

NORTHWEST PENNSYLVANIA GREENWAYS

Erie County, Pennsylvania

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NORTHWEST PENNSYLVANIA GREENWAYS

NORTHWEST PENNSYLVANIA - *Greenways Plan*

Erie County
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INTRODUCTION

ERIE COUNTY GREENWAYS PLAN - A Component of the Northwest Pennsylvania Greenways Plan

INTRODUCTION

The Erie County Greenways Plan is part of the larger Northwest Pennsylvania Greenways Planning effort undertaken by the Northwest Regional Planning and Development Commission. The Northwest Pennsylvania Greenways planning process was a multi-county effort completed for the Commission's eight counties, and individual plans for six counties, including:

- Erie County
- Clarion County
- Crawford County
- Forest County
- Venango County
- Warren County

Before the start of this plan individual plans for Lawrence and Mercer Counties were completed. Their results were synthesized into the Northwest Region Greenways Plan.

The purpose of this Chapter is to introduce the concept of Greenways to you, to present the benefits of establishing a greenway network in Erie County, and to establish the goals and objectives of creating the network. Towards that end this Introduction is organized as follows:

- Vision for Greenways in Erie County
- Benefits of Greenways to Erie County
- Goals and Objectives of the Erie County Greenways Plan

Erie County is rich in recreation, natural resources, and local history. These aspects attract millions of tourists to the region throughout the course of the year. Furthermore, many of the County's resources are unique and special to the northwest Pennsylvania region and beyond. Some of these include:

- French Creek: world renowned for its biodiversity
- Twelvemile, Sixteenmile, and Twentymile Creeks; Crooked Creek; Elk Creek; and Walnut Creek: world class steelhead fishing streams
- Presque Isle State Park: the most visited state park in Pennsylvania and one of the best locations for birds in the state
- Erie Bluffs State Park: old growth forest, rare flora, exceptional value wetlands, and significant archeological sites
- Six Exceptional Value and One High Quality Streams
- Twelve Trout Stocked Tributaries
- U.S. Route 6 Heritage Region: Pennsylvania's U.S. Route 6 covers over 440 miles within northern Pennsylvania. U.S. Route 6 stretches beyond Pennsylvania's borders both east and west and continues on to our country's Atlantic and Pacific coasts.

By planning to conserve and enhance natural system greenway corridors, and build upon existing and establish new recreation and transportation greenway corridors, Erie County is taking measures that will provide benefits for current and future generations of Erie County residents to enjoy and prosper from.

WHAT IS A GREENWAY?

The term “Greenway” was first coined in the 19th century, and since that time greenways have been defined in many ways. Some people think of greenways as primarily recreational (1), namely trails for hiking, jogging, biking, or canoeing/kayaking (often called water trails or “blueways”). For them, greenways are places that offer opportunities to experience the outdoors. For others, the purpose of greenways is primarily for conservation (2) of undeveloped land containing important natural resources like forests, wetlands, and stream banks, along with the plants and animals that live there. Still others see greenways in aesthetic (3) terms, preserving the pastoral countryside setting in rural areas, protecting outstanding natural features such as stream valleys, forested ridges, and sensitive habitats.

All three of these ideas (recreation, conservation, and aesthetic) are embraced by the following all-encompassing definition, which is adapted from the Commonwealth of Pennsylvania's Greenways Plan: ***Pennsylvania Greenways - An Action Plan for Creating Connections***, and is embraced by this Greenways Plan:

A greenway is a corridor of open space, varying greatly in scale, and incorporating or linking diverse natural, cultural, and scenic resources. Some greenways are recreational corridors or scenic byways accommodating pedestrian and non-motorized vehicle traffic on both land and water; while others function almost exclusively for environmental protection and are not designed for human passage.

