Crosses the West Branch on Habecker Church Road, near a scenic farmhouse.
- Continues through farmland on Habecker Church Road, Donerville Road, and Blue Rock Road. This segment of Donerville Road coincides with the urban growth boundary, so the fine views of farmland to the west are expected to remain for the foreseeable future. (Two spurs from Donerville Road, one on Charlestown Road and the other on Blue Rock Road/Route 999, go east to connect to the multi-use greenway along the Little Conestoga Creek.)
- Crosses the West Branch on Blue Rock Road near the 1810 Windom Mill (see previous description).
- Continues through a predominantly agricultural area, which includes some other mixed uses as well, on Blue Rock Road, Old Blue Rock Road, Supervisors Road, and Central Manor Road. Just to the east of this segment, where Bender Mill Road crosses the West Branch, is Bender's Mill, which dates from c. 1800, has been converted into apartments, and is in very good condition.
- Crosses the West Branch on Central Manor Road.
- Continues on Central Manor Road and Letort Road past the Letort Manor residential development and the Ann Letort Elementary School. A short spur to the southwest of this segment on Letort Road goes to the site of the former Manor Roller Mill, which dated from 1851; about 1500' to the east of that mill site, along the West Branch, is the site of the former A. Herr's Mill.
- Continues through a predominantly agricultural area, with some scattered residential development, on Sheep Lane, Owl Bridge Road, and Stehman Church Road. The Antioch Baptist Church is on the west side of this segment of Sheep

Lane. Owl Bridge Road crosses the West Branch on a stone arch bridge. Near the point where Owl Bridge Road turns west, away from the West Branch, is the site of the former Benjamin Herr's Mill, which dated from c. 1815.

- Ends at the junction of Stehman Church Road, Walnut Hill Road, and Creek Road, near the confluence of the West Branch with the Little Conestoga Creek. At this point is the Boyer Nature Preserve, which

is owned by the Lancaster County Conservancy. On the right bank of the Little Conestoga Creek, just north of the road intersection, is the Conestoga Feed Mill building; it was originally built c. 1818, but its appearance has changed with reconstruction after two fires, and it is now in an excellent state of repair and used as a home.



---

## 8. PROTOTYPE GREENWAY

---

The realization of a greenway along the Conestoga River, Little Conestoga Creek and West Branch of the Little Conestoga Creek must begin with the planning and development of a greenway project along a recognized segment of the Conestoga River. This is best achieved by actually devising a model or prototype for a greenway corridor. A prototype should actually describe the route and features of a small segment of a greenway—one that could readily be achieved by municipalities and other participants.

The importance of the prototype greenway should not be underestimated. Such a model will be visible to the general public and serve as a positive and realistic “blueprint” for future segments of an overall greenways plan. The exercise of devising a prototype plan is necessary because it addresses many real opportunities and constraints that must be considered throughout the entire planning area.

For an illustrated view of the prototype greenway and its location, please refer to the plan for the prototype greenway located at the end of this chapter on page 97.

### *8.1 Setting*

The segment chosen for the prototype greenway is on the main stem of the Conestoga River along the southern edge of the City of Lancaster, beginning at the upstream boundary of the Sunnyside development. It continues downstream past Duke Street to the western

boundary of Lancaster County Central Park, a distance of approximately 3.6 miles.

The following issues were carefully considered in selecting which site within the entire planning area would be used for the prototype greenway.

#### *a. Existing Natural Environment*

Topography and vegetation along this segment of the river vary widely, not unlike the entire Conestoga corridor. Steep slopes along the outside curves of the river, rolling topography, and flat river bottoms are common. Existing vegetation is characterized by open fields, brushy banks, mature trees, and cut lawns.

These varying environmental conditions provide an opportunity to successfully demonstrate trail alignment and construction techniques specific to each type of setting. The diversity of this setting lends itself to developing an environmental education program for local schools explaining the characteristics and significance of each ecological unit and their interrelationships throughout the entire planning area.

#### *b. Proximity*

The prototype greenway is strategically located adjacent to the Conestoga River and close to the population center of Lancaster County. The segment selected for the prototype is crossed by a major street, paralleled by public roads in certain sections, and sur-

rounded by significant public lands. The high visibility of this area will allow the public to see, use, and appreciate the efforts to enhance the greenway experience for all.

### *c. Land Ownership / Land Use*

The area selected for the prototype contains a variety of land in public and private ownership. All aspects are represented in this section, from public land with a variety of recreational uses (Lancaster County Central Park), through quasi public ownership with limited use, to private ownership with no recognized public use. This variety provides an opportunity for:

- encouraging initial public use of an identified greenway;
- starting intergovernmental cooperation for implementation; and
- refining coordination techniques with private landowners and user groups.

### *d. Future Expansion*

The location for the prototype greenway is also important because any future expansion upstream and downstream may be easily pursued. Alternate alignments on both sides may be proposed to allow natural expansion on either side as future parcels are offered for use or negotiated with public and private landowners.

## *8.2 Prototype Planning Overview*

### *a. Resource Conservation Greenways*

Resource conservation greenways extend along the entire length of the Conestoga River in the prototype greenway area and are intended to protect natural areas and encourage proper environmental practices. This type of greenway is accessible to the public where they coincide with linear parks and trail greenways.

With the possibility for future development of public land adjacent to the prototype—including the County's Sunnyside project—the resource conservation designation can assist in the identification, protection, and interpretation of significant natural features in

the area. The regional significance of the greenway and its positive impact on adjacent development can be capitalized upon in these areas.

### *b. Scenic Preservation Greenways*

Scenic preservation greenways are intended to protect landscapes, natural features, and historic sites that are important for their visual beauty. Two locations are included in this designation within the prototype greenway area:

- on the Sunnyside Peninsula; and
- on cemetery property to the north of Lancaster County Central Park.

Both parcels have broad areas of significant visual beauty that can be appreciated presently from the river. The prototype also proposes public hiking and biking trails on cooperative easements along the river corridor.

### *c. Linear Park and Trail Greenways*

Linear park and trail greenways provide for recreational activities such as walking and bicycling on public land, and on private land only with the property owner's permission. Both categories of this greenway type—pedestrian greenways (walking and jogging) and multi-purpose greenways (cycling)—are represented in the prototype area. Both types are also shown as either (1) existing, (2) proposed for public property, and (3) proposed for private property.

These existing and proposed trail experiences extended throughout the prototype greenway area, along the river, through recreation and scenic areas, and next to roads.

## *8.3 Proposed Route*

The prototype greenway is a corridor that begins at approximately the upstream limit of the Sunnyside development and continues 3.6 miles downstream to the boundary between Lancaster County Central Park and Media Heights Country Club. The width of the corridor is not specifically defined but is shaped to encompass a variety of natural and recreational features that can be expected in a greenway experience:

- ☑ walking trails;
- ☑ bike trails;
- ☑ canoe/kayak access points and waterway;
- ☑ trail head areas;
- ☑ scenic/natural areas;
- ☑ public parks; and
- ☑ cultural/historical features.

The following describes the route that the prototype will follow—from the vantage point of a visitor proceeding downstream along each side of the Conestoga River—on trails that are either existing or proposed. Please refer to the map on page 97 for a graphic illustration of the prototype greenway.

The prototype emphasizes the area's major attraction; the Conestoga River. The Conestoga offers a variety of recreational opportunities—canoeing, fishing, tubing and wading—and will be accessed from 4 points along its length.

The canoe and kayak access points are crushed stone pathways to the river that provide space to carry and launch a canoe easily and safely. In the prototype plan, these points are located adjacent to walking and biking trail heads, which contain the required parking, interpretive trail signage, waste receptacles, lighting, benches, and bike racks.

#### *a. Right Bank (Looking Downstream)*

The prototype greenway plan includes a multi-use greenway that begins along Conestoga Drive across from the Sunnyside peninsula and extends all the way downstream to the Strawberry Street bridge entrance to Lancaster County Central Park. From there, a pedestrian greenway extends downstream through a steeply sloping area to Greenwood Cemetery. The greenway then becomes multi-use again, first extending along the River through Greenway Cemetery and then looping around the south end of the peninsula.

The section of the prototype greenway on the right bank of the Conestoga River passes through several kinds of land ownership, includes sites of historic interest, and will include several kinds of improvements, as follows:

- ⇒ Begins and extends nearly ½ mile on County-owned land between Conestoga Drive and the Conestoga River. At the beginning of the greenway, there will be trail head parking, boat access to the Conestoga River, and an information kiosk. Near that point was an early mill that was sold to Lancaster City in 1836 to become the site of the first City water works; the water works pumped water up the hill to a reservoir in what is now Reservoir Park. The water then flowed to the City by gravity. Up the hill from this segment of greenway is Conestoga View, the county home near the site where the second oldest county hospital in America was built in 1801. Near the downstream end of this greenway segment is another boat access point.
- ⇒ Continues 700± feet on an easement through the Clermont Housing development, which is owned by the Housing Development Cooperation.
- ⇒ Crosses 600± feet of County-owned property. In the Conestoga River at this point is a pier from the old bridge that supported the trolley line that carried people to People's Park and Rocky Springs Park; the pier is proposed to be used for the new bridge the County will build to access the proposed juvenile detention center, other development, and greenways on the Sunnyside peninsula. Adjacent to the bridge will be trail head parking, a boat access point, and a kiosk with an education display.
- ⇒ Continues 300± feet on City property that includes a sewer facility.
- ⇒ Extends 1000± feet behind the Franklin Terrace housing, which is owned and operated by the Lancaster City Housing Authority.
- ⇒ Continues 1900± feet on property owned by the City of Lancaster. On this property are the stone remnants of two buildings once associated with the Lancaster Glue

Factory. Near the south end of this property is the South Duke Street bridge, which a branch of the greenway crosses to connect with the greenways on the Sunnyside peninsula. Just downstream from the South Duke Street bridge is the site of a former covered bridge known as the Old Factory Bridge. The old factory located nearby was part of a complex of buildings erected in the early 1800's as a textile mill; it was later a cotton mill and then the first cork works in Lancaster. Near the downstream end of this greenway segment will be trail head parking and an other boat access point.

- ⇒ Crosses 300± feet of County property.
- ⇒ Extends for approximately ¾ mile through wooded property owned by Riverview Cemetery. There is currently an informal trail through this property, but it will require an easement and improvements.
- ⇒ Continues another 900± feet through County property to the Strawberry Street bridge. In this area was Reigart's Landing, which was headquarters for the canal system that utilized the Conestoga River between here and the Susquehanna River from 1825 to 1837. The canal included nine locks; vestiges of some remain today.
- ⇒ Continues downstream for 800± feet on County and City land. This segment of greenway is on steeply sloping land and therefore is for pedestrian use only. Across Chesapeake Street to the north is Woodward Hills Cemetery, which was established by Trinity Lutheran Church in 1851; it is the burial site of many notable Lancastrians, including President James Buchanan.
- ⇒ Extends for nearly ½ mile through Greenwood Cemetery, where it once again becomes a multi-use greenway. Greenwood Cemetery was established in 1896. It contains over 1000 markers, statues, and family mausoleums a notable Egyptian Revival mausoleum dates from 1903. A crematorium built in 1884 was

the first public crematorium in Pennsylvania and one of the earliest in the nation.

- ⇒ Terminates on private land south of Greenwood Cemetery at the end of the peninsula. The greenway here should make a loop around the end of the peninsula and be incorporated into any future plans for development of the site.

### *b. Left Bank (Looking Downstream)*

The section of the prototype greenway on the left bank of the Conestoga River is more complex. A multi-use greenway goes around the perimeter of the Sunnyside peninsula, and a combination of multi-use and pedestrian greenway segments lies close to the section of the River in Lancaster County Central Park. However, there are additional greenway segments which branch off from the ones along the River and loop through the Sunnyside peninsula and Central Park.

The segments of prototype greenway on the left bank of the Conestoga River include extensive sections on County property, but there are some sections in historic significance, and proposed improvements as follows:

- ⇒ Includes a multi-use greenway near the shoreline of the Sunnyside peninsula. This greenway will be able to be accessed in two ways:
  - ❶ via the new bridge proposed from South Broad Street to the peninsula, as discussed in the description of the right bank, and
  - ❷ from South Duke Street. There will be a comfort station near the bridge from South Broad Street.
- ⇒ Includes additional greenway segments on the Sunnyside peninsula to create several loops that will provide a variety of experiences and give opportunities for hiking and bicycling routes of various lengths.
  - ❶ One alternative will cut across the peninsula just south of the abandoned

Brenner Quarry, thus creating a loop on the northern end of the peninsula. It will encircle the property proposed for Lancaster County's new juvenile detention center. There was an Indian village in the location where Brenner Quarry was later located.

- ② Another alternative will loop through the Sunnyside residential area, using existing roads and rights-of-way and connecting to South Duke Street. The multi-use trails on the existing roads/right-of-way will require improvements and/or signage.

⇒ Includes a variety of greenway segments in Lancaster County Central Park.

- ① A pedestrian greenway will follow the route of the CVA (Conestoga Valley Association) Trail; it will leave Williamson Road near the northeast entrance to the Park, climb to one of the higher elevations in the park, pass the Indian Rock lookout, pass a kiosk with an educational display near Indian Rock, descend to the Conestoga River shoreline, go around the perimeter of the peninsula to near the boundary of the Park and Media Heights Country Club, and cut back from the shoreline to a trail head parking area near City View Drive. It will pass a number of recreational and historical facilities, including the ropes course area, open play areas, the Garden of the Five Senses, the swimming pool, and several picnic and play areas. Comfort facilities are available at several points along this route.
- ② A multi-use greenway will follow Williamson Road and Rockford Road, from a point near the South Duke Street bridge to the Strawberry Street bridge. The greenway through this area will utilize either a 10-foot wide paved shoulder or a paved surface separated from the road by varying widths of landscape. Just east of the Strawberry Street bridge are a trail head parking and boat access point, both of which should be improved. A major historic site along this route is Rock Ford Plantation,

constructed in 1793-1794 for General Edward Hand, a physician and major general in the Revolutionary War, who was later a member of congress and George Washington's adjutant general. On the Conestoga River near here, Robert Fulton conducted his first experiments with paddle wheels for the propulsion of boats.

- ③ Additional multi-use greenways will follow City View Drive, Farm View Drive, General Hand Land, and Golf Road, thus providing several opportunities for traveling through that part of Lancaster County Central Park.

## 8.4 Development Phasing

### a. Phasing Criteria

In determining the best phasing for implementing the prototype greenway, several factors have been analyzed to develop the most realistic yet challenging solution. It is recommended that the phases accomplish the following:

- Promote public awareness of the Conestoga Greenway—its extensive benefits and importance to the community;
- Emphasize the segments that have the greatest chance for immediate success, thereby acting as catalysts for further success;
- Provide the most usable facility at a cost that is not prohibitive, leading to a natural extension of facilities in subsequent phases; and
- Develop working relationships between and among the various categories of landowners that will serve as positive reinforcement for further development.

### b. Phase 1

Phase 1 should include a greenway on the right bank of the Conestoga River, beginning along Conestoga Drive, across from the northeast section of the Sun-

nyside peninsula, and extending downstream to South Duke Street.

It will provide an opportunity to bring the various land-owners to the development table: Lancaster City, Lancaster City Housing Authority, Lancaster County, and the Housing Development Corporation. Phase 1 will also present a trail for direct access by a large user base in the adjacent residential developments. The large parcel of City owned property at Duke Street can become a significant resource in the greenway. With the development of the trail head area along Conestoga Drive, the upstream terminus of the prototype will be complete.

### *c. Phase 2*

Phase 2 should include the greenways on the Sunnyside peninsula. It includes the development of a loop trail system, with a greenway along the Conestoga River and connecting greenways that will allow users to travel around all or parts of the peninsula. The peninsula will be able to be accessed either from South Duke Street or by a proposed bridge from South Broad Street.

The Phase 2 greenways will be somewhat dependent on Lancaster County's development of the area, which will include a new juvenile detention facility. The greenways should be designed to complement the overall County project. In particular, the former quarry can be presented as a point of interest and education rather than a mining eyesore.

A section of greenway will also pass through a residential area, providing a definite opportunity for the prototype to demonstrate its ability to be a good neighbor and provide much needed recreational opportunities for nearby residents.

### *d. Phase 3*

Phase 3 should include the greenways in Lancaster County Central Park and on the right bank of the Conestoga River north of Central Park (between the South Duke Street and Strawberry Street bridges). The development of these greenways can build on the successful facilities and natural attraction of Central Park by using a closed trail loop that encompasses both sides of the Conestoga.

Central Park's existing hiking trail system would cross the river at Strawberry Street and Duke Street and run along the opposite bank. An easement would be required with Riverview Cemetery to complete the loop. The City of Lancaster would become a partner in this public/private system with a trail head facility on City land at the Duke Street Bridge. Another trail head would be developed at the existing parking lot near the Chesapeake Street Bridge.

The bike trail will also be looped in the same manner. In the Park, the system could be extended further as need and funds become available.

### *e. Phase 4*

Phase 4 should include a greenway on the right bank of the Conestoga River, beginning at the Strawberry Street bridge and going downstream from there.

This phase will involve extensive private lands, including Greenwood Cemetery and the south end of the peninsula. It will also require construction on a steep section of slope overlooking the River. As such, this section will have a great opportunity for public/private cooperation and construction on challenging terrain. This phase will also be somewhat dependent upon future land development at the sound end of the peninsula, over which a trail easement must be secured.

## *8.5 Preliminary Opinion of Probable Cost*

The following table provides a preliminary cost estimate for implementing selected components of the prototype greenway. Please note the following:

- The cost estimates were prepared for a non-prevailing wage situation; for public prevailing wage construction, various add-on wage rates must be added, based on factors such as kind of construction.
- Drainage structure cost estimates are based on 12" plastic pipe with end sections and rip-rap; it is estimated that there will need to be one structure for each 500± linear feet of trail, on stone trails only.

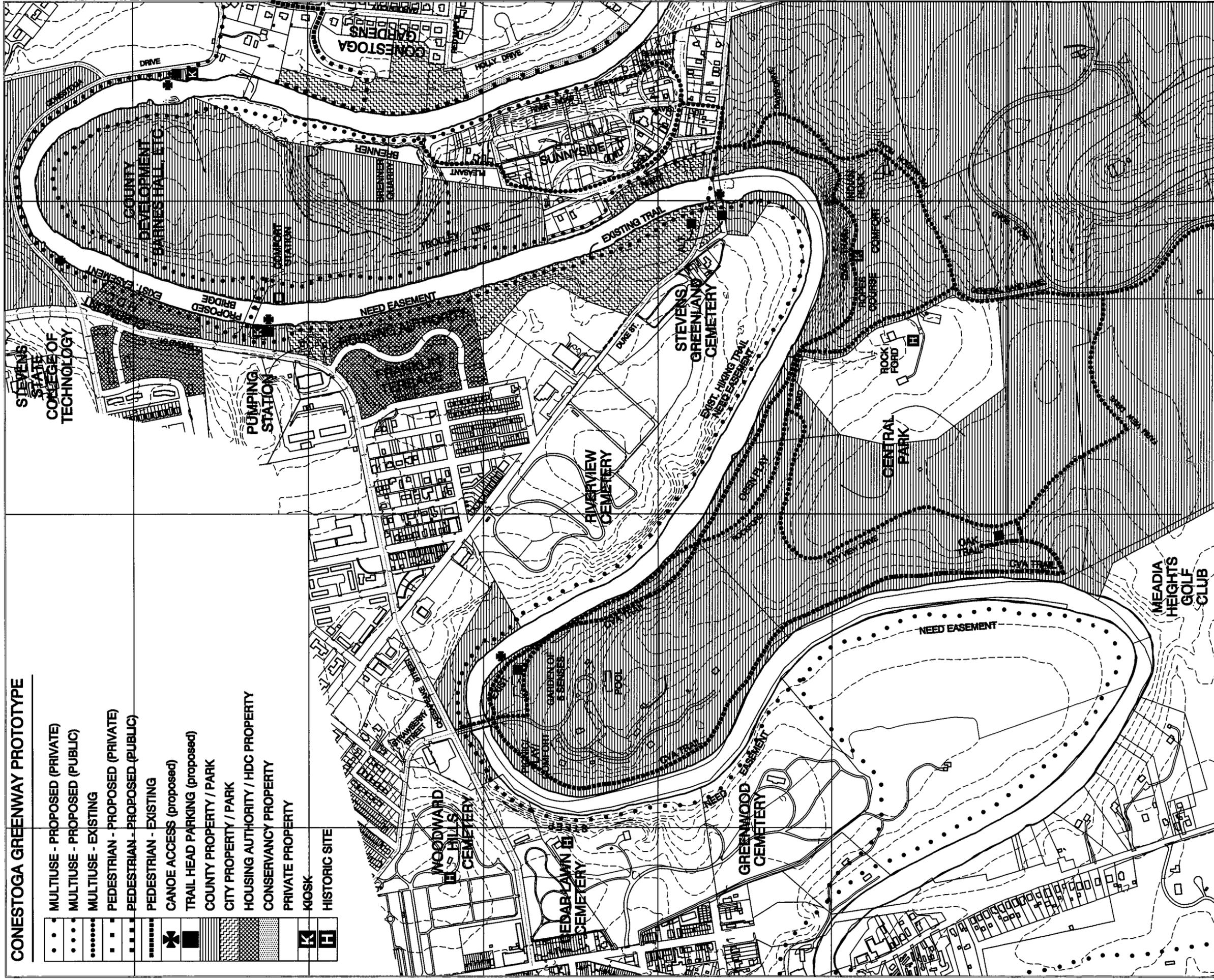
- Paved trails are proposed along existing roads; cost estimates are based on stone trails in all other locations.
- The cost estimates do not include shelters, comfort stations, water fountains, street improvements, improvements to existing utilities in the streets, lighting (except as noted for Trail Heads), rock excavation, topsoil or earth import/export, or permits.

Table 5: Preliminary opinion of the probable cost for constructing the prototype greenway

FEATURE	QUANTITY	UNIT	UNIT \$	ITEM TOTAL
<b>SINGLE TRAIL HEAD</b>				
(1) Clear and Grub Parking Lot	8,450	Square Foot	\$0.08	\$676
(2) Strip Topsoil for Lot	135	Cubic Yard	\$2.00	\$370
(3) Cut and Fill w/o Stockpile for Lot	938	Cubic Yard	\$3.00	\$2,814
(4) Replace Topsoil for Lot	60	Cubic Yard	\$4.00	\$240
(5) Pave 26 Car Parking Lot	938	Square Yard	\$13.00	\$12,194
(6) Average Access Drives to Lots	75	Linear Feet	\$85.00	\$4,875
(7) Bicycle Rack	1	Each	\$450.00	\$450
(8) Benches (metal)	1	Each	\$1,350.00	\$1,350
(9) Trash Receptacles (metal)	1	Each	\$1,050.00	\$1,050
(10) Dusk to Dawn Light	1	Each	\$800.00	\$800
Single Trail Head Subtotal = \$24,819				
Multiply by Number of Proposed Trail Heads = 4 x				
TRAIL HEAD SUBTOTAL = \$99,276				
<b>CANOE ACCESS</b>				
(1) Clear and Grub	480	Linear Feet	\$1.00	\$480
(2) Cut and Fill with out Stockpile	480	Linear Feet	\$0.80	\$384
(3) 6" Crushed Stone (12 foot wide path)	480	Linear Feet	\$6.00	\$2,880
CANOE ACCESS SUBTOTAL = \$3,744				
<b>SIGNS</b>				
(1) Trail Sign (8" x 8" routed post)	45	Each	\$100.00	\$4,500
(2) Interpretive Sign (1' x 2' metal on wood post)	10	Each	\$300.00	\$3,000
(3) Greenway Sign (2' x 3' metal on metal post)	5	Each	\$200.00	\$1,000
(4) Kiosks	3	Each	\$4,000.00	\$12,000
SIGNS SUBTOTAL = \$20,500				
<b>STONE HIKING AND BICYCLING TRAIL</b>				
(1) Clear and Grub	19,200	Linear Feet	\$0.55	\$10,560
(2) Cut and Fill with out Stockpile	19,200	Linear Feet	\$0.88	\$16,896
(3) 6" Crushed Stone (8 foot wide path)	19,200	Linear Feet	\$4.00	\$76,800
(4) Drainage	38	Each	\$940.00	\$35,720
PROPOSED STONE TRAIL SUBTOTAL = \$139,976				
<b>PAVED HIKING AND BICYCLING TRAIL</b>				
(1) Clear and Grub	19,560	Linear Feet	\$0.55	\$10,758
(2) Cut and Fill with out Stockpile	19,560	Linear Feet	\$0.88	\$17,213
(3) Bituminous Paving (8 foot wide path)	19,560	Linear Feet	\$6.70	\$131,052
(4) Drainage	0	Each	\$940.00	\$0
PROPOSED PAVED TRAIL SUBTOTAL = \$159,023				
OPINION SUBTOTAL = \$422,519				
15% Contingency = \$63,378				
<b>GRAND TOTAL = \$485,897</b>				

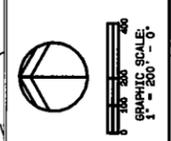
**CONESTOGA GREENWAY PROTOTYPE**

- MULTISE - PROPOSED (PRIVATE)
- MULTISE - PROPOSED (PUBLIC)
- MULTISE - EXISTING
- PEDESTRIAN - PROPOSED (PRIVATE)
- PEDESTRIAN - PROPOSED (PUBLIC)
- PEDESTRIAN - EXISTING
- CANOE ACCESS (proposed)
- TRAIL HEAD PARKING (proposed)
- COUNTY PROPERTY / PARK
- CITY PROPERTY / PARK
- HOUSING AUTHORITY / HDC PROPERTY
- CONSERVANCY PROPERTY
- PRIVATE PROPERTY
- KIOSK
- HISTORIC SITE



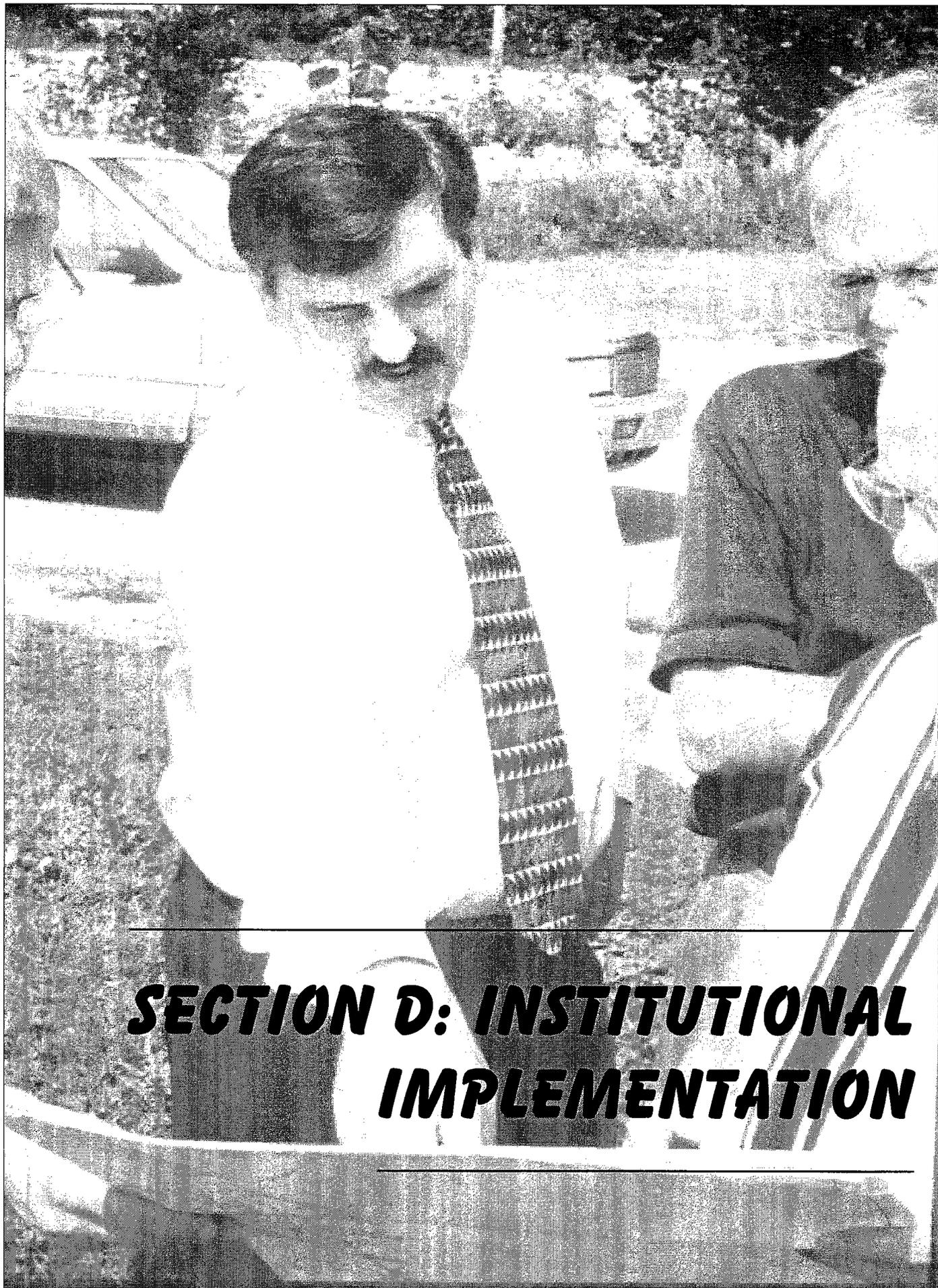
**NOTES:**  
 This drawing is prepared for the use of the local jurisdiction. It is not intended to be used for any other purpose. The user of this drawing is responsible for obtaining all necessary permits and approvals from the appropriate authorities. The user of this drawing is also responsible for obtaining all necessary information regarding the project and the site. The user of this drawing is also responsible for obtaining all necessary information regarding the project and the site. The user of this drawing is also responsible for obtaining all necessary information regarding the project and the site.

**Conestoga  
 Greenway**  
 Lancaster County, Pennsylvania



**LIMC**  
 Landmark Information Management Company, Inc.  
 P.O. Box 4000  
 1000 Walnut Street, Suite 4000  
 Philadelphia, PA 19106-4000  
 Tel: (215) 426-4000





---

***SECTION D: INSTITUTIONAL  
IMPLEMENTATION***

---



---

## 9. FUNDING MECHANISMS

---

There are a number of approaches that can be used to effectively develop funding opportunities for greenway projects. In recent years, consistent sources for funding have been effectively used in many communities throughout the country. In financing greenway projects, all available financial partnerships need to be examined. Typically, the more diverse and varied the sources of funding, the better. For example, it is much easier to obtain funding from federal and state agencies when a broad coalition of local support already exists.

Outside funding should be obtained for the following greenway activities:

- land acquisition;
- establishing conservation easements;
- trail construction and maintenance;
- facilities related to trails;
- habitat restoration (e.g. tree planting, stream bank stabilization);
- environmental education; and
- building and increasing public awareness about open space protection.

### *9.1 Federal Sources for Funding*

As with many other public projects in these times of shrinking federal expenditures, greenways are not eas-

ily funded. However, numerous possible sources of money exist that can be tapped if the greenway project has strong public and political support.

#### *a. TEA-21*

On June 9, 1998, President Clinton signed into law a new federal transportation bill called TEA-21, the Transportation Equity Act for the 21st Century. It is in every sense a direct successor to the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). In spite of TEA-21's complexity, this new law both leaves the groundbreaking reforms of ISTEA intact and provides new opportunities for innovation.

A significant difference between ISTEA and TEA-21 has to do with money that the federal government will make available for transportation enhancements. Specifically, TEA-21 authorizes \$217 billion in funding over six years—40% more than ISTEA. Actual funding flowing to the states is unlikely to increase by 40%. In most states, funding will be higher, but the difference will be incremental rather than revolutionary. The good news is that the program structure of TEA-21 replicates that of ISTEA, with only a few minor exceptions.

In spite of the benefits transportation spending has brought to some communities, it has undeniably brought problems such as loss of open space and fracturing of communities. ISTEA recognized this and created the Transportation Enhancements Program to encourage diverse modes of travel, fostering local economic development, and bringing direct benefits to

communities from transportation spending. Projects eligible for this funding include improvements to bicycle and pedestrian infrastructure, and scenic and historic preservation. The Transportation Enhancements Program makes the critical link between communities and transportation.

TEA-21 expands the support of bicycling and walking established by ISTEA. All of ISTEA's most important provisions were retained, and a few policies, programs, and eligibility's were added.

⇒ **Policies:** Section 1202 of TEA-21 creates a new standard for consideration of bicycle and pedestrian needs when road projects are undertaken. Bicycle and pedestrian facilities “..shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities, except where bicycle and pedestrian use is not permitted.” It also helps protect existing bicycle and pedestrian routes from disturbance.<sup>1</sup>

⇒ **Planning:** Consideration of bicycle facilities and pedestrian accommodations in long range transportation plans is explicitly mandated in TEA-21. Three sections of the bill—Section 1202 (Bicycle Transportation and Pedestrian Walkways), Section 1203 (Metropolitan Planning), and Section 1204 (Statewide Planning)—stipulate that transportation plans and programs must, “...provide for the development and integrated management and operation of transportation systems and facilities (including pedestrian walkways and bicycle transportation facilities)...”<sup>2</sup>

⇒ **Design Guidance:** To help determine how the accommodation called for above can be reached, the bill directs USDOT to consult with interested parties—such as the Planning Committee for the LIMC's Greenway and Park Advisory Board (GPAB)—to develop guidance on various approaches to accommodate bicycle and pedestrian travel. Specifically, the guidance developed through this process is to include recommendations on updating the policies and recommendations by the American Association of State Highway and Transportation Officials (AASHTO) that relate to street design standards to accommodate bicyclists and pedestrians. This provides an excellent opportunity for LIMC's GPAB to work with the USDOT to rethink the current approach to street design and ensure bicyclists and pedestrians are accommodated everywhere they are permitted.<sup>3</sup>

⇒ **Safety:** TEA-21 modifies the Hazard Elimination program to ensure that projects to protect the safety of bicyclists are eligible for federal safety funds. It expands the range of facilities eligible for these funds to include publicly owned bicycle and pedestrian pathways and trails—such as the Conestoga Greenways—and makes traffic calming an eligible activity. This makes more than \$620 million per year in safety money potentially available for bicycle, pedestrian, and traffic calming projects.<sup>4</sup>

The Conestoga Greenways may very well qualify for TEA-21 funds because of the population that will be served by the greenway trails and because the trails will provide transportation alternatives within the

1 Adapted from: Surface Transportation Policy Project, **TEA-21 User's Guide: Making the Most of the New Transportation Bill**, D.C.:Washington: STPP, 1998.

2 Ibid.

3 Ibid.

4 Ibid.

County. Chapter 2 of this report describes why the planning area is an excellent location for a system of interconnected greenways.

For additional information on TEA-21, contact the Surface Transportation Policy Project  
1100 17th Street, NW  
Tenth Floor  
Washington, DC, 20036  
202-466-2636

email: [stpp@transact.org](mailto:stpp@transact.org)  
web: [www.transact.org](http://www.transact.org)  
[www.tea21.org](http://www.tea21.org)

### *b. Rivers, Trails, and Conservation Assistance Program (RTCA)*

The Rivers, Trails, and Conservation Assistance Program (RTCA) of the National Park Service works with communities to conserve land and river resources in urban and suburban areas, far from the boundaries of a national park. This program is well suited for development of the Conestoga Greenways in achieving both resource and rivers conservation initiatives. If selected, an RTCA staff member would be assigned to work closely with the LIMC, providing assistance in working with adjacent landowners in obtaining properties for greenways development. The regional office for the RTCA is located in Philadelphia at the following address:

National Park Service  
Rivers, Trails, and Conservation Assistance Program  
200 Chestnut Street, Room 260  
Philadelphia, PA 19106  
Robert Potter, Chief  
(215) 597-1787

## *9.2 State of Pennsylvania Sources for Funding*

The LIMC Regional Park and Open Space Plan identified a series of funding sources available from the State of Pennsylvania that meet the objective of providing recreation opportunities. Greenways meet many crite-

ria for providing recreational opportunities for municipalities. Funding sources include the following:

### *a. Keystone Recreation, Park, and Conservation Fund*

The Keystone Recreation, Park and Conservation Fund Act of 1993 designates funding for Pennsylvania State Parks and forest systems, improvements to local parks and recreation facilities, natural areas, historic sites, educational facilities, zoos, public libraries, and rivers protection and conservation. Grant funding is administered by the following agencies:

- Department of Conservation and Natural Resources (DCNR)
- Department of Education
- Pennsylvania Historical and Museum Commission
- State System for Higher Education
- Pennsylvania Fish and Boat Commission
- Game Commission

### *b. DGNR Planning, Implementation, and Technical Assistance (PITA) Grant Programs*

Funding is also available as part of the Planning, Implementation, and Technical Assistance (PITA) Grant Programs. Under this program, there are three types of grant programs:

❶ Community Grant Program, which provides assistance for the following:

- Circuit Riders
- Comprehensive Recreation, Park and Open Space Plans
- Greenway Plans
- Master Site Plans
- County Natural Areas Inventories
- Peer-to-Peer Technical Assistance

② Pennsylvania Rails-to-Trails Grant Program, providing assistance for the following:

- Rail-Trail Feasibility Studies
- Rail-Trail Master Plans
- Rail-Trail Special Purpose Studies

③ Pennsylvania Rivers Conservation Grant Program providing assistance for the following:

- Rivers Conservation Plans
- Rivers Implementation Projects

Other grant programs with direct application for greenways development and rivers conservation planning include the Pasture Stream Bank Fencing grant program available from the Game Commission. Under this program, the State will perform the installation of stream bank fencing at no cost to the land owner. The devices must remain in place for a period of no less than 10 years. Also of note, Community Forestry Grants are available through the Bureau of Forestry whereby money is made available for reforestation projects and planting along greenbelts.

The broad range of funding initiatives available from DCNR is well suited to meet an equally broad range of management objectives for the Conestoga Greenways and rivers conservation plan.

#### *c. DCNR Acquisition and Development Program*

① Community Grant Program provides assistance for the following:

- Acquisition: Grants for the purchase of land for park, recreation, and conservation purposes.
- Park Rehabilitation and Development: Grants for the rehabilitation of existing parks, indoors and outdoor recreation facilities, and development of new park and recreation areas.
- Small Communities / Small Projects: This is a special component for municipalities with a population of 5,000 or less. Grants are limited to a maximum of \$20,000 and

will provide up to 100% funding of only material costs and professional design fees.

② Rails To Trails Grant Program provides assistance for the following:

- Acquisition: Grants for the purchase of abandoned railroad rights-of-way for public recreation trail use and the purchase of adjacent land for for access or related support facilities.
- Rehabilitation and Development: Grants for rehabilitation and development of abandoned rights-of-way and support facilities for public recreation trail use.

③ Rivers Conservation Grant Program provides assistance for the following:

- Acquisition: Grants for the purchase of land for rivers conservation purposes.
- Development: Grants for the development of river conservation projects recommended in the approved Rivers Conservation Plan.

#### *d. Pennsylvania Department of Transportation Enhancement Projects*

These grants are available for enhancement projects as part of the TEA-21 funding program described above under Federal Sources for Funding. Although there has not been a maximum grant amount established, Enhancement Project grants can account for 80% of the total project cost. PennDOT typically processes requests for funding assistance through the Lancaster County Planning Commission.

#### *Pennsylvania Recreation Trails Program (Symms Act)*

The Symms National Recreational Trails Act of 1991 (part of ISTEA) is a program that allocates funds to states for recreation trails and trail related projects. Funds are typically used for trail maintenance, acquisition and development of trails, trail head facilities such as informational signage and parking, and improving access to trails for persons with disabilities. Funding such as this would play a significant role in achieving

the goals for Linear Parks and Trails Greenways. The Pennsylvania Department of Conservation and Natural Resources administers this program in association with the Pennsylvania Recreation Trails Program.

#### *Pennsylvania Land and Water Conservation Fund*

The LWCF has provided small amounts of funding to municipalities for land acquisition and park development. This program utilizes federal dollars that are distributed by the State. A key criteria is that land must be owned by the applicant (municipality) if park improvements are proposed. Such a program has direct application for greenways development on existing public park land within the planning area.

#### *Pennsylvania Department of Environmental Protection-Division of Drinking Water Management*

The Federal Safe Drinking Water Act provides money to states to purchase land for water quality protection. The Act has appropriated 8.9 billion dollars over a 5 year period for states to distribute at the local level in the form of long-term loans. The intention is to provide assistance to communities where public water systems are already in place, but are vulnerable to contamination from pollution associated with development. Because Resource Conservation Greenways are an effective tool for providing increased protection of water resources, the Act has direct application for greenways development.

### *9.3 Local Sources for Funding*

#### *a. Lancaster County Community Park Initiative Grants*

Although Lancaster County awards grants to County municipalities for acquisition and development of parkland, municipalities must match the grant amount with a minimum of 50% in local dollars. As with sources for State funding, greenways development should be considered as part of an overall park land development and acquisition program.

#### *b. Intergovernmental Cooperation Demonstration Grants of Lancaster County*

Lancaster County offers grants to municipalities and qualified non profit organizations for projects that demonstrate effective intergovernmental cooperation. The County believes this will encourage creative solutions that involve working together. This program should be considered for its applicability to greenway projects, due to their innovative and intermunicipal nature.