The movement to establish greenways was given a significant boost in 1987, when the President’s Commission on American Outdoors recommended that an interconnected greenways network be established throughout the nation. Many states, including the Commonwealth of Pennsylvania, took up the task of promoting greenways. *Pennsylvania’s Greenways – An Action Plan for Creating Connections* was published in 2001. This report established a strategy for creating a comprehensive, statewide greenway network by the year 2020. The Governor appointed the Department of Conservation and Natural Resources (DCNR) to oversee the Commonwealth’s greenways program. DCNR, in partnership with county and municipal officials, supports greenways planning and implementation through education, technical assistance, and grant making programs.

Through the Northwest Pennsylvania Greenways, the following definition was developed to define greenways for the northwest region's participating counties:

Greenways of Northwestern Pennsylvania

A greenway is a corridor of open space. Greenways vary greatly in scale, from narrow ribbons of green that run through urban, suburban, and rural areas to wider corridors that incorporate diverse natural, cultural and scenic features. They may follow old railways, canals, or ridge tops, or they may follow stream corridors, shorelines, or wetlands, and include water trails.

Some greenways are for human activity and may accommodate motorized and non-motorized recreation and transportation uses. Other greenways conserve natural infrastructure for the benefit of community, economy, and environment and are not designed for human passage.

WHY A GREENWAYS PLAN FOR ERIE COUNTY?

Wherever greenways are developed, they provide numerous and diverse benefits to local municipalities and their residents. This section of the plan focuses on those benefits that are especially applicable to greenways development in Erie County. Such benefits include:

- Promoting environmentally-sound land development
- Promoting land and water restoration
- Encouraging a network of non-motorized land and water transportation corridors to connect people to our resources
- Exploring opportunities to expand motorized off highway vehicle and snowmobile trail opportunities
- Conserving natural resource infrastructure resources
- Building capacity at the local level for implementation
- Encouraging economic development
- Promoting healthy living
- Enhancing the quality of life

For example, greenway corridors established to preserve contiguous forest or open space protect habitat for wildlife, and in certain instances, habitat for threatened or endangered species. Greenways along rivers, streams, lakes, and reservoirs may have multiple advantages such as habitat protection, flood control, and drinking water protection. Corridors linking areas of farmland and open space help to preserve the rural landscape and way of life. Many of these benefits are interrelated and work together to bolster quality of life in the region. For example, providing transportation alternatives in the form of trails, shared use paths, or safe routes to

school, leads to better health and fitness. Similarly, conserving historic and cultural resources supports economic prosperity by attracting visitors from outside and inside the region.

Northwest Pennsylvania contains a diversity of environmental, cultural, and historic resources. Municipalities, counties, and regional partnership organizations are committed to planning for the future of the region by promoting and conserving our resources, utilizing a green infrastructure planning approach. Furthermore, these entities are also committed to connecting our residents to our resources by expanding existing, and establishing new, recreation greenways throughout the County.

The process of establishing a greenway network in Northwest Pennsylvania will not take away the rights of property owners, nor will it restrict development in the region. The greenway network will promote sustainable development, reduce development costs, and reduce the burden of providing public services on local, county, and state governments.

PRESERVING ERIE COUNTY'S DEFINING CHARACTERISTICS

Maintaining and protecting Erie County's open spaces and natural resources is now of greater importance than ever. Preservation of these assets can play a key role in establishing a high quality of life for ourselves and future generations. Residents enjoy the natural and recreational resources that set their community or region apart from everywhere else. Rocky bluffs of the Lake Erie shoreline, the revitalized Bayfront District, plateau-like topography of the North East wine region, naturally formed glacial lakes, charming towns, and historic covered bridges are all part of the unique character of Erie County. Visitors to the area are often charmed by the shoreline towns and lighthouses, amazed by the beauty and diversity of Presque Isle State Park, or entertained by the performances at the Erie Bayfront amphitheatre.