#### *c. Municipal Bonds for Capital Improvement Projects*

Bond funds are money that can be borrowed by a municipality or local authority and used to implement a pre-approved set of capital improvement projects. As identified in the Regional Park and Open Space Plan, bonds can be General Obligation Bonds, which are paid back from a municipality's general revenues, or they can be Revenue Bonds which are retired from revenues generated by specific community improvements. A bond issue can be appropriated to fund projects with a long life expectancy. Development of greenways are an excellent application for such bond programs. Payments should be spread over the many years during which the project's benefits will be utilized by the community. It is important to note that the total cost of a project which has been funded through a bond issue will ultimately end up costing more because of lending interest charges. Bonds are most effectively used during periods of low interest rates.

### *9.4 Funding through Non-Profit Foundations*

Non-profit foundations can play a critical role in funding greenway and river conservation projects. These organizations can provide assistance in greenways development through the administration of land trusts programs, by assisting in establishing conservation easements, by helping to leverage funding from the public sector, or by making funds available. The amount of actual grant funding that can be awarded for greenways planning and development by a non-profit foun-

ation is dependent upon the mission of the granting organization. Some examples include:

*a. The American Greenways DuPont Awards Program*

The American Greenways DuPont Awards is a partnership project of DuPont, The Conservation Fund and the National Geographic Society. The program provides small grants to stimulate the planning and design of greenways in communities. Grants are small in size (up to \$2,500) and are used for activities such as mapping, ecological assessments, surveying, conferences, design activities, brochures, interpretive displays, etc.

American Greenways  
The Conservation Fund  
1800 North Kent Street - Suite 1120  
Arlington, VA 22209  
(703) 525-6300

*b. The Ressler Mill Foundation*

The Ressler Mill Foundation was established in 1967 by siblings Anna C., W. Franklin and William K. Ressler to preserve and open to the public the Ressler homestead. Grants are made available for:

- Research, recording and publishing of the history of milling, rural mills, the milling industry and technology, and the effect of milling on the economy and culture.
- The acquisition, preservation, restoration, and operation of educational, non-profit historic mill sites.
- Projects which are expected to result in significantly enhancing the goals and objectives of the Foundation. Priority is given to projects which rank high in urgency. Grants must be expended within one calendar year. Grants will be typically made available to 501(c)(3) non-profit organizations.

The Ressler Mill Foundation  
29 East King Street - Room 14  
Lancaster, PA 17602  
(717) 481-7702

*c. William Penn Foundation*

William Penn Foundation is a private grant making organization founded in 1945 by Otto and Phoebe Haas. Historically, the Foundation has concentrated its efforts to improve the quality of life in the greater Philadelphia area. In recent years, the organization has expanded its mission to include programs that specialize in environmental issues. The region in which the organization will fund projects now spans from Atlantic City to Harrisburg and as far north as the Delaware Water Gap.

The Foundation supports programs that conserve and improve the natural resources of the region and that promote access to and stewardship of those resources. It supports efforts that will enhance the development of sustainable environmental policies. Goals include the following:

- promoting open land preservation with funding priorities focused towards preserving natural areas that will protect habitat, biodiversity, and fresh water, while protecting important agricultural areas. More importantly, the organization supports regional cooperation in planning and implementation projects with specific priority given to the development of greenways and parks.
- supporting environmental education with specific support given to public information activities that protect and enhance the environment and improve or augment environmental programs.

Although grants are often limited to 501(c)(3) non-profit organizations, grants are occasionally made to government entities.

The William Penn Foundation  
Two Logan Square - 11th Floor  
Philadelphia, PA 19103  
(215) 988-1830

*d. The Chesapeake Bay Foundation - Revolving Loan Fund*

In the late 1980s, the Chesapeake Bay Foundation (CBF) was able to set up a Revolving Loan Fund. This

fund, when no debt is outstanding, totals about \$500,000 and is made available to groups or individuals solely for land conservation purposes. These short-term funds may be used to help secure an option, provide a bridge loan, furnish money for a down payment, or be part of a larger purchase effort by a variety of other funding sources. There is no set limit on the loan amount. Loans are generally made for one year and are renewable. Interest payments are generally set below market rates. Some form of collateral, or the land itself, is required to secure the loan. There are no income limits for applicants, however the conservation of the property must be guaranteed in perpetuity. CBF's priorities include protection of wetlands and forests, special habitats, waterfront land, farmland, and land that helps to promote growth management goals such as greenbelts or greenways. CBF also promotes habitat restoration on conservation lands whenever possible to bolster wetlands and forest mass within a watershed. CBF can help plan and design such projects with landowners and conservation buyers.

The Chesapeake Bay Foundation  
162 Prince George Street  
Annapolis, MD 21401  
(410) 268-8816

#### *e. The Trust for Public Land*

The Trust for Public Land (TPL) is a national non-profit land conservation organization founded in 1972 to protect land for the public's use and enjoyment. TPL's goal is to conserve land for people, which it accomplishes through several programs. Its principal program is acquiring lands suitable for open space and parks and conveying them to public agencies for ownership and management. TPL has completed more than 1,000 projects, safeguarding more than 800,000 acres of historic, natural and scenic lands throughout the country. TPL works with government agencies, at their request or invitation, to acquire land for conservation and public use through a variety of ways. These include:

- **Buying Time:** Because of budgetary, staffing and legal constraints, public agencies, such as the LIMC, frequently are not in a position to act when important parcels of land become available. TPL responds quickly to opportunities to secure land for conservation and bridges the gap

between the time the land is available, and the time public purchase is possible.

- **Complex Acquisition Challenges:** Public agencies often do not have the time or staffing capacity to work through complex acquisition issues. TPL's project staff is supported by financial and legal specialists.
- **Meeting Land Owner Needs:** TPL is experienced in structuring transactions to meet the special needs of landowner, such as life estates, annuities, and estate planning strategies. TPL has the flexibility to work out arrangements that are beyond public agencies' legal authority.

It is TPL's policy to then sell the land to public agencies at fair market value. Typically, TPL does not request reimbursement for any of its costs. TPL acquires land in its own name and does not act as a broker or agent of governmental agencies. The TPL has a track record of helping to facilitate greenways projects through their Green Cities Initiative program. Example projects include the Gwynns Falls Trail in Baltimore, the Chattanooga Greenways System, and the Mountain Sound Greenway that links the Cascade Mountains to Puget Sound in Washington State.

The Trust for Public Land  
Mid-Atlantic Regional Office  
666 Broadway  
New York, NY 10012  
(212) 677-7171

#### *f. The American Farmland Trust*

The American Farmland Trust works to save farmland from development through their revolving loan fund. Their goal is to save land so that it will continue to be farmed. The Trust will actually buy farmland that is vulnerable to or in danger of being sold for commercial or residential development. They will then sell the development rights on the land and locate a buyer who will only practice agriculture on the land. The Trust specifies that they generally will hold title to the land for a relatively short period of time (a 24 month period for example). Although the American Farmland Trust should not be looked upon as being the first choice of funding for the protection of farmland and scenic open space, they can provide a means for saving selected

pieces of valuable land that may be designated as a scenic greenway.

The American Farmland Trust  
1920 N Street, NW - Suite 400  
Washington, DC 20036  
(202) 659-5170

### *g. The National Trust for Historic Preservation*

The National Trust for Historic Preservation, chartered by Congress in 1949, is considered the leader of the national preservation movement. The Trust provides technical advice and financial assistance to non-profit organizations and public agencies engaged in preservation. The Trust also sponsors programs that demonstrate how preservation can stimulate community revitalization and economic development.

#### *National Preservation Loan Fund*

The National Preservation Loan Fund promotes the revitalization of commercial and industrial centers, the conservation of neighborhoods and rural communities, the protection of endangered landmarks, and the preservation of archeological and maritime resources. The Fund provides organizations (non-profit and/or public agencies) with loans and other forms of financial assistance to help establish or expand local and statewide revolving funds and loan pools. More importantly, the Fund helps organizations to acquire and rehabilitate historic sites and districts. Funds are generally awarded as below-market rate loans, lines of credit, or participation loans with other lenders. A minimum dollar-for-dollar match usually is required. Maximum terms are up to 5 years and \$150,000 for site-specific projects.

#### *Preservation Services Fund*

The Preservation Services Fund is designed to encourage preservation at the local level by providing seed money for preservation projects. Preservation Services Fund grants are awarded for projects in the following categories: Consultant Services, Preservation Education, and Co-sponsored Conferences. The category most applicable for Conestoga Greenways projects is Preservation Education. Support for preservation education activities might include:

- designing heritage education curricula for state and local school districts;
- preparing a booklet or workshop for local homeowners on how to repair or maintain properties containing historic elements; and
- producing a workbook for school children or local landmarks, history, and architectural styles.

The grant range is between \$500 and \$5,000. Both of these funding programs available from the National Trust can help the Conestoga Greenways planning initiatives, such as historic site interpretation and restoration in scenic preservation greenways.

The National Trust for Historic Preservation  
1785 Massachusetts Avenue, NW  
Washington, DC 20036  
202-588-6000

## *9.5 Other Options*

Other options for funding might include establishing a mechanism whereby contributions may be solicited from the general public and used to fund development of the Conestoga Greenways. The LIMC's Greenway and Park Advisory Board could administer such a program and call it the "Conestoga Greenways Fund."

---

# 10. EDUCATIONAL PROGRAMS

---

Education and information programs which explain the importance of the Conestoga Greenways and rivers conservation are a necessary component of this plan and can help to insure its success. Whereas Chapter 6 contains specific approaches that municipal planners and decision makers should follow when implementing an educational component for the Conestoga Greenways, the following describes in greater detail which groups should be targeted for such programs and why.

Educational programs should be targeted to four primary groups:

- ① landowners living alongside or near a proposed greenway trail;
- ② homeowners who require information about proper fertilizer application, yard maintenance and plant species selection;
- ③ school districts that would like to develop a diverse program of environmental education; and
- ④ members of the agricultural community who through some basic changes in their farming practices can help to reduce impacts to water quality of the waterways.

In addition, this section provides references to other organizations that have prepared educational literature

for landowners explaining how they can minimize the impact to the natural environment by altering how they manage their own property.

## *10.1 Landowners Opposing a Proposed Greenway Trail*

It is not uncommon for greenways to face opposition from landowners living alongside or near the greenway corridor. Whether the adjacent residents live in apartments, condominiums, or single family homes, run a business or are farmers, they all may be opposed to the greenway trail for a variety of reasons—many of which do not consider the positive aspects of greenways and focus on unsubstantiated fears.

Some landowners may fear that trespassers, crime or vandalism will increase because of an influx of outsiders passing on or near their home or land. Others may fear liability. Some may have received wrong information and believe that the greenway represents little more than the taking of their land. They may object on philosophical grounds, believing that government should own as little land as possible or, as landowners, they should receive payment in compensation for public access to the greenway. Ironically, many future neighbors of a greenway trail have no negative opinions toward a trail, but are persuaded to oppose it when other landowners raise concerns.

### *Recommended Educational Programs*

There are a variety of educational approaches that should be considered when working with people who may be in opposition to greenway development. First and foremost, the benefits of greenways must be made simple and clear, and adjacent landowners must be involved in the process. In many ways, the groundwork for this effort has already been laid through the "Celebrate the Conestoga" program which began during the spring of 1995.

- ① Do not wait for nearby residents to learn about the plan for the Conestoga Greenways by reading about it in the newspaper. Talk with them directly, either by going door-to-door, making repeated presentations at municipal offices, or by including literature that describes the plan for the Conestoga Greenways in municipal newsletters. Meet with store owners, community leaders, and others to explain exactly what the proposed plan is and what the greenway's benefits are.
- ② Emphasize that there will be no takings of private property. This can not be repeated enough. Literature should explain that greenways on private property will only occur on a voluntary basis and when the landowner has negotiated a legal agreement. Examples of such agreements, such as conservation easements, conservation trail easements, or limited use agreements should be provided.
- ③ The tax benefits of easement programs should also be explained in simple and easy-to-understand language. Members of local land trusts should provide assistance in explaining these benefits as well as providing assistance to landowners who choose to negotiate an easement.
- ④ Take the time to understand why adjacent landowners are opposed to the greenway. Quite often, many of their concerns stem from fear of the unknown. Explain that such fears are not uncommon and provide examples of successful greenways from other communities. Try to arrive at solutions that benefit as many

landowners as possible. It is not uncommon that a group of residents will band together to oppose the greenway. Yet within these groups, there may be bicyclists, walkers, runners, families with sports-minded children, or individuals with disabilities who want to exercise away from traffic. These people will most likely become supporters of greenway trails.

- ⑤ Work with the local media to help defuse the opposition. Favorable coverage in the media is an excellent way to offset the opposition while gaining support for the Conestoga Greenways. Editors and reporters will ultimately shape how the plan for the greenways is perceived by the community. Provide media contacts with interesting and factual information such as how greenways provide an excellent alternative for recreation, and how they connect neighborhoods with schools, parks, business districts, and community centers providing alternative modes of transportation.

Chapter 11 of this plan identifies key individuals and organizations who should be involved in making the plan for the Conestoga Greenways a success. Contained in this list are members of the media who can provide necessary media support.

### *10.2 Homeowners who Require Information About Proper Fertilizer Application, Yard Maintenance and Plant Selection*

Improper yard care by individual homeowners can be detrimental to the health and vitality of the Conestoga Greenways. This is particularly true for areas targeted for resource conservation greenways and rivers conservation planning initiatives.

### *Recommended Educational Programs*

- ❶ Prepare a series of one-page fact sheets that explain when it is acceptable for homeowners (or renters) to apply fertilizer to their yard, which mixtures will not pose a possible threat to groundwater, and which chemicals should be avoided. Source information should be available from the Lancaster County Parks and Recreation Department, the State of Pennsylvania DCNR, the Penn State Cooperative Extension Service, and private contractors.
- ❷ As described elsewhere in this document, river conservation and improvement techniques such as stream bank stabilization, riparian buffer restoration and controlling runoff of sediment and erosion are essential to the health and vitality of the waterways. Yet, in spite of these planning efforts, some homeowners mow the grass and clear understory plants to the edge of the waterways. However innocuous this may seem, such clearing severely hampers the ability for a waterway to naturally control erosion and sustain important habitat. The irony is most individuals are not aware of the harm that they are causing. Just as with fertilizer management, educational literature should be distributed which explains why this practice of yard care is to be avoided. Literature explaining how to construct and maintain a composting device and why not to dump lawn clippings into the waterways should also be included.
- ❸ Provide a listing of recommended trees, shrubs, ground covers, and seasonal flowers that homeowners can use when choosing what, when, and where to plant. This effort will help to discourage invasive and non-native species from being introduced. Emphasize plants which attract wild-life and provide the best habitat.

The Alliance for the Chesapeake Bay and the U.S. Fish and Wildlife Service, Chesapeake Bay Field Office, have prepared a very useful information series titled A

*Homeowner's Guide*. Particularly helpful are "Integrated Pest Management" and "Bayscaping for the Long Term." For more information on Bayscapes, contact:

U.S. Fish and Wildlife Service  
Chesapeake Bay Field Office  
177 Admiral Cochrane Drive  
Annapolis, MD 21401  
(410) 224-2732

In addition, the University of Maryland Cooperative Extension Service, Home and Garden Information Center (1-800-342-2507) has prepared a series of technical fact sheets targeted for homeowners which explain when to use fertilizers, the benefits of alternative pesticides, and how to control soil erosion around a home. These informative fact sheets are part of the state's ongoing efforts to protect the Chesapeake Bay.

The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) distributes a very helpful fact sheet titled, "When and What to Plant on Streambanks," written by plant materials specialist Robert J. Glennon. This document contains a listing of recommended plant species, an explanation of when to plant and a listing of which nurseries and seed companies stock the species.

Another excellent source which details how individuals can create wildlife habitat areas in their backyard, in school yards, or in parks is titled "Native Plants in the Creation of Backyard, School Yard, and Park Habitat Areas." It is written by Marci Mowery, executive director of the Audubon Council of Pennsylvania. This book and others are available through the Environmental Center in Lancaster County Central Park.

### *10.3 A Diverse Program of Environmental Education for Schools*

The plan for the Conestoga Greenways provides an excellent opportunity for developing a comprehensive program in environmental education for many of the schools within Lancaster County. The Conestoga Greenways could function as a living classroom for students from early elementary school through high school. Students would be able to earn science cred-

its, history credits, or physical education credits towards graduation. Representatives of the Lancaster County and City Parks Department, DCNR, the Conestoga Valley Association, and retired citizens could provide special assistance in developing program curriculum and even be guest teachers for specific events. Chapter 7 of this report contains some site specific implementation opportunities for developing educational programs for school groups.

Example environmental education projects that students could perform include:

- ① Waterways clean-up which would allow students to learn the functional value of rivers and streams and the impacts of urbanization upon these waterways.
- ② Stormdrain stenciling (Don't Dump - Conestoga Waterways Drainage) projects would allow students to learn and educate others on the linkage between storm drains and the waterways. This is probably the only publicly sanctioned graffiti project that they will ever get to do!
- ③ Wildflower plantings would allow students to understand the habitat value of natural vegetation.
- ④ Wetland plantings would allow students to learn about the value the wetlands have upon water quality and habitat, erosion control, stormwater runoff, etc.
- ⑤ Riparian reforestation would teach students about the value of riparian forested areas for wildlife habitat, bank stabilization, and overall water quality.
- ⑥ Trail construction and maintenance.
- ⑦ Historic site information displays.

## 10.4 The Agricultural Community

There are a range of low-cost and low maintenance agricultural techniques available to farmers that, when implemented, can provide improvements to water quality, habitat integrity, and sediment and erosion control for the waterways of the Conestoga. Some of these techniques include stream bank fencing, stream and waterway crossing devices for cattle, environmental farmstead evaluations, construction of mud-free cattle lanes and barnyard runoff management.

Rather than trying to reinvent the wheel, educational materials such as the *Pequea-Mill Creek Information Series*, prepared by the Penn State College of Agricultural Sciences Cooperative Extension Service explain in simple and concise language why farmers should consider implementing these techniques.

Contact: Pequea-Mill Creek Project  
 307B Airport Drive  
 P.O. Box 211  
 Smoketown, PA 17576  
 Attention: Jerry Martin  
 (717) 396-9423

In addition, the Pennsylvania Department of Environmental Protection (DEP), Chesapeake Bay Program has prepared fact sheets which describe the benefits of stream bank fencing and agricultural crossing devices. More importantly, the literature explains how the state will install these devices at no cost to the landowner. These fact sheets are available electronically at no cost via the Internet at <http://www.dep.state.pa.us> (choose Information by Environment Subject/choose Water Management).

Landowners can also contact the Lancaster County Conservation District or phone the Harrisburg Central Office of DEP, Bureau of Land and Water Conservation at (717) 787-5259.

## 10.5 Other Sources for Information on Stream Restoration

"A Streambank Stabilization and Management Guide for Pennsylvania Landowners." Commonwealth of

Pennsylvania, Department of Environmental Resources, Office of Resources Management, Bureau of Water Resources Management, Division of Scenic Rivers. 1986. (Telephone 717-787-2316).

The U.S.D.A. Natural Resources Conservation Service (NRCS) has prepared a handbook titled, "Stream Corridor Restoration Handbook", and is available to the public.

For more information, contact:

Jerry Bernard  
National Geologist  
NRCS  
202-720-0428  
jbernard@usda.gov

Internet site:

[http://www.usda.gov/stream\\_restoration](http://www.usda.gov/stream_restoration)

1 3  
1 4  
1 5  
1 6  
1 7  
1 8  
1 9  
2 0  
2 1  
2 2  
2 3  
2 4  
2 5  
2 6  
2 7  
2 8  
2 9  
3 0  
3 1  
3 2  
3 3  
3 4  
3 5  
3 6  
3 7  
3 8  
3 9  
4 0  
4 1  
4 2  
4 3  
4 4  
4 5  
4 6  
4 7  
4 8  
4 9  
5 0  
5 1  
5 2  
5 3  
5 4  
5 5  
5 6  
5 7  
5 8  
5 9  
6 0  
6 1  
6 2  
6 3  
6 4  
6 5  
6 6  
6 7  
6 8  
6 9  
7 0  
7 1  
7 2  
7 3  
7 4  
7 5  
7 6  
7 7  
7 8  
7 9  
8 0  
8 1  
8 2  
8 3  
8 4  
8 5  
8 6  
8 7  
8 8  
8 9  
9 0  
9 1  
9 2  
9 3  
9 4  
9 5  
9 6  
9 7  
9 8  
9 9

---

# 11. KEY INDIVIDUALS AND ORGANIZATIONS

---

This plan for the Conestoga Greenways has been prepared to guide the LIMC, municipal officials and organizations, non-profit organizations, business entities and other groups or individuals who wish to work cooperatively in developing greenways and providing river conservation in Lancaster County.

It is important to not only identify key organizations and individuals who will be responsible for bringing the recommendations contained in the plan to fruition, but to group them into categories where their skills or abilities to influence change will best be used. Implementation of a plan such as this will ultimately involve representatives of many municipalities, school districts, civic associations, and others since full implementation will require wide-spread support by each group.

Yet one of the greatest challenges is in determining who should be responsible within each organization and how their skills might be utilized most effectively. For these reasons, this plan contains a detailed matrix of key organizations and individuals in Lancaster County who should be directly involved in making the plan for the Conestoga Greenways a success (see pages 117 - 122). Striving to develop as complete a listing as possible, the matrix contains more than 100 organizations in Lancaster County.

The matrix is actually broken down into two matrices which group organizations and individuals representing a public organization (municipal government, school districts, park providers, or utilities), and private or non-profit groups (civic associations, environmental groups, historic organizations, etc.).

The three matrices group each entry in one or more of seven specific categories for application. These categories include:

- Administration;
- Development and Implementation;
- Maintenance;
- Natural Resources;
- Recreation;
- Historic; and
- Tourism/Economic Development.

For example, East Hempfield Township is grouped into the *Public* category with specific categorization under *Administration*, *Development and Implementation*, and *Maintenance*. The assumption underlying this grouping is that a Township manager would provide overall administrative guidance for the segments of greenways within his Township; would assist in developing the plan that would actually implement greenways; and

would be responsible for providing the necessary maintenance of greenway trails and facilities.

Similarly, the Conestoga Valley School District is also grouped into the *Public* category, but with specific categorization under *Natural Resources*, *Recreation*, and *Historic*. Here the assumption is that the Superintendent would promote educational programs for students in areas such as natural resources (earth science), recreation (trail maintenance), and historic (interpretive displays) all with a specific emphasis placed on

greenways. The goal is that the Superintendent would work to make the Conestoga Greenways a living classroom for students.

As with many components of this plan, the matrix of key organizations and individuals should be viewed as a "living document" subject to periodic revision as the leadership in organizations changes. New groups or organizations should be added to the matrix when and where needed.

*Key Organizations and Individuals*  
**PUBLIC SECTOR**

	Administration	Development Implementation	Maintenance	Natural Resources	Recreation	Historic	Tourism Economic Development
Conestoga Valley School District (Superintendent)			✓	✓	✓	✓	
East Hempfield Township (Township Manager)	✓	✓	✓				
East Lampeter Township (Township Manager)	✓	✓	✓				
East Lampeter Township Parks & Recreation Commission	✓	✓	✓		✓		
East Petersburg Borough (Borough Manager)	✓	✓	✓				
Hempfield Area Recreation Commission	✓	✓	✓		✓		
Hempfield School District (Superintendent)				✓	✓	✓	
Lancaster Area Sewer Authority		✓	✓				
Lampeter - Strasburg Recreation Commission	✓	✓	✓		✓		
Lampeter - Strasburg School District (Superintendent)			✓	✓	✓	✓	
City of Lancaster Bureau of Parks and Public Property	✓	✓	✓	✓	✓		
Lancaster City Arts Commission						✓	
Lancaster County Agricultural Preserve Board		✓		✓			
Lancaster County Department of Parks and Recreation	✓	✓	✓	✓	✓		
Lancaster City Housing Authority		✓	✓	✓	✓		
Lancaster Recreation Commission	✓	✓	✓		✓		
Lancaster County Commissioners	✓	✓					✓
Lancaster County Conservation District		✓		✓			

	Administration	Development Implementation	Maintenance	Natural Resources	Recreation	Historic	Tourism Economic Development
Lancaster County Library						✓	
Lancaster County Planning Commission	✓	✓					
LIMC Greenway Park Advisory Board (CPAB) and GPAB Committees: - Planning Committee - Public Awareness Com. - Technical & Reg. Com.	✓	✓	✓	✓	✓	✓	✓
Lancaster Sewer Authority		✓	✓				
Lancaster Shade Tree Commission			✓	✓	✓		
Lancaster Township (Township Manager)	✓	✓	✓				
Lancaster Township Park and Recreation Commission	✓	✓	✓	✓	✓		
Lancaster Water Authority		✓	✓				
Landis Valley Museum						✓	
Manheim Township (Township Manager)	✓	✓	✓				
Manheim Township School District (Superintendent)			✓	✓	✓	✓	
Manheim Township Parks and Recreation Commission	✓	✓	✓	✓	✓		
Manor Township (Secretary-Treasurer)	✓	✓	✓				
Manor Township Parks and Recreation Commission	✓	✓	✓	✓	✓		
Millersville Borough (Borough Manager)	✓	✓	✓				
Millersville Borough Park Committee	✓	✓	✓	✓	✓		
Millersville University		✓	✓	✓	✓		
Mountville Borough (Borough Secretary)	✓	✓	✓				
Mountville Borough Park Committee	✓	✓	✓	✓	✓		

	Administration	Development Implementation	Maintenance	Natural Resources	Recreation	Historic	Tourism Economic Development
Pennsylvania Department of Conservation and Natural Resources: Bureau of Recreation and Conservation				✓	✓		
Penn Manor School District (Superintendent)			✓	✓	✓	✓	
Pennsylvania Power and Light Company		✓					
Pequea Township (Township Secretary-Treasurer)	✓	✓					
Pequea Township Environmental Advisory Committee				✓			
Natural Resources Conservation Service		✓		✓			
School District of Lancaster (Superintendent)			✓	✓	✓	✓	
Suburban Lancaster Sewer Authority		✓	✓	✓	✓		
West Hempfield Township (Township Manager)	✓	✓	✓				
West Lampeter Township (Township Administrative Assistant)	✓	✓	✓				

*Key Organizations or Individuals*  
**PRIVATE OR NON-PROFIT**

	Administration	Development Implementation	Maintenance	Natural Resources	Recreation	Historic	Tourism Economic Development
Alliance for the Chesapeake Bay				✓			
American Association of Retired Persons						✓	
American Society of Landscape Architects - Penn Del Chapter		✓		✓	✓		
Area houses of worship			✓	✓	✓	✓	

	Administration	Development Implementation	Maintenance	Natural Resources	Recreation	Historic	Tourism Economic Development
Boy Scouts of America - Pennsylvania Dutch Council			✓	✓	✓	✓	
Boys & Girls Club of Lancaster			✓	✓	✓	✓	
Building Industry Association (BIA)							✓
Chesapeake Bay Foundation				✓			
Citizens for Responsible Growth		✓					
Conestoga Area Historical Society						✓	
Conestoga Valley Assoc.		✓	✓	✓	✓	✓	
Ducks Unlimited				✓			
East Petersburg Historical Society						✓	
Sportsman Associations				✓			
Franklin and Marshall College				✓	✓		
Heritage Center of Lancaster						✓	
Historic Preservation Trust of Lancaster, County						✓	
Intelligencer Journal							✓
Lancaster Alliance					✓		
Lancaster Bicycle Club			✓		✓		
Lancaster Canoe Club		✓			✓		
Lancaster Catholic High School			✓	✓	✓	✓	
Lancaster Chamber of Commerce and Industry							✓

	Administration	Development Implementation	Maintenance	Natural Resources	Recreation	Historic	Tourism Economic Development
Lancaster Country Day School			✓	✓	✓	✓	
Lancaster County Association of Realtors							✓
Lancaster County Bird Club			✓	✓			
Lancaster County Conservancy	✓	✓		✓		✓	
Lancaster County Historical Society						✓	
Lancaster Group of Sierra Club			✓	✓			
Lancaster Heritage and Environment Alliance				✓		✓	
Lancaster Hiking Club			✓		✓		
Lancaster Mennonite High School			✓	✓	✓	✓	
Lancaster Mennonite Historical Society						✓	
Lancaster New Era							✓
Lancaster Road Runners Club			✓		✓		
Lancaster Sunday News							✓
Mens Garden Club			✓	✓			
Muhlenberg Botanical Society			✓	✓			
National Off-Road Bicycle Association (NORBA)			✓		✓		
Penn Dutch Pacers			✓		✓		
Penn Laurel Girl Scout Council			✓	✓	✓		
The Pioneers							

	Administration	Development Implementation	Maintenance	Natural Resources	Recreation	Historic	Tourism Economic Development
Rails to Trails Conservancy		✓	✓	✓	✓		✓
Representative Thomas Armstrong		✓					✓
Representative Arthur D. Hershey		✓					✓
Representative Leroy Zimmerman	✓						✓
Representative Jere W. Schuler	✓						✓
Representative Jere L. Strittmatter	✓						✓
Representative Michael Sturla	✓						✓
Representative Katie True	✓						✓
Senator Gibson E. Armstrong	✓						✓
Senator Noah W. Wenger	✓						✓
Sertoma Club of Lancaster			✓		✓		
Trout Unlimited Donegal Chapter		✓	✓	✓	✓		
The Nature Conservancy		✓	✓	✓			
Waterfowl USA		✓	✓	✓			
Welcome Wagons			✓	✓	✓		✓
Women's Garden Club of Lancaster			✓	✓			
YWCA			✓	✓	✓		
YMCA			✓	✓	✓		

---

## 12. NEXT STEPS

---

### *Overview*

While it is important to remember that the process of thoroughly developing and implementing a greenway and river corridor conservation plan for the Conestoga may take many years to be fully realized, there are a number of immediate actions that can be taken to get the process underway. The pro-active approach taken by the LIMC Greenway and Park Advisory Board and Planning Committee combined with preparation of this document are excellent first steps.

### *Recommended Next Steps*

The following briefly outlines the next steps that should be taken by the LIMC to begin implementing the plan for the Conestoga Greenways. It is important to remember that although this plan contains many recommendations and approaches, a general rule of thumb is to go for the easiest victories first. This does not intend to diminish or discourage any of the larger or more ambitious recommendations, but rather works to build community support through demonstrated accomplishments. The adage "success breeds success" is directly applicable to further this greenway and river conservation plan.

### *The Strategic Implementation Matrix*

The Strategic Implementation Matrix, located at the end of this chapter, contains nearly 80 specific greenway implementation activities. These activities have been grouped into four categories:

- Activities that constitute the prototype greenway project;
- Site-specific activities along or near the Conestoga River;
- Site-specific activities along or near the Little Conestoga Creek and the West Branch of the Little Conestoga Creek; and
- Activities that are not site-specific

In addition, the matrix also identifies:

- Lead Responsibility - Which group or entity should have the lead responsibility for seeing that implementation of the activity is managed or supervised in an effective manner.
- Cost - A general estimate or magnitude of cost to implement the activity. Detailed cost estimates will be developed as planning and design for each of the individual activities occur.

- Priority - Four priority rankings indicate an anticipated time-frame for when each of the activities might be implemented.

The recommendations detailed in the Strategic Implementation Matrix should be reviewed annually to insure that the plan for the Conestoga Greenways is being implemented on schedule (also see 12.4: Annual Work Plan). This annual review also provides an opportunity to amend sections of the plan, and/or Strategic Implementation Matrix, in response to changing conditions—fiscal, land use, or political.

## *12.1 Begin to Implement the Prototype Greenway*

The plans to secure funding for implementing the prototype greenway presented in Chapter 8 should proceed forward as quickly as possible. The proposed site parallels the Conestoga River; is strategically located in close proximity to the population center for Lancaster County; is crossed by a major street and is paralleled by public streets—all of which provide ready access; and is surrounded by significant expanses of scenic land. In addition, the plan for the prototype greenway has been favorably reviewed by the Lancaster County Parks Department.

## *12.2 Hire a Full-Time Coordinator for Greenway and River Corridor Conservation Planning*

The LIMC should seek funding to create a full-time staff position for a greenways coordinator. The principal responsibilities of this position should be to promote and work with the LIMC committees for implementing many of the recommendations detailed in this plan. The Greenway and Parks Advisory Board and associated committees should develop the job description for this position. Examples of funding sources for the position of a greenways coordinator are presented in Chapter 9 (Funding Mechanisms) of this document.

## *12.3 Identify and Implement Short Term Approaches*

Short term approaches are excellent implementation techniques for select pieces of property. Examples of sites include selecting alternative routes for the greenways corridor, negotiating limited access agreements with private property owners, or establishing a revocable trail license agreement for an important segment of land.

Acquiring land or negotiating conservation and access easement with property owners are effective techniques for implementing the greenway, yet these may require many months to accomplish and should be viewed as long-term approaches.

## *12.4 Prepare an Annual Work Plan for Implementation of Greenway and River Corridor Conservation Planning Initiatives*

### *An Annual Work Plan and the Strategic Implementation Matrix*

The annual work plan is a document which details a series of projects that can be realistically accomplished during the course of the year. Typically, an annual work plan identifies who will be responsible for taking the lead on each project and also identifies the funding requirements and responsibilities. The plan should be updated on an annual basis.

The Strategic Implementation Matrix—beginning on page 125 of this chapter—should be referred to when selecting which project(s) to include in the annual work plan. In addition, Chapter 6 (Options for Greenway Development and Protection), contains more than 90 site specific recommendations for greenway development and river conservation.

**Strategic Implementation Matrix for Specific Greenway Implementation Activities**

**NOTES**

Greenway Implementation Activities: Trail lengths are approximate; exact lengths will be developed as design for individual trails occurs.  
 Lead Responsibility: Entity with primary responsibility for seeing that activity occurs; others may be involved also.  
 Cost: General estimate indicating magnitude of cost; detailed cost estimates will be developed as planning and design for individual activities occur.

**Priority:**

- Priority 1 - Highest priority; to be initiated within next few years
- Priority 2 - To be initiated within next five years
- Priority 3 - Long range (probably beyond next five years)
- Ongoing - Continuing activity to be pursued whenever opportunity permits

#	RIVERS CONSERVATION AND/OR GREENWAY IMPLEMENTATION ACTIVITY	LEAD RESPONSIBILITY	COST	PRIORITY	COMMENTS
<b>Activities That Constitute The Prototype Greenway Project</b>					
1	Develop 1.3 ± mile of multi-use trail on right bank of Conestoga River from Conestoga Drive/Betz Road area to Duke Street	Lancaster City	\$75,000	1	Part of Phase I of prototype greenway
2	Develop 4 boat access points on right bank of Conestoga River from Conestoga Drive/Betz Road area to Duke Street area	Lancaster City	\$20,000	1	Part of Phase I of prototype greenway
3	Develop trail head parking lot along Conestoga Drive south of Betz Road	Lancaster City	\$30,000	1	Part of Phase I of prototype greenway
4	Develop trail head parking lot along South Broad Street near site of proposed bridge to Sunnyside peninsula	Lancaster City	\$30,000	1	Part of Phase I of prototype greenway
5	Develop comfort facility near site of proposed bridge from South Broad Street to Sunnyside peninsula	Lancaster County	\$20,000	1	Part of Phase I of prototype greenway
6	Develop kiosk with educational display near site of proposed bridge from South Broad Street to Sunnyside peninsula	Lancaster Inter-Municipal Committee	\$5,000	1	Part of Phase I of prototype greenway; possible topic for display is old trolleys

#	RIVERS CONSERVATION AND/OR GREENWAY IMPLEMENTATION ACTIVITY	LEAD RESPONSIBILITY	COST	PRIORITY	COMMENTS
7	Develop trail head parking lot near South Duke Street bridge	Lancaster City	\$30,000	1	Part of Phase I of prototype greenway
8	Develop 1.5 ± mile of new multi-use trails on Sunnyside peninsula	Lancaster County	\$80,000	1	Part of Phase II of prototype greenway; also part of new juvenile detention center project
9	Improve and/or sign multi-use trails on existing roads/rights-of-way in Sunnyside development	Lancaster City	Dependent on final design	2	Part of Phase II of prototype greenway
10	Develop 1 ± mile of multi-use trail near right bank of Conestoga River from South Duke Street bridge to Strawberry Street bridge	Lancaster County and Lancaster City	\$55,000	2	Part of Phase III of prototype greenway
11	Improve and/or sign multi-use trails in Lancaster County Central Park from South Duke Street bridge to Strawberry Street bridge	Lancaster County	Dependent on final design	2	Part of Phase III of prototype greenway
12	Develop 1.1 ± mile of pedestrian trail in Lancaster County Central Park from Williamson Road to Strawberry Street bridge	Lancaster County	\$60,000	2	Part of Phase III of prototype greenway
13	Develop kiosk with educational display along pedestrian trail near Indian Rock	Lancaster County	\$5,000	2	Part of Phase III of prototype greenway; possible topic for display is Native American culture and archeological sites
14	Improve trail head parking lot on left bank of Conestoga River just upstream from Strawberry Street bridge	Lancaster County	\$30,000	2	Part of Phase III of prototype greenway
15	Develop boat access point on left bank of Conestoga River just upstream from Strawberry Street bridge	Lancaster County	\$5,000	2	Part of Phase III of prototype greenway
16	Develop 2.0 ± miles of trails on peninsula west of Lancaster County Central Park	Lancaster Township	\$110,000	3	Phase IV of prototype greenway

#	RIVERS CONSERVATION AND/OR GREENWAY IMPLEMENTATION ACTIVITY	LEAD RESPONSIBILITY	COST	PRIORITY	COMMENTS
<b>Site-specific Activities Along or Near the Conestoga River</b>					
17	Develop the Manheim Township Heritage Trail and Bike Path and connect it to the "Conestoga Greenways" network	Manheim Township	\$1,400,000	1	Manheim Township is seeking TEA-21 funds
18	Develop boat access point on right bank of Conestoga River at Perelman Park at Binkley's Mill	Manheim Township	\$5,000	1	
19	Develop kiosk with educational display at Perelman Park at Binkley's Mill	Lancaster Inter-Municipal Committee	\$5,000	1	Possible topic for display is rivers conservation and other environmental issues
20	Develop a cooperative canoe/bicycle transport program that facilitates canoeing from Perelman Park at Binkley's Mill to Lancaster County Central Park and returning by bicycle	Manheim Township and Lancaster County	\$16,000 in start-up costs	1	Cooperative project between Manheim Township and Lancaster County Parks Department
21	Develop boat access point on right bank of Conestoga River near Eden Road	Manheim Township	\$5,000	2	
22	Develop boat access point on left bank of Conestoga River at Conestoga Pines Park	Lancaster City	\$5,000	2	
23	Move fence and improve path on Lancaster City water works property to facilitate portaging on left bank of river around dam at water works and rapids near railroad bridge	Lancaster City	\$50,000	2	
24	Install fish ladders on Conestoga River at dam at Lancaster City water works	Lancaster City	\$240,000	1	Pennsylvania Fish and Boat Commission may provide substantial funding; expected to be completed during 1999
25	Develop boat access point on right bank of Conestoga River south of Route 23	Lancaster Township or Manheim Township	\$5,000	3	

#	RIVERS CONSERVATION AND/OR GREENWAY IMPLEMENTATION ACTIVITY	LEAD RESPONSIBILITY	COST	PRIORITY	COMMENTS
26	Work to acquire rights for multi-use trail beginning at railroad bridge, crossing industrial property south of railroad, and ending at Pitney Road	East Lampeter Township	Admin. costs only	2	
27	Work to acquire rights for pedestrian trail along left bank of Conestoga River from railroad bridge to East King Street/Route 462	East Lampeter Township	Admin. costs only	3	
28	Develop boat access point on right bank of Conestoga River along Conestoga Drive North, north of East King Street	Lancaster Township	\$5,000	3	
29	Work to assure protection for resource conservation greenway along Conestoga River on Rocky Springs tract	West Lampeter Township	Admin. costs only	1	
30	Support efforts to return the Rocky Springs carousel to Lancaster County	Lancaster Inter-Municipal Committee and municipalities	Admin. costs only	Ongoing	Encourage location of carousel in original building, at Lancaster County Central Park, or at another appropriate site
31	Develop boat access point on right bank of Conestoga River west of Engleside bridge	Lancaster Township	\$5,000	2	
32	Develop 1.4± miles of trail on the abandoned railroad right-of-way from Engleside to Eckman Road	Lancaster County and West Lampeter Township	\$75,000	3	
33	Develop boat access point on left bank of Conestoga River in D. F. Buchmiller County Park	Lancaster County	\$5,000	3	
34	Develop kiosk with educational display along New Danville Pike near Lock 1	Lancaster Inter-Municipal Committee	\$5,000	1	Topic for display is Conestoga Navigation Canal
35	Begin to improve and sign multi-use greenways (e.g. bike/walking paths) along New Danville Pike, Bean Road, and Route 741	Pequea Township	Dependent on final design	3	

#	RIVERS CONSERVATION AND/OR GREENWAY IMPLEMENTATION ACTIVITY	LEAD RESPONSIBILITY	COST	PRIORITY	COMMENTS
36	Develop boat access point on right bank of Conestoga River in Windolph Park	Lancaster Township	\$5,000	2	
37	Develop boat access point, small parking area, and comfort facility on right bank of Conestoga River south of Creek Drive on Millersville University property	Millersville Borough	\$25,000	2	Locate facilities upstream from Creek Drive
38	Maintain liaison with Millersville University to encourage inclusion of greenways in University's planning and development processes	Millersville Borough	Admin. costs only	Ongoing	Millersville University and Millersville Borough are developing new comprehensive plans
39	Develop boat access point and parking area on right bank of Conestoga River west of Slackwater Road bridge	Manor Township	\$30,000	2	
40	Develop boat access point on left bank of Conestoga River on Pennsylvania Fish and Boat Commission property at Rock Hill	Pennsylvania Fish and Boat Commission	\$5,000	2	
41	Develop kiosk with educational display near bridge at Rock Hill	Lancaster Inter-Municipal Committee	\$5,000	2	Possible topic for display is bridges
42	Acquire land or easements at selected locations along Conestoga River in Manor Township	Lancaster County Conservancy	Dependent on sites & acreage selected	2	Stress rivers conservation activities on these rural sites.
43	Develop kiosk with educational display on Safe Harbor Water Power Company property	Lancaster Inter-Municipal Committee	\$5,000	2	Possible topic for display is industry along Conestoga River (e.g. iron works, power generation)
44	Develop boat access point on left bank of Conestoga River in Safe Harbor area	Safe Harbor Water Power Company	\$5,000	2	

#	RIVERS CONSERVATION AND/OR GREENWAY IMPLEMENTATION ACTIVITY	LEAD RESPONSIBILITY	COST	PRIORITY	COMMENTS
<b>Site-specific Activities Along or Near Little Conestoga Creek and the West Branch of Little Conestoga Creek</b>					
45	Develop and sign 0.9 ± mile of multi-use trail on East Petersburg Borough property from East Petersburg Community Center near center of Borough to East Petersburg Community Park near Little Conestoga Creek	East Petersburg Borough	\$50,000	2	
46	Begin to improve and sign multi-use greenways (e.g. bike/walking paths) along existing roads in southern part of East Petersburg Borough	East Petersburg Borough	Dependent on final design	3	
47	Enhance wetlands area adjacent to McGovernville Road and Shreiner Station Road for purposes such as environmental education and picnicking	East Hempfield Township	Dependent on final design	2	
48	Improve park land at south end of Lancaster Health Alliance property, north of Route 30	East Hempfield Township	\$20,000	1	Can be connected to greenway along Little Conestoga Creek
49	Develop 0.7 ± mile of off-road multi-use trail as part of new Good Drive project to connect Glenbrook Avenue and Marietta Avenue	East Hempfield Township	\$40,000	1	
50	Develop 0.3 ± mile of multi-use trail in Wheatland Hills Park	East Hempfield Township	\$20,000	Complete	
51	Develop boat access point on right bank of Little Conestoga Creek in Wheatland Hills Park	East Hempfield Township	\$5,000	2	For boating in area of Wheatland Hills Park and Maple Grove Park and Greenway only (i.e. within public lands); effect of dam removal on stream height must be evaluated to determine feasibility.

#	RIVERS CONSERVATION AND/OR GREENWAY IMPLEMENTATION ACTIVITY	LEAD RESPONSIBILITY	COST	PRIORITY	COMMENTS
52	Develop 2 boat access points on left bank of Little Conestoga Creek in Maple Grove Park and Greenway	Lancaster Township	\$10,000	2	
53	Restore Maple Grove Mill	Lancaster Township	\$1,000,000	1	Seek funds from sources such as foundations; use for recreation, community events, and office
54	Develop 0.9± mile multi-use loop trail along both sides of Little Conestoga Creek between Columbia Avenue and Schoolhouse Road	Lancaster Township and Manor Township	\$95,000	2	Cost includes \$45,000 for new bridge near north end of project area
55	Develop kiosk with educational display in Maple Grove Park and Greenway	Lancaster Inter-Municipal Committee	\$5,000	2	Possible topic for display is early amusement parks
56	Develop 0.5± mile multi-use trail in Millersville Borough Park and on Fred S. Eshleman Elementary School property	Millersville Borough	\$30,000	3	
57	Develop 1.3± miles of multi-use trail on left bank of Little Conestoga Creek between Blue Rock Road/Route 999 and Letort Road	Manor Township	\$70,000	1	
58	Work to assure protection for resource conservation greenway along West Branch of Little Conestoga Creek	West Hempfield Township	Admin. costs only	3	
59	Begin to improve and sign multi-use greenways (e.g. bike/walking paths) in Mountville Borough	Mountville Borough	Dependent on final design		
60	Develop 0.2± mile of multi-use trail through Mountville Community Park	Mountville Borough	\$12,000	2	

evaluated on a site-by-site basis, incentives can substantially reduce costs for developers without jeopardizing public safety. As a result, developers can benefit greatly while conserving open space and creating community recreational opportunities. The community, of course, benefits by having dedicated open space that can be used for resource conservation, scenic preservation, and linear parks and trail greenways.

### *Open Space Dedication in Lancaster County*

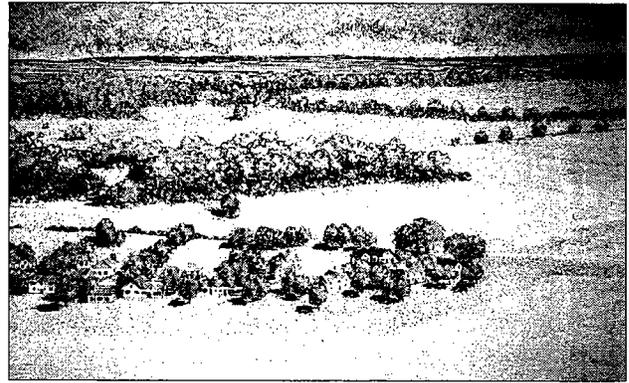
Regulations and specification for the dedication of open space as part of residential land development are outlined in Section 610 of the Lancaster County Subdivision and Land Development Ordinance of 1991. The ordinance states, "All plans for residential subdivisions of land or residential land developments shall provide for the dedication of and for park and open space uses or payment of a fee as provided in this Ordinance..." The ordinance further adds (Section 6.10.07) that, "...when a subdivision or land development is traversed by or abuts an existing trail customarily used by pedestrians and/or equestrians, the [developer] shall make provisions for the continued recreational use of the trail." According to Section 610.08, the "...Planning Commission may require as a condition of final plan approval the dedication and improvement of trails and linear parks, which may be credited toward the park and open space land requirement."

The dedication of open space is also outlined in Article V, Section 503.11 of the Pennsylvania Municipalities Planning Code, and in the subdivision and land development ordinances of most municipalities in Lancaster County.

## *A1.2 Cluster Development Ordinances*

### *What is it?*

Clustering, or cluster development, is a technique by which development is concentrated in one or more areas of a building site, allowing the remaining portion of the site to be conserved for open space as a scenic preservation or resource conservation greenway.



*Cluster development concentrates homesites on just a portion of the building site leaving the remainder as open space.*

### *How it works*

When clustering is used, the gross density of a building site is not changed. However, the minimum lot size requirement is decreased to make the building lots smaller, thus achieving the same number of units as conventional development, but on a smaller portion of the site. Because of the smaller lot sizes, there is land "left over" that can be used for greenway development. For example, a ten-acre site developed using conventional techniques and a half-acre minimum lot size might yield 20 home sites and no open space. The same 10-acre parcel developed using the cluster technique and a quarter-acre minimum lot size might yield 20 home sites and 5 acres of open space. This open space could be utilized for recreation purposes,

1 Arendt, Randall, Elizabeth A Brabec, Harry L. Dodson, Christine Reid, and Robert D. Yaro. *Rural By Design*. Chicago: Planners Press, American planning Association, p.226.

program also requires that there be an active development market in the community.

*Where are TDR programs currently being used?*

Transferable development rights is allowed under Article VII, Section 702.1 of the Pennsylvania Municipalities Planning Code.

*A1.5 Criteria for Locating New Development on a Site*

*What is it?*

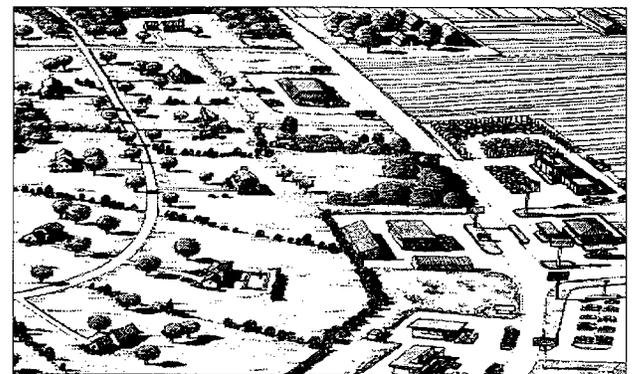
Existing zoning laws are often not effective in controlling the negative visual impacts of new development. By adopting a Farmland/Open Space Conservation and Development Bylaw, communities can ensure that new developments—particularly those on open areas of farmland—are designed to minimize their impacts upon sensitive environmental features and scenic areas or vistas.<sup>2</sup>

Under the bylaw, developers are required to draw up plans showing not only the proposed layout of new lots, but also the proposed locations of houses, driveways, and other site improvements.

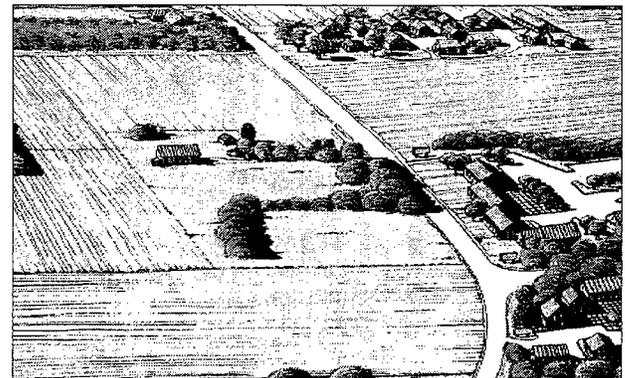
When reviewing the site plans, the local planning commission can suggest modifications to the location of houses and drives to minimize the visual impact on the landscape. Often the simplest criteria used by planning officials is, “What is the impact on the landscape as seen from the road?” Suggestions can include relocating proposed houses and driveways from the center of properties to the edges where they would occupy less open space, have lesser impact on the property’s rural character, and be sheltered from summer sun and winter winds. In addition, they would maintain



*A typical rural landscape with scenic openspace.*



*Conventional residential and commercial development.*



*Recommended approach where development is designed to have a minimal impact on scenic openspace and farmland.*

<sup>2</sup> Yaro, Robert, D., Randall G. Arendt, Harry L. Dodson, and Elizabeth A. Brabec. *Dealing With Change in the Connecticut River Valley: A Design Manual for Conservation Development*. Center for Rural Massachusetts, University of Massachusetts, 1998, p.50.

the long views over open fields for both themselves and their neighbors to enjoy.<sup>3</sup>

Proposed driveways can also be modified to follow existing hedgerows, walls, and edges of existing fields. An overall reduction on the number and length of driveways can be achieved through the use of common driveways.

Simply by moving the location of houses and drives by several hundred feet or less, the rural character and important scenic features of a landscape can be preserved for all to appreciate. In addition, the Farmland/Open Space Development Bylaw can be used to establish a system of scenic resource greenways, or to enhance an existing greenways network.

Because of careful site planning encouraged through the site plan review process, new homes can blend in with the character of a rural landscape. Not only does this protect the natural environment, but it also produces a much more pleasant living environment for new residents and greatly increases the value of properties in the area.

## *A1.6 Site Grading and Clearing Standards*

### *What are they?*

Site clearing and grading standards are effective tools for minimizing soil erosion, stabilizing cleared slopes, and preserving existing trees from being needlessly damaged. These standards are specifically intended to protect water quality and to minimize the impact of development on surrounding streams, rivers, lakes, and wetlands. Site clearing standards achieve their effectiveness through well-written and adequately enforced municipal regulations.

This tool, combined with requiring re-vegetation within a short period of time to stabilize areas that have been cleared or regraded, can significantly reduce soil erosion and subsequent sediment deposition



*Standards that regulate site clearing and grading can effectively protect water quality and minimize sedimentation of waterways.*

to the waters of the Conestoga. These standards are also effective in preserving greater amounts of existing native vegetative cover. Similarly, construction costs typically associated with clearing and grading of new development sites are reduced because less land is cleared.

Historically, local clearing and grading programs have been used to control erosion after it has occurred. A far better approach is to implement preventative measures before development occurs rather than remedial measures after construction. It is far less expensive to prevent soil erosion than to clean it up.

### *How they work to protect greenways*

Standards for regulating site clearing and grading are enacted through local municipal ordinances and state regulations. For these standards to be effective, they must require clearing and grading permits for all new development. Ordinances should contain strong language that clearly establishes minimum criteria for clearing and grading, and these criteria must be actively enforced on all development sites. Effective plan review and construction enforcement is also needed to ensure that new development meet minimum municipal guidelines for clearing and grading.

3 Ibid., p. 54.

Establishing a standards program requires that additional costs be incurred by developers for identification and protection of significant vegetative stands, and the additional staff time required to review development projects.

### *Benefits*

A system of clearing and grading standards can greatly enhance any greenways program by preserving natural vegetated areas that can be added to the open space network. More rigid clearing and grading standards can also be applied to development sites in the vicinity of an existing resource protection greenway, further enhancing and protecting the greenway.

### *Examples of ordinances that contain clearing and grading standards*

Regulations for the protection of natural features on development sites are specified in Section 611 of the West Lampeter Township Subdivision and Land Development Ordinance (enacted 5/22/90), Section 721 of the Subdivision and Land Development Ordinance of Manheim Township - 1989, Section 609.02 of the Lancaster Township Subdivision and Land Development Ordinance of 1982, Section 609.01 of the East Hempfield Township Subdivision and Land Development Ordinance of 1988, and Section 608.02 of the Lancaster County Subdivision and Land Development Ordinance of 1991. (For a complete listing of townships and boroughs using this ordinance, see the Matrix in Table 6 at the end of Appendix 1).

## *A1.7 Standards for Protecting Native Vegetation*

### *How does it work?*

By adopting standards for the preservation of native vegetation, municipal governments can mitigate the impacts of stormwater runoff, conserve wildlife habitat, and reduce site disturbance in new developments.

When native trees, shrubs, and grasses are replaced with turf or lawns, the loading of fertilizers into local streams is greatly increased. In addition, turf grass has been shown to be less pervious than natural vegeta-

tion. The disturbance caused by the removal of native vegetation during construction also increases the amount of suspended sediments present in surface runoff, and causes the fragmentation of wildlife habitat.

By establishing maximum clearing standards, communities can limit the amount of natural vegetative cover that is removed on a site during construction. In addition, limiting the removal of native vegetation from development sites also reduces construction costs.

### *Benefits for greenway development*

Protecting native vegetation can also help to enhance a system of resource protection greenways. Even native vegetation preserved in residential developments can serve as important corridors for wildlife to feed, interact, and move between larger areas of habitat. Conversely, a network of resource protection greenways can provide a natural mechanism for the protection of native vegetation.

## *A1.8 Limits on the Amount of Impervious Surface on a Site*

### *What it means*

Revising conventional design standards for streets and parking areas can result in a net reduction in the amount of impervious or paved surface on a site, and ultimately, throughout a watershed.

Reducing the amount of impervious surface, in turn, helps protect both aquatic and terrestrial environments (and theoretically, any resource protection greenways associated with these environments) from the impacts of nonpoint stormwater runoff. Reducing the amount of impervious surface can also lead to reduced construction costs for stormwater treatment devices.

This is accomplished by utilizing alternative construction materials, reducing street widths, reducing the size of parking areas, or conveying surface runoff into devices that retain the runoff on-site and/or allow for infiltration.

Table 6: *Development standards and restrictions in practice by each municipality throughout the study area.*

	Open Space Dedication	Cluster Develop.	Overlay Zoning	TDRs	Criteria for locating developm't	Site Grading & Clearing Standards	Standards on Native Vegetation	Limits on Impervious Surfaces	Stormwater BMPs	Buffers
East Hempfield Township	✓	✓			✓	✓		✓	✓	✓
East Lampeter Township	✓	✓	✓					✓		✓
East Petersburg Borough	✓				✓	✓		✓	✓	✓
Lancaster City	✓	✓	✓					✓	✓	
Lancaster Township	✓		✓		✓	✓	✓	✓	✓	✓
Manheim Township	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Manor Township	✓	✓			✓	✓		✓	✓	✓
Millersville Borough	✓	✓	✓			✓		✓	✓	✓
Mountville Borough	✓	✓			✓	✓		✓		✓
Pequea Township	✓		✓		✓	✓	✓	✓	✓	✓
West Hempfield Township	✓	✓	✓	✓	✓	✓		✓	✓	✓
West Lampeter Township	✓	✓		✓	✓	✓	✓	✓	✓	✓

**Legend**  
 ✓ Indicates that the development standard or restriction is practiced by the municipality

---

# APPENDIX 2: ACQUISITION AND EASEMENT OPTIONS

---

The range of non-regulatory techniques for land acquisition and conservation available to municipal governments and private non-profit organizations can provide an important complement or alternative to local regulatory tools, particularly when regulations are politically infeasible. Non-regulatory tools and conservation techniques can be used singularly or in combination to achieve the objectives for development of the Conestoga Greenways. The two most important private land protection techniques used by land trusts or municipal governments to protect land and/or historic buildings are acquisition and donation of interests in the property. Acquisition or donation can be for all of the rights in the property, termed fee-simple, or can be for a specific use of the property, termed an easement.

## *A2.1 Fee-simple Acquisition*

### *a. Overview*

The ownership of land can in some ways be equated to ownership of a bundle of rights. These rights typically include the right to control access to the land, the right to develop or re-develop property, the right to extract minerals such as sand and gravel, the right to hunt on the land, the right to not develop the land and place limits on the type of activity that may take place with easements, and a variety of other rights or ac-

tions—most of which are subject to some form of reasonable regulation or adherence to zoning code.

Typically, when one person owns all the rights associated with a parcel of land (the bundle of rights), this person owns the land “in fee-simple.” When these rights are owned separately, such as when multiple parties hold title to the land or some form of easement crosses the land, this is known as “less than fee interest” and is described in the following section.

Fee-simple ownership of the land provides the highest level of control for the use of a land parcel. Fee-simple ownership can occur in three ways: (1) the land is purchased from the owner for the market value (the most expensive option), (2) there is a bargain sale by the owner to the municipality or land trust (described further below), or (3) there is an outright donation of the property to the municipality or land trust. The benefits to the landowner of bargain sales and outright donations are described in more detail below.

### *b. Limiting factors*

Although the acquisition cost varies from site to site, the costs of acquiring a piece of land can in some instances be significant. In addition, fee simple acquisition—when purchased by municipal government—removes the property entirely from the local tax rolls. Finally, newly purchased land can re-

quire a significant amount of maintenance and upkeep that must be funded through other municipal programs.

*c. Criteria for selecting priority greenways for acquisition.*

Municipal officials in coordination with the LIMC should establish criteria to use when selecting priority resource conservation, scenic preservation, and linear park and trail greenways for acquisition. Key questions that should be asked in evaluating the importance of an individual piece of property include the following:

- Is the land targeted for development?
- Has the property become available for sale (willing seller)?
- Can an agreement for purchase or dedication be negotiated with the current owner?
- Is the parcel in close proximity to an existing greenway segment?
- Is the parcel in close proximity to an existing public park, school, or other activity center?
- What is the potential to link two or more isolated pieces of greenway?
- Is there a presence of rare, endangered, or threatened plant or animal species?
- Does the property contain outstanding scenic views?
- Does the property meet Pennsylvania's objectives for rivers conservation?
- Is there a presence of important historically significant features?
- Is the parcel large enough to warrant acquisition?
- Does the parcel have a significant amount of frontage on the waterways?
- Can funding or other forms of assistance for acquisition be obtained?
- Is there broad-based public support for acquisition?

- Will acquisition be perceived as a positive move by existing neighbors?
- Is the property accessible for maintenance?

If outright acquisition is not feasible, other options should be explored. For example, establishing a conservation easement or conservation trail easement is an excellent alternative when a landowner is receptive to the concept of placing a greenway on their property (for resource protection or public access), but is not willing to sell his land. In such instances, a voluntary access or protection easement should be negotiated on commercial, industrial, or residential property.

*d. Property donations or bargain sales*

As an alternative to purchasing land for conservation purposes—often at full market value—municipal governments and land trusts can acquire property at either fee or less-than-fee interests through donation or at bargain sale. As discussed above, full value purchase is rarely the approach of first preference because of the expense of acquisition and management.

*Property Donations*

Property donation—when available—is the preferable option. It is inexpensive for the municipality or land trust and it offers the conservation-minded property owner the greatest potential tax benefits. However, for financial reasons, this option is not available to every seller. Bargain sales, in which a portion of the fair market value of the property is paid, provide the opportunity to benefit from the federal and state tax advantages of what is essentially a donation to a charitable institution, along with a direct cash payment.

A bargain sale involves the sale of property at a price below the property's fair market value. A taxpayer can claim a charitable deduction equal to the difference between the fair market value of the property and the sale price paid by the conservation organization (such as a land trust). With the tax benefits of a partial donation and the cash proceeds from the sale price, a bargain sale may provide the landowner with a yield close to that of a sale at full market value. Another important point to consider is that of capital gains. When a landowner sells appreciated property, the capital gain realized from the sale of the property is subject to income tax. A donation avoids this tax altogether, while

a bargain sale provides a partial escape from capital gains tax.

### *Limiting factors*

Even an outright donation of property has drawbacks. The municipality or land trust must be able to cover the costs of the land transfer and its continued management into the future

## *A2.2 Conservation Easements*

### *a. Overview*

An easement provides the opportunity for the landowner to continue to control the use and development of his or her property, but to allow, under specifically defined circumstances, public use or public access on their land, or to restrict the development of the land for future generations.

Easements are effective devices for preserving sensitive lands which may contain rare, threatened or endangered species (Species of Special Concern) and providing public access along appropriate segments of the Conestoga River, Little Conestoga Creek, and West Branch of the Little Conestoga Creek. The donation of easements may also allow landowners to obtain income, estate, and property tax benefits for land stewardship while they continue to live on the land (see Property Donations or Bargain Sales A2.1d ). A sample conservation easement and conservation trail easement can be found on pages 153 and 161 of Appendix 2.

### *b. Limiting factors*

The holder of the easement retains only certain specified powers and rights on the land. Thus, the easement must be carefully written to reflect the present and future needs and desires of the property owner and the holder of the easement. The easement must also be carefully upheld over the years; difficulties may arise where a land trust closes without granting its easements to another organization.

## *A2.3 Negotiated Limited Use Agreements*

### *a. Overview*

Similar to that of a conservation easement or conservation trail easement, limited use agreements generally specify a pre-determined period of time whereby access is granted to private property. Such agreements will also define a limited amount of uses that the private property owner is willing to grant to the public. Such agreements can be used, for example, when a degraded segment of stream bank is targeted for stabilization techniques (bioengineering, armoring, etc.), reforestation, selective brush removal of invasive plant species, or trash and debris cleanup. In other instances, access is needed across private property to perform in-stream habitat restoration projects. This type of work effort is consistent with the goals and objectives for rivers conservation and resource protection greenways. Agreements such as these are often used for a predetermined period of time (not to exceed 12 months, etc.) and cease to exist after the work has been completed.

## *A2.4 Revocable Trail License Agreement*

### *a. Overview*

A revocable trail license agreement is very similar to that of a conservation trail easement, but unlike an easement which typically is established in perpetuity, the property owner reserves the right to at any time revoke and annul the trail license. Such an agreement may have merit when a property owner is receptive to granting access to the public on a limited portion of their property, but is uncertain that they will be happy with a long-term or irrevocable easement. The license agreement allows the private property owner the chance to “test the waters” for a predetermined period of time. Such an agreement can also allow municipal officials to build goodwill with the hope of some day negotiating a long-term agreement.

### *b. Limiting factors*

The revocable trail agreement does not protect the long term use of a trail, particularly under changes of ownership.

A sample Revocable Trail License Agreement can be found on page 169 of Appendix 2.

## *A2.5 Railbanking*

### *a. Overview*

In 1983, Congress amended the National Trails System Act to create a program called railbanking (Section 8(d) of the National Trails System Act). Railbanking allows existing railroad corridors which are proposed for abandonment by the owner rail company to be preserved intact or put in a “bank” for future transportation use. While these corridors are railbanked, they can then be used as trails for greenways. Because railbanked lines are not considered abandoned under federal or state law, rail easements are not retired and the overall corridors remain intact and are not fragmented. The Supreme Court unanimously upheld the constitutionality of railbanking in 1990. Many states have used rail banking to acquire critical segments of rail corridor and have converted them into bikeways and pedestrian corridors.

### *b. Who may file for railbanking?*

Any qualified private organization or municipal government can file for railbanking. The requirement for requesting railbanking is filing a copy of the “Statement of Willingness to Assume Financial Responsibility” with the ICC and railroad. The party who files this statement does not accept any financial liability for the corridor—it is merely expressing an interest in doing so. In effect, by filing the “Statement of Willingness,” the

filer is only stating a willingness to assume financial responsibility for the corridor if and only if the corridor is purchased.

The “Statement of Willingness” must be simultaneously submitted to the ICC and the railroad. Currently, railbanking is a voluntary process from the railroad’s perspective. Without the railroad’s approval, the corridor cannot be railbanked. If the railroad agrees to railbank, it will notify the ICC, which will then issue either a “Certificate of Interim Trail Use” (CITU) or a “Notice of Interim Trail Use” (NITU) in place of an “Abandonment Certificate.” The two parties then have up to 180 days to negotiate for the sale and transfer of the corridor. Either party can stop the negotiations at any time without incurring a penalty. The ICC will grant extensions with showings of good cause if the negotiations cannot be completed within the 180 day limit. If a railbanking agreement is not reached within the negotiating period, including extensions, abandonment authorization will be granted.

In summary, railbanking is an excellent tool to use for greenway development when a rail corridor is proposed for abandonment and municipal planners or private organizations wish to keep the corridor intact in its entirety.

### *Sources:*

Little, Charles, E. 1990. *Greenways for America*. Johns Hopkins University Press, Baltimore: MD.

Mantell, Michael, with Stephen Harper and Luther Propst, 1990. *Creating Successful Communities: A Guidebook to Growth Management Strategies*. Island Press, Washington: D.C.

Rails to Trails Conservancy, 1993. *Secrets of Successful Rail-Trails: An Acquisition and Organizing Manual for Converging Rails into Trails*. Rails to Trails Conservancy, Washington: D.C.

## *Sample Conservation Easement*

### *How to use this Sample Conservation Easement*

This Sample Conservation Easement is intended to provide the user with a comprehensive guide for preparing an easement. It is important to remember that this sample easement should be used as a guide, and not merely copied. The text provides a format and language that are appropriate to a wide variety of potential scenarios. However, no one sample document can serve as a standard for all situations. For each easement, the language of the document should be carefully tailored to meet the specific conditions and goals for the property. In addition, each easement should be reviewed by a Pennsylvania attorney.

The language contained in the sample easement may be modified to reflect site conditions for any specific site within the Conestoga Greenways. For example, as you prepare a conservation easement, be aware that the site may possess only one or two of the following values:

- ✓ a diversity of plant and animal species;
- ✓ natural and scenic open space; and
- ✓ historic, educational, and / or recreational values.

Other sites may not be located near to the waterway—or may not be prominently visible from the waterway.

The listing of Prohibited Uses in Section 3.0 are other examples of where the sample text may require modification for a specific site. For instance the list of Prohibited Uses may need to be expanded to provide the greatest level of protection for a specific site. Similarly, some of the prohibited uses described may not be applicable and should be removed from the easement language.

## Sample Conservation Easement

This GRANT OF CONSERVATION EASEMENT is made this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_  
 by \_\_\_\_\_  
*(Name and address of individual or organization)* \_\_\_\_\_ (“GRANTOR”),  
 in favor of \_\_\_\_\_  
*(Name and address of individual or organization)* \_\_\_\_\_ (“GRANTEE”),  
 located in \_\_\_\_\_  
*(Name of Jurisdiction)* \_\_\_\_\_, Pennsylvania.

WITNESSETH:

WHEREAS, the GRANTOR is the owner in fee simple of certain real property in \_\_\_\_\_  
*(Name of Jurisdiction)* \_\_\_\_\_, Pennsylvania, more particularly  
 described in Exhibit A (*Exhibit A is a legal description of the property*), attached hereto; and a deed  
 recorded in the office of the Recorder of Deeds in and for Lancaster County, Pennsylvania,  
 in Deed \_\_\_\_\_, Volume \_\_\_\_\_, Page \_\_\_\_\_,  
 and incorporated by this reference (the “Property”). The Property consists of \_\_\_\_\_  
 \_\_\_\_\_  
*(Number of total acres as indicated in the legal description)* \_\_\_\_\_ acres; and

WHEREAS, the Property which exists in a substantially undisturbed natural state and  
 possesses a diversity of plant and animal species, natural, scenic, open space, historic,  
 educational, and / or recreational values and other similar attributes (collectively,  
 “conservation values”) of great importance to the GRANTOR, the people of Lancaster  
 County, and the people of the State of Pennsylvania; and

WHEREAS, in particular, the property consists of open space and forested lands which lie  
 close to or adjacent to the \_\_\_\_\_  
*(Name of Waterway - Example: Conestoga River, Little Conestoga  
 Creek, West Branch of the Little Conestoga Creek)* \_\_\_\_\_ and have been identified in the  
Conestoga Greenways: A River Corridor Conservation Plan (1999) and / or the Regional Park  
 and Open Space Plan (1993), and amendments to those Plans which are referenced herein  
 and are on file in the offices of \_\_\_\_\_ Township and indicated in  
 Exhibit B (*Exhibit B is a baseline documentation of the Property*), as being significantly important in  
 the development of a comprehensive network of greenways; and

WHEREAS, the Property is situated on or in close proximity to the \_\_\_\_\_  
*(Name of  
 Waterway)* \_\_\_\_\_ and visible from (the) (these) public  
 waterway(s) which sustain(s) substantial recreational uses; and

WHEREAS, the GRANTOR is a good steward of his/her land, has a deep appreciation of the  
 great outdoors and the scenic corridors of this public waterway, and has a desire to share  
 this appreciation with others; and

WHEREAS, the specific conservation values of the Property are documented in an inventory of relevant features of the Property, dated \_\_\_\_\_, 20 \_\_\_\_, on file at the offices of the GRANTEE / and attached hereto as Exhibit B and incorporated by this reference ("Baseline Documentation"), which consists of reports, maps, photographs, an appraisal and other documentation that the parties agree provide, collectively, an accurate representation of the Property at the time of this grant and which is intended to serve as an objective information baseline for monitoring compliance with the terms of this Conservation Easement; and

WHEREAS, GRANTOR further intend, as owners of the Property, to convey to the GRANTEE the right to preserve and protect the conservation values of the Property in perpetuity; and

WHEREAS, the Legislature of the Commonwealth of Pennsylvania has declared in Act #442 of 1968, Purdon's Statutes (PS) 32, Section 5001-5013, that public benefits result from the protection and conservation of natural lands and other open space lands including the protection of scenic areas for public visual enjoyment from public rights-of-way, the conservation, and protection of forest lands as valued natural flora and fauna, for clean air and water, as well as for aesthetic purposes; and the Legislature has declared that public benefit will result from conservation, protection, and improvement of Pennsylvania's forest lands; and

WHEREAS, the GRANTEE is qualified under Section 501 [c][3] and 170 [h] of the Internal Revenue Code, incorporated under the laws of the Commonwealth of Pennsylvania and registered with the Pennsylvania Department of State, whose purpose is the preservation, protection, or enhancement of land in its natural, scenic, historical, forested, and / or open space condition, and the GRANTEE is willing to accept an easement; and

WHEREAS, the GRANTOR and the GRANTEE agree that the purposes of this Conservation Easement are:

1. to preserve and protect the natural, scenic, and ecological values of the Property including topography, soil, water, forest cover, wetlands, plants, and animals and his/her natural habitats and scenic amenity;
2. to retain the Property forever in its natural, scenic, historic, educational, recreational and open space condition; and
3. to prevent any use of the Property which will significantly impair or otherwise interfere with the natural, scenic, open space and ecological values of the Property; and

WHEREAS, the GRANTEE agrees by accepting this grant to honor the intentions of the GRANTOR stated herein and to preserve and protect in perpetuity the conservation values of the Property for the benefit of this generation and the generations to come; and

NOW THEREFORE, intending to be legally bound and in consideration of the foregoing and the mutual covenants, terms, conditions, and restrictions contained herein, GRANTOR hereby voluntarily grants and conveys to the GRANTEE and GRANTEE hereby accepts a Conservation Easement in gross in perpetuity over the Property of the nature and character and to the extent hereinafter set forth.

**1. Purpose.** It is the purpose of this Easement to assure that the conservation values of the Property will be retained forever to prevent any use of the Property that will significantly impair or interfere with the conservation values of the Property.

**2. Rights of GRANTEE.** To accomplish the purpose of this Conservation Easement the following rights are conveyed to GRANTEE by this Conservation Easement:

2.1 To preserve and protect the conservation values of the Property;

2.2 To enter upon the Property at reasonable times in order to monitor GRANTOR's compliance with and otherwise enforce the terms of this Easement; provided that such entry shall be upon prior reasonable notice to GRANTOR, and GRANTEE shall not unreasonably interfere with GRANTOR's use and quiet enjoyment of the Property;

2.3 To prevent any activity on or use of the Property that is inconsistent with the purposes of this Conservation Easement and to require the restoration of such areas or features of the Property that may be damaged by any inconsistent activity of use, pursuant GRANTEE's Remedies; and

2.4 GRANTEE may erect signs the depict the boundary(s) of the Conservation Easement. GRANTEE may also erect signs which specify that the Conservation Easement is not intended for public access.

**3. Prohibited Uses.** Any activity on or use of the Property inconsistent with the purpose of this Conservation Easement is prohibited. Without limiting the generality of the foregoing, the following activities and uses are expressly prohibited:

3.1 Any commercial or industrial use of or activity on the Property other than those relating to agriculture, recreation, or home occupations as permitted by local zoning ordinance;

3.2 The placement or construction of any human-made buildings, structures, or other improvements of any kind (including, without limitation, fences, roads, and parking lots) other than the following:

3.2.1 The maintenance, renovation, expansion, or replacement of existing agricultural, residential, and related buildings, structures, and improvements in substantially their present location as shown in Exhibit B; provided that any

expansion or replacement of any existing building, structure, or improvement may not substantially alter its character or function or increase its present height, or the land surface area it occupies without the prior approval of the GRANTEE;

3.2.2 The placement or construction, after prior notice to GRANTEE, of additional buildings, structure, and improvements for agricultural purposes in the designated agricultural area described in Exhibit B;

3.3 Dumping, storage, processing or landfill of agricultural or non-agricultural solid, liquid or hazardous wastes and debris on the Property;

3.4 Outdoor storage of human-made materials;

3.5 Burning or incinerating any material, whether natural or human-made;

3.6 The alteration or manipulation of the ponds and water courses located on the Property as shown on Exhibit B, or the creation of new water impoundments or water courses, for any purpose other than permitted agricultural or residential uses of the Property; provided that any new water impoundments or water courses for permitted agricultural or residential uses shall be located in the designated residential and agricultural areas described in Exhibit B.

3.7 The placement of any signs, billboards and outdoor advertising on the Property, except that signs whose placement, number, and design do not significantly diminish the scenic character of the Property, may be displayed to state the name and address of the Property and the names of persons living on the Property, to advertize the Property for sale or rent, and to post the Property to control unauthorized entry or use. At a minimum, all signs must adhere to the regulations for signs contained in the zoning ordinance;

3.8 The draining, filling, dredging, or diking of the wetland areas described in Exhibit B, including any enlargements thereof, or the cultivation or other disturbance of the soil within 50 feet of the edge of the \_\_\_\_\_ (*Name of the Waterway*), the location of which is indicated on Exhibit B, with the exception;

3.8.1 Stormwater management and flood control facilities required by governmental authorities having jurisdiction may be installed.

3.9 Any alteration of the surface of the land, including, without limitation, the excavation or removal of soil, sand, gravel, rock, peat, sod, except as may be required in the course of any activity permitted herein; provided that construction material, such as rock, dirt, sand, and gravel, may be taken for the use on the Property from locations approved by the GRANTEE and indicated in Exhibit B;

3.10 Any use or activity that causes or is likely to cause significant soil degradation or erosion of any significant pollution of any surface or subsurface waters; provided that this prohibition shall not be construed as extending to agricultural operations and practices (including without limitation, the use of agri-chemicals such as fertilizers, pesticides, herbicides, and fungicides) that are substantially in accordance with a farm conservation plan prepared or approved by the Lancaster County Conservation District or the United States Department of Agriculture and Natural Resources Conservation Service, or any successor or equivalent agency, which is reviewed and updated whenever a substantial change in operations is contemplated but in any case no less often than every ten years;

3.11 The pruning, cutting down, or other destruction or removal of live trees, and/or woody vegetation located outside the designated residential and agricultural areas described in Exhibit B, except to control or prevent hazard, disease, or fire, to maintain the designated open space areas described in Exhibit B, or to provide firewood for use on the Property;

3.12 Intensive agricultural activities such as the establishment or maintenance of any commercial feedlot or horse boarding facilities; and

3.13 The above-ground installation of new utility systems or extensions of existing utility systems such as but not limited to water, sewer, power, fuel, and communication lines, communication towers and their related facilities, but excluding systems for irrigating the Property.

**4.0 Rights of the GRANTOR.** GRANTOR reserve to him/herself and to his/her personal representatives, heirs, successors, and assigns, all rights accruing from his/her ownership of the Property, including the right to engage in or permit or invite others to engage in all uses of the Property that are not expressly prohibited herein and are not inconsistent with the purpose of this Easement.

## **5. GRANTEE'S Remedies.**

5.1 **Injunction.** GRANTEE, its successors or assigns, jointly or severally, shall have the right to enforce the restrictions contained herein by injunction or other appropriate legal proceedings.

5.2 **Right of Restoration.** GRANTEE may require GRANTOR, his/her successors, heirs, assigns, agents or invitees, as the case may be, to correct any violation(s) of this Grant of Conservation Easement caused by any act of the GRANTOR, his/her successor, heirs, assigns, agents or invitees as the case may be, by restoring the Property to the extent feasible to the condition existing immediately prior to such violation.

5.3 **Costs of Enforcement.** Any cost incurred by GRANTEE in successfully enforcing the terms of this Conservation Easement against GRANTOR, his/her heirs, assigns, agents or invitees, as

the case may be, including, without limitation, costs of suit and attorneys fees, and any cost of restoration necessitated by a Violation of the terms of this Grant shall be borne by the GRANTOR, his/her heirs, assigns, agents, or invitees, as the case may be, in proportion to the damage caused by each.

5.4 GRANTEE'S Discretion. Enforcement of the terms of this Conservation Easement shall be at the discretion of GRANTEE, and any forbearance by GRANTEE to exercise its rights under this Conservation Easement in the event of any breach of any term of this Conservation Easement by GRANTOR shall not be deemed or construed to be a Waiver by GRANTEE of such term or of any subsequent breach of the same or any other term of this Easement or of any of GRANTEE'S rights under this Conservation Easement. No delay or omission by GRANTEE in the exercise of any right or remedy upon any breach by GRANTOR shall impair such right or remedy or be construed as a waiver.

## **6. Costs & Liabilities.**

GRANTEE shall under no circumstances be obligated to pay taxes or assessments on the Property Subject to Easement.

## **7. General Provisions.**

7.1 Successors and Assigns. The Restrictions contained herein shall apply to the Property Subject to Easement as an open space easement in gross in perpetuity. The covenants, terms, conditions and restrictions of this easement shall be binding upon, and inure to the benefit of, the parties hereto and his/her respective representatives, heirs, invitees, successors and assigns and shall continue as a servitude running in perpetuity with the Property Subject to Easement.

7.2 Condemnation. If the easement is taken, in whole or in part, by the exercise of the power of eminent domain, GRANTEE shall be entitled to compensation in accordance with applicable law. This shall not be construed to limit GRANTOR'S rights to compensation provided by law in the event of the exercise of the power of eminent domain. If part of the Property is affected by an eminent domain proceeding, the balance of the Property shall continue to be subject to this Conservation Easement.

7.3 Exclusive Purchase. GRANTEE agrees that it will hold this Conservation Easement exclusively for Conservation purposes and that it should assign its rights and obligations under this Conservation Easement to a public agency or organization qualified, at the time of the subsequent assignment as an eligible donee under applicable state and federal statutes and which has commitment, resources and ability to monitor and enforce the Conservation Easement so that the purposes of these easements shall be preserved and continued and provided such assignee assumes all obligations of GRANTEE hereunder. GRANTEE further

agrees to obtain the new entity’s written commitment to monitor and enforce the Conservation Easement.

7.4 Severability. If the application of any provisions in this Conservation Easement or the applicants thereof to any person is found to be invalid, the remainder of the provisions of this Conservation Easement or the application of such provision to persons or circumstances other than those as to which it is found to be invalid, as the case may be, shall not be affected.

7.5 Reservation of Rights. GRANTOR reserves unto GRANTOR his/her successors, heirs and assigns in title, all rights, privileges, powers and immunities in respect to the Property Subject to Easement including, without limitation, the rights of possession and enjoyment subject always to the covenants, terms and restrictions herein.

7.6 Perpetual Easement Running With the Land. The restrictions and easements contained herein shall run with the land, including each lot created hereafter, as an easement in perpetuity.

7.7 Limitation of Liability. Notwithstanding anything contained herein to the contrary, the rights, restrictions and obligations of the GRANTOR herein shall apply only to the owner of Property during the period of ownership, and upon transfer of such Property, such owner shall have no further rights, responsibilities, obligations, or liability pursuant to or arising from this Grant of Conservation Easement except for claims arising from such owner's violation or this Grant of Conservation Easement during the period of ownership.

7.8 Interest in Property. GRANTOR hereby warrant specially the interest herein conveyed.

7.9 Notification of Transfer. The GRANTOR, and its successors and assigns in title to the Property, shall notify the GRANTEE prior to any transfer of all or any portion of the Property. The notification shall be in writing and shall set forth the name and address of the proposed GRANTEE.

7.9.1 Upon transfer of any or all portions of the property, the subsequent deed shall include the full text of the easement.

TO HAVE AND TO HOLD unto GRANTEE, its successors and assigns, forever.

IN WITNESS WHEREOF and again stating his/her intention to be legally bound hereby, the said GRANTOR have caused this Agreement to be duly executed and its seal to be impressed hereon and attested all as of the \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

Witness:

## *Sample Conservation Trail Easement*

### *How to use this Sample Conservation Trail Easement*

This Sample Conservation Trail Easement is intended to provide the user with a comprehensive guide for preparing an easement. It is important to remember that this sample easement should be used as a guide, and not merely copied. The text provides a format and language that are appropriate to a wide variety of potential scenarios. However, no one sample document can serve as a standard for all situations. For each easement, the language of the document should be carefully tailored to meet the specific conditions and goals for the property. In addition, each easement should be reviewed by a Pennsylvania attorney.

The language contained in the sample easement may be modified to reflect site conditions for any specific site within the Conestoga Greenways. For example, as you prepare a conservation easement, be aware that the site may possess only one or two of the following values:

- ✓ a diversity of plant and animal species;
- ✓ natural and scenic open space; and
- ✓ historic, educational, and / or recreational values.

Other sites may not be located near to the waterway—or may not be prominently visible from the waterway.

The listing of Prohibited Uses in Section 3.0 are other examples of where the sample text may require modification for a specific site. For instance the list of Prohibited Uses may need to be expanded to provide the greatest level of protection for a specific site. Similarly, some of the prohibited uses described may not be applicable and should be removed from the easement language.

## *Sample Conservation Trail Easement*

This GRANT OF CONSERVATION TRAIL EASEMENT is made this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by \_\_\_\_\_ (Name and address of individual or organization) \_\_\_\_\_ (“GRANTOR”), in favor of \_\_\_\_\_ (Name and address of individual or organization) \_\_\_\_\_ (“GRANTEE”), located in \_\_\_\_\_ (Name of Jurisdiction) \_\_\_\_\_, Pennsylvania.

WITNESSETH:

WHEREAS, the GRANTOR is the owner in fee simple of certain real property in \_\_\_\_\_ (Name of Jurisdiction) \_\_\_\_\_, Pennsylvania, more particularly described in Exhibit A (*Exhibit A is a legal description of the property*), attached hereto; and a deed recorded in the office of the Recorder of Deeds in and for Lancaster County, Pennsylvania, in Deed \_\_\_\_\_, Volume \_\_\_\_\_, Page \_\_\_\_\_, and incorporated by this reference (the “Property”). The Property consists of \_\_\_\_\_ (Number of total acres as indicated in the legal description) \_\_\_\_\_ acres; and

WHEREAS, the property possesses natural, scenic, open space, historic, educational, and / or recreational values (“conservation values”) of great importance to the GRANTOR, the people of Lancaster County, and the people of the State of Pennsylvania; and

WHEREAS, in particular, the property consists of open space and forested lands which lie close to or adjacent to the \_\_\_\_\_ (Name of Waterway - Example: Conestoga River, Little Conestoga Creek, West Branch of the Little Conestoga Creek) \_\_\_\_\_ and have been identified in the Conestoga Greenways: A River Corridor Conservation Plan (1999) and / or the Regional Park and Open Space Plan (1993), and amendments to those Plans which are referenced herein and are on file in the offices of \_\_\_\_\_ Township and indicated in Exhibit B (*Exhibit B is a baseline documentation of the Property*), as being significantly important in the development of a comprehensive network of greenways; and

WHEREAS, the Property is situated on or in close proximity to the \_\_\_\_\_ (Name of Waterway) \_\_\_\_\_, and prominently visible from (the) (these) public waterway(s) which sustain(s) substantial recreational uses; and

WHEREAS, the GRANTOR is a good steward of his/her land, has a deep appreciation of the great outdoors and the scenic corridors of the \_\_\_\_\_ (Name of Waterway) \_\_\_\_\_, and has a desire to share this appreciation with others; and

WHEREAS, the trail access points of the Property are documented in an inventory of relevant features of the Property, dated \_\_\_\_\_, 20\_\_\_\_, on file at the offices of the GRANTEE / or attached hereto as Exhibit B and incorporated by this reference



*location and legal limits of the Conservation Easement on the property. For example: fifty (50) feet* \_\_\_\_\_ from the edge of the normal flow channel of the \_\_\_\_\_ *(Name of Waterway)* \_\_\_\_\_, such area being the Conservation Trail Easement;

2.1.1 GRANTEE may allow another nonprofit organization, or greenway trail association whose mission it is to create and maintain such trails, through a Trail Maintenance and Monitoring Agreement, to create and maintain a walking/jogging/bicycling trail as defined herein within the Conservation Trail Easement if such entity demonstrates to GRANTEE its ability and commitment to implement the design, development and long-term management of the walking/jogging/bicycling trail. The Trail Maintenance and Monitoring Agreement shall require that the qualified municipal government, nonprofit organization, or greenway trail association conduct regular monitoring and supervision of the walking/jogging/bicycling trail; or

2.1.2 GRANTEE may allow a governmental entity, or a joint venture between or among such entities, through a Trail Maintenance and Monitoring Agreement, to create and maintain a walking/jogging trail as defined herein within the Conservation Trail Easement, if such entity demonstrates to GRANTEE that it has the ability and commitment to implement the design, development and long-term management of the walking/jogging trail. The Trail Maintenance and Monitoring Agreement shall require the governmental entity to conduct regular monitoring and supervision of the walking/jogging trail;

2.2 GRANTEE shall itself or through its successors or assigns, conduct regular monitoring and supervision of the walking/jogging trail;

2.3 GRANTEE may close any trails within the Conservation Trail Easement on the Property on a temporary basis for repairs and maintenance (including removal of storm-damaged trees blocking any trails), natural hazards (including flooding), or to correct violations of prohibited uses or activities; and

2.4 GRANTEE may mow or otherwise cut woody or herbaceous plants, weeds and grasses within the Conservation Trail Easement.

2.5 GRANTEE may erect Public Use signs that depict the boundary(s) of the Conservation Trail Easement. GRANTEE may also erect Incidental signs with instructions for where to park or gain access to the trail.

**3. Prohibited Uses.** Any activity on or use of the Conservation Trail Easement inconsistent with the purpose of this Conservation Trail Easement is prohibited. Without limiting the generality of the foregoing, the following activities and uses are expressly prohibited:

3.1 Any commercial or industrial activity or use;

3.2 The placement, either temporary or permanent, or construction of any human made improvements, materials, buildings or structures; except that:

3.2.1 Trail base materials and foot bridges, including but not limited to mulch chips, stone dust, stone, brick or concrete pavers, macadam, and wood may be constructed at the discretion of GRANTEE, but only if future sections of the trail are created with similar materials; and

3.2.2 Stormwater management and flood control facilities required by governmental authorities having jurisdiction may be installed;

3.3 The exploration for or extraction of minerals, hydrocarbons, soils or other materials on or below the surface;

3.4 Dumping, storage, processing or landfill of agricultural or non-agricultural solid, liquid or hazardous or other wastes;

3.5 Outdoor storage of human made materials;

3.6 Burning or incinerating any materials, whether natural or human made;

3.7 The alteration, manipulation or destruction of surface water courses;

3.8 The placement of any signs, billboards and outdoor advertising on the Conservation Trail Easement, except that signs whose placement, number, and design do not significantly diminish the scenic character of the Conservation Trail Easement, may be displayed to state the name and address of the Property and the names of persons living on the Property, to advertize the Property for sale or rent, and to post the Property to control unauthorized entry or use. At a minimum, all signs must adhere to the regulations for signs contained in the zoning ordinance.

3.9 On road vehicles and off-road recreational vehicles including but not limited to cars, trucks, motorcycles, snowmobiles, three wheel, four wheel all-terrain vehicles in any manner, except in emergencies, in any manner or location;

3.10 Activities other than those that constitute passive recreation that may be defined by GRANTEE from time to time;

3.11 Mowing of non-woody herbaceous plants, weeds, grasses, or cutting of woody vegetation, except as provided in section 3.2;

3.12 Activities which interfere with the natural character of the Conservation Trail Easement such as, but not limited to: gardens, agricultural activities, and kennels; and

3.13 Application, spraying or treatment of pesticides, herbicides or fungicides, unless GRANTEE approves of same in writing.

**4. Rights of the GRANTOR.** GRANTOR reserve to themselves, and to his/her personal representative, heirs, invitees, successors, and assigns, all rights accruing from his/her ownership of the Property, including the right to engage in or permit or invite others:

4.1 To engage in all uses of the Property that are not expressly prohibited herein and are not inconsistent with the purpose of this Easement; and

4.2 To enter all areas, including the Property Subject to Easement on his/her respective properties at any time.

**5. GRANTEE'S Remedies.**

5.1 Injunction. GRANTEE, its successors or assigns, jointly or severally, shall have the right to enforce the restrictions contained herein by injunction or other appropriate legal proceedings.

5.2 Right of Restoration. GRANTEE may require GRANTOR, his/her successors, heirs, assigns, agents or invitees, as the case may be, to correct any violation(s) of this Conservation Trail Easement caused by any act of the GRANTOR, his/her successors, heirs, assigns, agents or invitees as the case may be, by restoring the Property to the extent feasible to the condition existing immediately prior to such violation.

5.3 Costs of Enforcement. Any cost incurred by GRANTEE in successfully enforcing the terms of this Conservation Trail Easement and/or grant of Conservation Trail Easement against GRANTOR, his/her successors, heirs, assigns, agents or invitees, as the case may be, including, without limitation, costs of suit and attorneys fees, and any cost of restoration necessitated by a Violation of the terms of this Grant shall be borne by the GRANTOR, his/her heirs, assigns, agents, or invitees, as the case may be, in proportion to the damage caused by each.

5.4 GRANTEE'S Discretion. Enforcement of the terms of this Conservation Trail Easement shall be at the discretion of GRANTEE, and any forbearance by GRANTEE to exercise its rights under this Conservation Trail Easement in the event of any breach of any term of this Conservation Trail Easement by GRANTOR shall not be deemed or construed to be a Waiver by GRANTEE of such term or of any subsequent breach of the same or any other term of this Easement or of any of GRANTEE'S rights under this Conservation Trail Easement. No delay or omission by GRANTEE in the exercise of any right or remedy upon any breach

by GRANTOR shall impair such right or remedy or be construed as a waiver.

## **6. Costs & Liabilities.**

GRANTEE shall under no circumstances be obligated to pay taxes or assessments on the Property Subject to Easement.

## **7. General Provisions.**

7.1 Successors and Assigns. The Restrictions contained herein shall apply to the Property as an open space easement in gross in perpetuity. The covenants, terms, conditions and restrictions of this easement shall be binding upon, and inure to the benefit of, the parties hereto and his/her respective representatives, heirs, successors and assigns and shall continue as a servitude running in perpetuity with the Property.

7.2 Condemnation. If the Conservation Trail Easement is taken, in whole or in part, by the exercise of the power of eminent domain, GRANTEE shall be entitled to compensation in accordance with applicable law. This shall not be construed to limit GRANTOR's rights to compensation provided by law in the event of the exercise of the power of eminent domain. If part of the Property is affected by an eminent domain proceeding, the balance of the Property shall continue to be subject to this Conservation Trail Easement.

7.3 Exclusive Purchase. GRANTEE agrees that it will hold this Conservation Trail Easement exclusively for Conservation purposes and the establishment of a walking/jogging trail, respectively and that it should assign its rights and obligations under this Conservation Trail Easement except to a public agency or organization qualified, at the time of the subsequent assignment as an eligible donee under applicable state and federal statutes and which has commitment, resources and ability to monitor and enforce the Conservation Trail Easement so that the purposes of these easements shall be preserved and continued and provided such assignee assumes all obligations of GRANTEE hereunder. GRANTEE further agrees to obtain the new entity's written commitment to monitor and enforce the Conservation Trail Easement.

7.4 Severability. If the application of any provisions in this Conservation Trail Easement or the applicants thereof to any person is found to be invalid, the remainder of the provisions of this Conservation Trail Easement or the application of such provision to persons or circumstances other than those as to which it is found to be invalid, as the case may be, shall not be affected.

7.5 Reservation of Rights. GRANTOR reserve unto GRANTOR, his/her successors, heirs and assigns in title, all rights, privileges, powers and immunities in respect to the Property Subject to Easement including, without limitation, the rights of possession and enjoyment subject always to the covenants, terms and restrictions herein.

7.6 Perpetual Easement Running With the Land. The restrictions and easements contained herein shall run with the land, including each lot created hereafter, as an easement in perpetuity.

7.7 Limitation of Liability. Notwithstanding anything contained herein to the contrary, the rights, restrictions and obligations of the GRANTOR herein shall apply only to the owner of Property during the period of ownership, and upon transfer of such Property, such owner shall have no further rights, responsibilities, obligations, or liability pursuant to or arising from this Grant of Conservation Trail Easement except for claims arising from such owner's violation of this Grant of Conservation Trail Easement during the period of ownership.

7.8 Interest in Property. GRANTOR hereby warrant specially the interest herein conveyed.

7.9 Notification of Transfer. The GRANTOR, and its successors and assigns in title to the Property, shall notify the GRANTEE prior to any transfer of all or any portion of the Property. The notification shall be in writing and shall set forth the name and address of the proposed GRANTEE.

7.9.1 Upon transfer of any or all portions of the property, the subsequent deed shall include the full text of the easement.

TO HAVE AND TO HOLD unto GRANTEE, its successors and assigns, forever.

IN WITNESS WHEREOF and again stating his/her intention to be legally bound hereby, the said GRANTOR have caused this Agreement to be duly executed and its seal to be impressed hereon and attested all as of the \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

Witness:

## *Sample Revocable Trail License Agreement*

THIS AGREEMENT made this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by and between \_\_\_\_\_

*(Name and address of individual)*

\_\_\_\_\_ herein after referred to as

"Owner" and \_\_\_\_\_ *(Name of Municipality)*

herein after referred to as the "Licensee."

WITNESSETH:

WHEREAS, the OWNER is the owner of premises situated in \_\_\_\_\_ *(Name of Municipality)*

\_\_\_\_\_, Lancaster County, Pennsylvania, as the same are

more described in Exhibit A *(Exhibit A is a legal description of the property)*, attached hereto; and a

deed recorded in the office of the Recorder of Deeds in and for Lancaster County,

Pennsylvania, in Deed \_\_\_\_\_, Volume \_\_\_\_\_, Page \_\_\_\_\_, and

incorporated by this reference (the "Property"). The Property consists of \_\_\_\_\_ *(Number of total*

*acres as indicated in the legal description)* \_\_\_\_\_ acres; and

WHEREAS, in particular, the property consists of open space and forested lands which lie

close to or adjacent to the \_\_\_\_\_ *(Name of Waterway - Example: Conestoga River, Little Conestoga*

*Creek, West Branch of the Little Conestoga Creek)* \_\_\_\_\_ and have been identified in the Conestoga

Greenways: A River Corridor Conservation Plan (1999) and / or the Regional Park and Open

Space Plan (1993), and amendments to those Plans which are referenced herein and are on

file in the offices of \_\_\_\_\_ Township and indicated in Exhibit B

*(Exhibit B is a baseline documentation of the Property)*, as being significantly important in the

development of a comprehensive network of greenways; and

WHEREAS, it is proposed that a portion of said greenway trail shall include an existing trail

that crosses Owner's land, as generally depicted on a sketch map attached hereto as Exhibit

C, it is hereby

AGREED that permission is granted by the Owner to \_\_\_\_\_ *(Name of Municipality)*,

to temporarily make use of that portion of Owner's land which includes the greenway trail

generally depicted on a sketch map attached hereto as Exhibit C, for the purpose of creating

and maintaining a public access trail for the recreation and benefit of the general public at its

cost and expense upon the following conditions:

1. This license is for the benefit of the Licensee only and shall not be assigned or transferred without the written permission of the Owner;

2. The only work authorized by this license is the removal of underbrush and fallen trees to the extent necessary to maintain a public access trail and the placement of wood, metal or plastic markers for the purpose of defining said access trail;

3. No structures, shelters, restrooms, picnic or cooking facilities or campsites shall be constructed by the Licensee without written permission of the Owner;

4. The Owner may, upon notice to the Licensee, request that the \_\_\_\_\_ *(Name of Municipality)* \_\_\_\_\_ change the course of the path through the Owner's property;

5. The Owner reserves the right, at any time, to revoke and annul this license. Upon written notice of revocation to the \_\_\_\_\_ *(Name of Municipality)* \_\_\_\_\_, the \_\_\_\_\_ *(Name of Municipality)* \_\_\_\_\_ shall, within a reasonable time, remove any or all wood, metal or plastic markers on the access trail or any other works or structures erected by the \_\_\_\_\_ *(Name of Municipality)* \_\_\_\_\_ thereon.

6. Notice of revocation of license or a request for the realignment of the public access trail may be given to the \_\_\_\_\_ *(Name of Municipality)* \_\_\_\_\_ by mailing a notice to that effect by certified mail to the Township or Borough manager.

\_\_\_\_\_  
Property Owner

\_\_\_\_\_  
Township or Borough Manager

---

# APPENDIX 3: DESIGN STANDARDS FOR GREENWAY TRAILS

---

## *A3.1 Standards for Different User Groups*

### *a. Pedestrians*

Pedestrians, who travel at fairly low speeds (an average of three to 7 miles per hour), include a wide variety of people, such as walkers, joggers, hikers, runners, and people pushing baby strollers. This group of trail users generally require fewer specific design guidelines than other users. Most pedestrians prefer a soft surface such as crushed rock (rather than asphalt) to prevent injuries. If asphalt is used as a primary trail surface, consider providing at least a 2-foot-wide shoulder of a softer material on both sides of the trail for pedestrians. If a separate path is planned for pedestrians, the surface can be upgraded to consist of crushed stone, wood chips, or bare earth. Regardless of the trail surface, a 7-foot vertical clearance should be maintained by clearing vines, trees, and other vegetation.

### *b. Bicyclists*

Bicyclists, whether commuting, recreational, touring, or mountain cyclists—use different equipment, have slightly different needs, and vary in cycling ability. The following design guidelines refer to sight distances, trail width, and trail clearances, for all cyclists. Some as-

pects, such as surface trail material, may not apply to mountain bicyclists. Additionally, standards for bike lanes along roadways have been included.

The American Association of State Highway and Transportation Officials (AASHTO) recommends a 10-foot width for bicycle paths, with at least a 2-foot wide cleared shoulder on either side. AASHTO further recommends that a 12-foot-wide trail with shoulders may be even more appropriate depending on the anticipated uses of the trail. The vertical clearance for bicycle paths is at least 8 feet, although 10 feet should be the minimum for overpasses and tunnels.

In order to provide adequate stopping sight distance for bicyclists, paved or unpaved multi-use trails should maintain a minimum sight distance of at least 150 feet.

Bicyclists should yield the right of way to pedestrians and equestrians. Additionally, bicyclists should give clear warning before passing. In order to maintain such protocol, signs should be posted throughout the trail reminding users of courtesies.

Bicycle lanes are portions of a roadway designated by striping, signing, or pavement markers for preferential or exclusive use by bicyclists. AASHTO recommends that these lanes be a minimum of 5 to 6 feet wide for user safety and are typically delineated by a solid

painted white line 4 to 6 inches wide between the roadway and bike lane.

### *c. Multi-use Trails*

Multi-use trails should be a minimum of 10 to 12 feet wide. This width will allow the greenway trail to accommodate equestrian use. If the trail is not of a softer surface material such as granular stone or dirt, it is recommended that a 5-foot-wide tread be planned along the side of the multi-use trail. If a separate tread is not possible, a cleared shoulder will suffice. Vertical clearances for equestrians should be at least 10 feet with a horizontal clearance of 5 feet. All low-hanging tree limbs should be cut flush with the trunk of the tree in order to prevent injury to the rider or horse.

“Share-the-trail” signs indicating that equestrians have the right-of-way on multi-use trails should be placed throughout a greenway system as part of a user education trail design plan.

In order to make the linear trail system accessible to all people, regardless of physical condition, a minimum standard width of five-feet should be maintained throughout the trail corridor. Additionally, an accessible trail gradient should not exceed 5 percent. If it does, Uniform Federal Accessibility Standards recommends building a ramp which can accommodate all users. This ramp should not exceed an 8 percent grade.

## *A3.2 Standards for Trail Surface Material*

There are many surface types available to complete a multi-use trail, including granular stone, asphalt, concrete, soil cement, wood chips, and natural surface. Surface types can be either soft or hard, defined by the material’s ability to repel or absorb moisture, can encourage or discourage trail use, and control the speed of the trail travel.

There are a number of factors to consider when choosing a surface for a trail: availability of the material, cost to purchase the material and install it, life expectancy, accessibility, cost of maintaining the surface, and user acceptance and satisfaction.

Regional climate factors such as temperature extremes, precipitation rate and frequency, and frost/thaw cycles heavily influence the choice of surfacing materials.

## *A3.3 Standards for Viewsheds*

Lines of sight within a corridor or out to a landscape or adjacent built features are called viewsheds. There are two viewshed issues concerned with the design of trails and linear parks. The first issue is safety—the need for an unobstructed forward and backward view at all times. The second important viewshed issue is the need for trail users to see their surroundings. With these two aspects in mind, the following are minimum acceptable sight distances to be used within the greenway: pedestrians, 50 linear feet each way; equestrians, 100 linear feet each way; bicyclists, 150 linear feet each way. As viewsheds affect the quality of a user’s experience along trails and greenway linear parks, careful consideration should be given to these aspects.

## *A3.4 Standards for Signage*

Signs play an important role in trail design. Signs not only give directions, but offer needed information along trails. It is important that signs are used primarily to mark routes, regulate uses, and provide safety warnings as required. The following are guidelines intended to be used along the greenway corridor and are recognizable standards as developed by the Federal Highway Administration in the *Manual on Uniform Traffic Control Devices* (MUTCD).

The following standards are universal and are reserved for their intended uses.

### *a. Standard Shapes:*

- The octagon is reserved exclusively for the stop sign;
- The equilateral triangle, with one side pointed downward is reserved exclusively for the yield sign;
- The circle gives advance warning of a railroad crossing;
- The diamond is used to warn of possible hazards; and

- The rectangle, with the longer dimension vertical, is for regulatory signs.

### *b. Standard Sign Colors and Sizes*

- A red background is for stop signs, do-not-enter, and prohibition signs;
- Signs should be clearly readable and easy to understand. With this in mind, information on signs should be concise and direct with simple bold styles of lettering;
- Standards suggest the effective text height for most trail signs is between 3 and 6 inches;
- Colors and shape can be used for transmitting messages quickly, but only if the meaning is easily understood and consistent throughout the trail;
- It is suggested by the MUTCD that trail stop signs should measure 18 by 18 inches, yield signs 24 by 24 inches, and regulatory signs 12 by 18 inches;
- The placement of signs along a greenway trail is extremely important as improperly placed signs may present an obstacle or hazard to users. Trail signs should be placed in a clear area, unobstructed by parked cars, vegetation, or buildings, with post-mounted signs 2 feet off the edge of the trail and raised 4 to 5 feet off the ground; and
- Non-traffic signs, such as informational, educational, or interpretive signs, should be placed 4 feet off the sides of the trail in order to let users pull off the trail and read the signs, as well as leaving plenty of room for the passers-by in the right-of-way.

### *c. Sign Types*

A comprehensive system of signs along interpretive trails is essential for trail success. Messages at the beginning and along the trail should include:

- a map describing all trails and their respective length;

- a general description of each trail including its emphasis, character, historical attributes, and main features;
- locations of areas for rest, comfort, danger, etc.; and
- descriptions of events and places, special features, things to view, touch, or smell, etc.

Stop signs and warning signs need to be placed within sight-distance limits for adequate time to read and respond. The viewing distance for stop signs should be 100 to 125 feet, while the distance for warning signs should be 125 to 150 feet. Signs which indicate a trail/road intersection should be placed at least 200 feet from the hazard.

Pavement markings should be used to reinforce signage by providing additional information. Pavement markings are particularly useful for bikeways, since more than signs, are directly in the bicyclist's normal zone of vision. Striping and message stencils are the most common form of pavement markings. Stenciled message markings are normally white with a minimum letter height of 4 feet and include messages as STOP, YIELD, and PED X-ING.

Finally it is important not to overload and confuse trail users with an overabundance of signs. Keep at least 75 feet between signs to allow users to read and react to the messages.

Specific standards of informational signs indicating the location and route of the greenway should ultimately conform to municipal, county, and state requirements.

## *A3.5 Standards for Trail Furniture/Kiosks*

Individual site furniture—including benches for resting, and kiosks—should meet the following environmental criteria: temperature, precipitation, wind, and light.

The anticipated climate of a particular area is again a key consideration when determining whether permanent, partial, or temporary shade and glare reductions are needed. In hot areas, site furniture should not be placed near extensive areas of paving which reflect or radiate excessive amounts of heat, unless buffered by

shade. Additionally, benches, handles, and handrails exposed to full sunlight should be nonmetallic and light in color to remain comfortable to the touch.

In cooler areas, furniture should be dark in color, placed to take advantage of natural sun traps, and smooth in texture to inhibit snow and ice accumulation. It is also recommended that furniture not be placed in areas where snow is stockpiled.

In excessively wet areas, benches and kiosks should drain well and be constructed of non-absorptive materials to promote rapid drying and placed to take advantage of the warming effects of sunlight.

Finally, materials selected for use in humid climates should be naturally decay and fungus-resistant, or specially treated to minimize mildew, rot, and consequential staining.

### *Sources*

Rails to Trails Conservancy and the Association of Pedestrian and Bicycle Professionals, January, 1998. "Improving Conditions for Bicycling and Walking: A Best Practices Report Prepared for the Federal Highways Administration." RTC, Washington, D.C.

Rails to Trails Conservancy, 1993. **Trails for the 21st Century: Planning, Design and Management Manual for Multi-Use Trails.** Island Press, Washington, D.C.

Trapp, Suzanne and Michael Gross and Ron Zimmerman. n.d. **Signs, Trails and Wayside Exhibits: Connecting People and Places,** University of Wisconsin, UW-SP Foundation Press Inc., WI: Stevens Point

UNC Highway Safety Research Center and HDR Engineering, 1991. "National Bicycling and Walking Study, Federal Highway Administration Report No. FHWA-PD-92-003," Washington, DC.

### *And*

Association of Pedestrian and Bicycle Professionals  
pedbike@aol.com

Federal Highway Administration  
400 Seventh Street, SW HEP-10  
Washington, DC 20590  
www.fhwa.dot.gov

Rails-To-Trails Conservancy  
1100 17th Street, NW  
10th Floor  
Washington, DC 20036  
www.railtrails.org

Pedestrian Federation of America  
1506 21st Street, NW  
Suite 200  
Washington, DC 20036  
nbpc@access.digex.net (email)

---

## ***APPENDIX 4: ACRONYMS***

---

AASHTO	American Association of State Highway Transportation Officials	PennDOT	Pennsylvania Department of Transportation
AFT	American Farmland Trust	PITA	Planning Implementation and Technical Assistance Program
BMP	Best Management Practice	PNDI	Pennsylvania Natural Diversity Index
CBF	Chesapeake Bay Foundation	PP & L	Pennsylvania Power and Light
CMAQ	Congestion Mitigation and Air Quality Program	PS	Purdon's Statutes
DCNR	(Pennsylvania) Department of Conservation and Natural Resources	RTCA	Rivers, Trails and Conservation Assistance Program
DEP	(Pennsylvania) Department of Environmental Protection	RUS	Recreation Use Statutes
ICC	Interstate Commerce Commission	SLSA	Suburban Lancaster Sewer Authority
ISTEA	Inter-Modal Surface Transportation Efficiency Act	STP	Surface Transportation Program
LIMC	Lancaster Inter-Municipal Committee	TDR	Transfer of Development Rights
LWCF	(Pennsylvania) Land and Water Conservation Fund	TEA-21	Transportation Equity Act for the 21 <sup>st</sup> Century
MUTDC	Manual on Uniform Traffic Control Devices	TPL	Trust for Public Land
NRCS	Natural Resource Conservation Service	USDA	United States Department of Agriculture
NRTF	National Recreational Trails Fund	USDOT	United States Department of Transportation



---

# ***APPENDIX 5: MAPS OF THE CONESTOGA GREENWAY***

---

The eight maps contained in this appendix illustrate the locations for the three types of greenways and other important features.<sup>1</sup>

Items detailed on these include the following:

- **Linear Park and Trail Greenways**

- Pedestrian - Proposed (private property)
- Pedestrian - Proposed (public property)
- Pedestrian - Existing
- Multiuse - Proposed (private property)
- Multiuse - Proposed (public property)
- Multiuse - Existing

- **Scenic Preservation Greenways** or Scenic Areas
- **Resource Conservation Greenways**
- Urban Growth Boundaries
- Property Lines
- Roads
- Easements
- Contours at 25' intervals
- Structures
- Historic and Cultural Sites

<sup>1</sup> Please note that the base maps used for the eight greenway plans were prepared by the Lancaster County GIS Department and carry the following statement: "This drawing was prepared for the use of the Lancaster Inter-Municipal Greenway & Park Advisory Board and / or Lancaster County Planning Commission and is intended to be used for reference and illustrative purposes only. This drawing is a not legally recorded plan, survey, official tax map or engineering schematic and it is not intended to be used as such. This drawing includes records, information and data developed and maintained in various Lancaster County offices; map layers were created from different sources and at different scales, and the actual or relative geographic position of any feature is only as accurate as the source information. If you have questions about any of the base GIS data shown on this map, direct them to the Lancaster County Planning Commission. Questions regarding the greenway mapping should be directed to the Lancaster Inter-Municipal Committee (LIMC)."

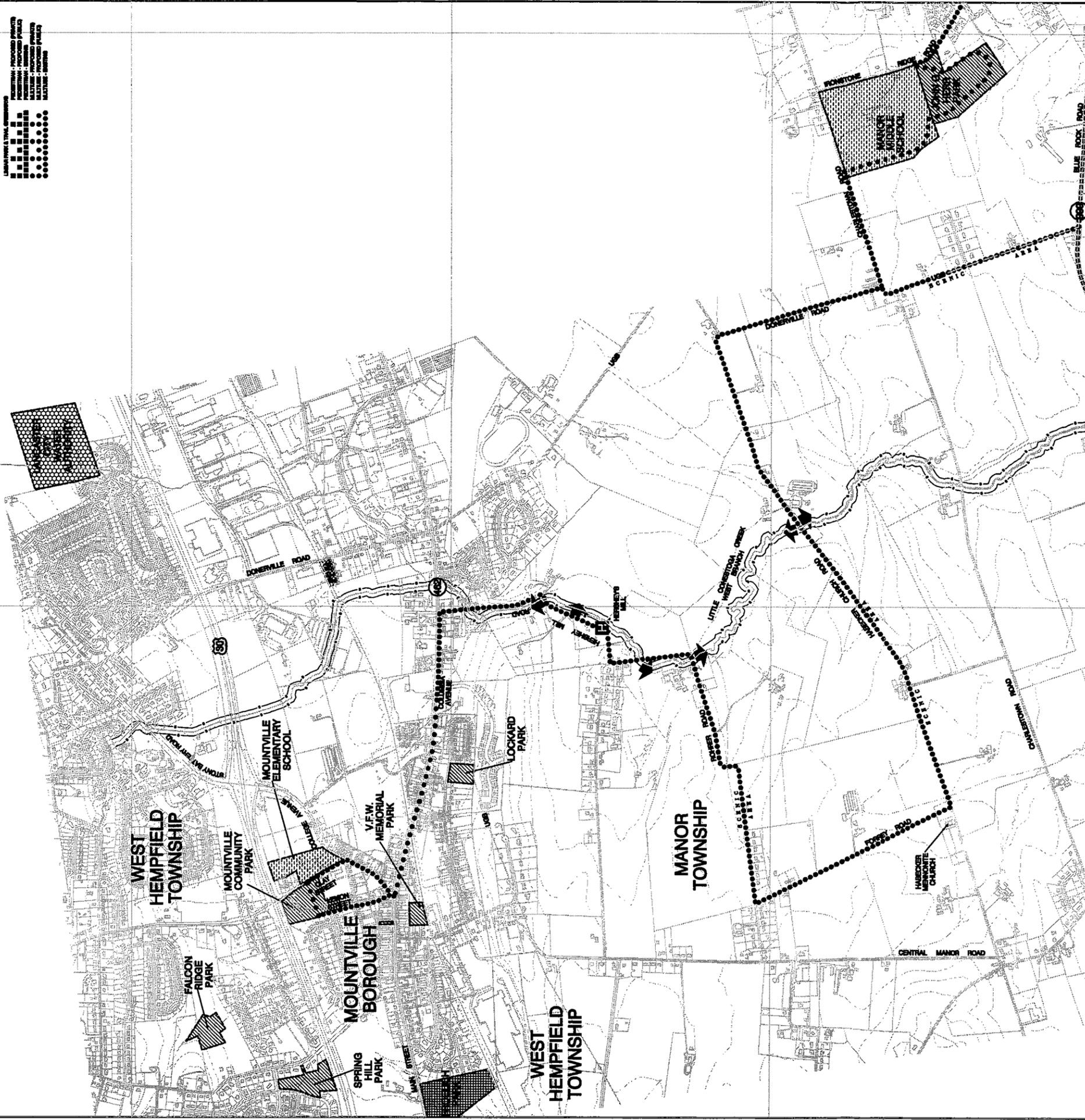
- Significant Geological Sites
- Boat Access Areas
- Existing Public Parks
- Existing Public Schools
- Other Public Lands
- Other Properties (such as private parks, schools, utilities, nature preserves, and non-profit organizations)

The routes for each type of greenway are described in greater detail in Chapter 7 (Recommended Locations) of this plan.



**LEGEND**

- SEWERAGE COLLECTION SYSTEM
- UTILITY (WATER) BOUNDARY
- PROPERTY LINES
- ROADS
- RAILROADS
- HIGHWAYS
- AIRPORTS
- STRUCTURES
- SCENIC AREA
- HISTORIC LANDMARK
- HISTORIC DISTRICT
- HISTORIC BUILDING
- HISTORIC SITE
- HISTORIC LANDMARK
- HISTORIC DISTRICT
- HISTORIC BUILDING
- HISTORIC SITE
- HISTORIC LANDMARK
- HISTORIC DISTRICT
- HISTORIC BUILDING
- HISTORIC SITE



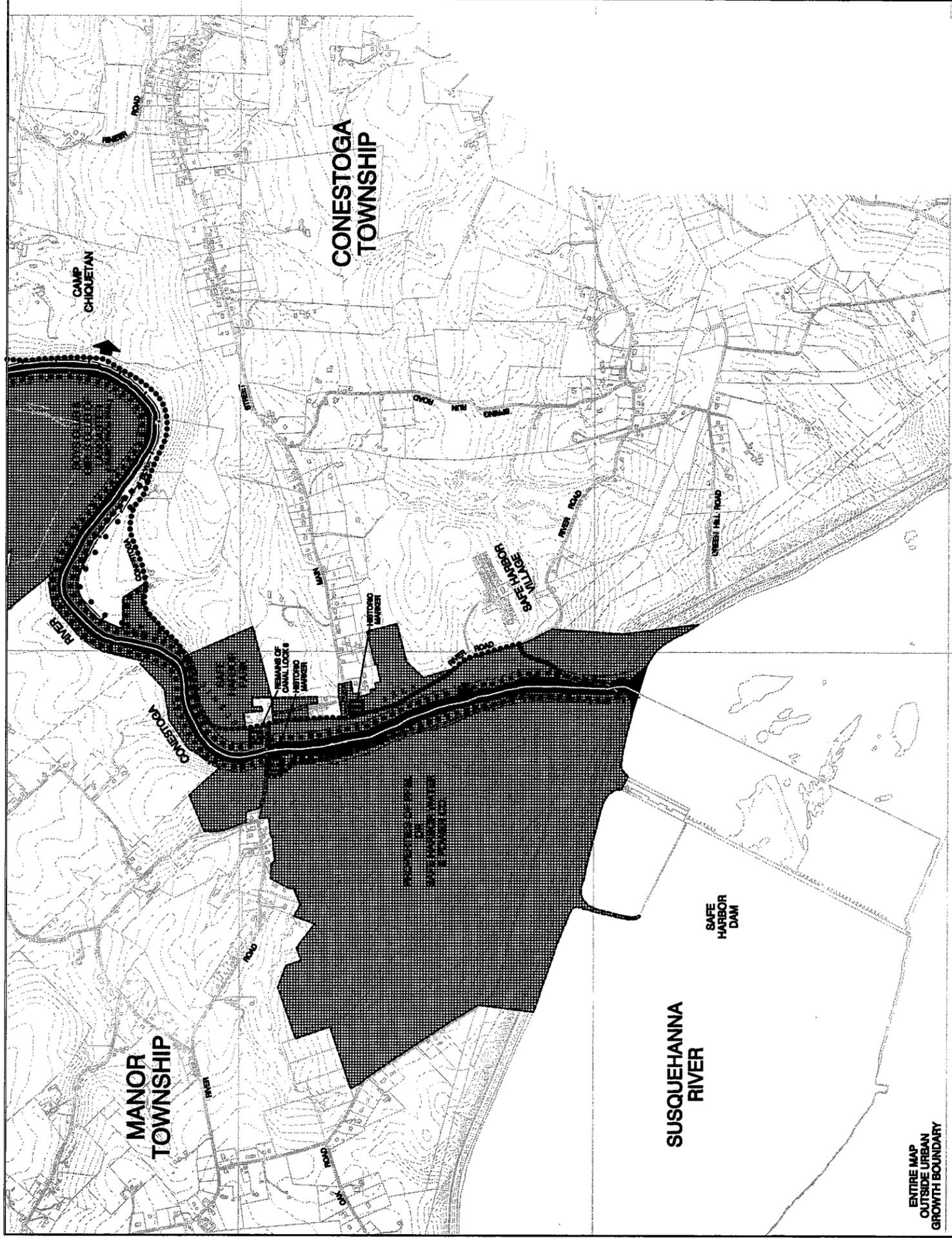
**LIMC**  
Lancaster Inland Marine Company  
100 N. 2nd St., Lancaster, PA 17301  
Tel: (717) 391-1111

**Conestoga Greenways**  
Lancaster County, Pennsylvania

Scale 1" = 10 Miles

THIS MAP WAS PREPARED FOR THE USE OF THE LANCASTER COUNTY PLANNING AND DEVELOPMENT DEPARTMENT. IT IS THE PROPERTY OF THE LANCASTER COUNTY PLANNING AND DEVELOPMENT DEPARTMENT AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE LANCASTER COUNTY PLANNING AND DEVELOPMENT DEPARTMENT. ALL RIGHTS RESERVED.





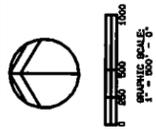
ENTIRE MAP  
OUTSIDE URBAN  
GROWTH BOUNDARY

**LEGEND**

- INTERSTATE CORRIDOR
- URBAN GROWTH BOUNDARY
- PROPERTY LINES
- PARKWAY
- MAIN ROAD
- OTHER ROAD
- RIGHT-OF-WAY
- SUBURBAN AREA
- HISTORIC DISTRICT
- HISTORIC BUILDING
- HISTORIC SITE
- HISTORIC STRUCTURE
- HISTORIC LANDMARK
- HISTORIC DISTRICT
- HISTORIC SITE
- HISTORIC STRUCTURE
- HISTORIC LANDMARK

# Conestoga Greenways

Lancaster County, Pennsylvania



**KEY MAP**  
Scale 1" = 10 Miles

THIS MAP WAS PREPARED FOR THE USE OF THE LANCASTER INTERMODAL CENTER & THE LANCASTER COUNTY DEPT. OF TRANSPORTATION. THE LANCASTER COUNTY DEPT. OF TRANSPORTATION IS NOT RESPONSIBLE FOR THE ACCURACY OF THE DATA OR THE RESULTS OF THE ANALYSIS. THE LANCASTER COUNTY DEPT. OF TRANSPORTATION IS NOT RESPONSIBLE FOR THE ACCURACY OF THE DATA OR THE RESULTS OF THE ANALYSIS. THE LANCASTER COUNTY DEPT. OF TRANSPORTATION IS NOT RESPONSIBLE FOR THE ACCURACY OF THE DATA OR THE RESULTS OF THE ANALYSIS.