Erie County has many recreational assets, including Presque Isle State Park, Erie Bluffs State Park, Lake Erie, Asbury Woods Greenway Trail, the Bayfront Parkway Multi-Use Trail, the Seaway Trail, many other local trails, several local municipal parks, steelhead fishing in Lake Erie's tributaries, and a countywide network of snowmobile trails. These resources provide a variety of opportunities for biking, hiking, fishing, hunting, boating, snowmobiling, wildlife viewing, and other pastimes.

In addition to its abundant natural and recreational assets, Erie County also has a rich history that is well-preserved. Several significant historic sites such as Cashier's House in Erie, home to the Erie County History Center; Corry Armory; Erie Land Lighthouse; the USS Brig Niagara; and the Eagle Hotel in Waterford provide opportunities for increasing tourism to the county. The county also features historic covered bridges in Waterford and Albion. The city of Erie boasts four diverse National Historic Districts featuring residences, industry, and commerce. Other municipalities containing National Historic Districts are the Boroughs of Waterford, North East, and Union City. Greenways linking historic resources with the County's recreational amenities will increase their accessibility and attract more tourists.

Within the Erie County Comprehensive Plan, the Historic Preservation Plan outlines specific policies and guidelines for historic preservation. The County recognizes the Erie County Historical Society as the lead agency for preservation activities in the county. The County's role is to assist and provide technical expertise so that agencies and other interested municipalities can properly preserve their historic resources.

EXPANDING THE ECONOMY

Economic growth is of special importance in Erie County. The county seat, the City of Erie, is the fourth largest city in the state of Pennsylvania. Erie is the state's primary access point to Lake Erie, the Great Lakes, and the St. Lawrence Seaway. Throughout history, Erie was a maritime center after the American Revolution, a railroad hub during the American westward expansion, and an important manufacturing center during the Industrial Revolution. As of the 2006 census, manufacturing still ranked first with the health care sector coming in second as the largest major employment industries within the county. Recently, tourism and recreation have emerged as part of a new and diverse mix of key business sectors that Erie County can capitalize on.

Tourism/Eco-Tourism

Erie County's proximity to major population centers, such as Cleveland, Buffalo, and Pittsburgh, as well as its situation along Lake Erie, make it a logical place for development in one of the fastest-growing sectors in Pennsylvania's economy: Recreational and Eco-Tourism.

According to DCNR, tourism is the second largest industry in the Commonwealth and nearly one-fifth of Pennsylvania's tourists travel to enjoy its outdoor amenities. A recent Pennsylvania study noted that in 2002, recreational tourism accounted for 459,000 jobs statewide, an increase of 100,000 from 1998. In addition, the report noted that "there is also evidence to demonstrate that communities with recreational greenways have witnessed significant increases in real estate values."

Erie County contains numerous natural and recreational resources that are important assets for providing the potential for substantial growth in the travel and tourism sector. Some of these assets include; Presque Isle State Park, which attracts more than four million visitors each year; one of the state's newest state parks, Erie Bluffs State Park; world-class steelhead fishing along the tributaries of Lake Erie; and the Great Lakes Wine Region.

Fishing

The economic impact of the Lake Erie tributary fisheries in Erie County was examined by the Pennsylvania Fish and Boat Commission, Division of Research and documented in a report in October of 2004. This analysis, based on user surveys, projected overall angler effort trips have nearly tripled in the last decade, increasing from 72,413 trips in 1993 to 200,816 trips in 2003. The Erie steelhead fishery is actively enjoyed by thousands of anglers. Because the fishery attracts a large number of visitors to the region it provides a notable contribution to the County's economy. This report estimated that anglers attracted to the Erie County's stream and shoreline steelhead fishery spent nearly \$9.5 million on trip related expenditures in 2003. Overall, this activity produced \$5.71 million in new value-added activity in Erie County and, through direct and indirect effects, supported 219 jobs in the economy.

Wine Industry

Pennsylvania's wine region is rapidly growing. With approximately 14,000 acres of grapes currently in production, the state now ranks 4th nationally in the amount of grapes grown. Wine and tourism in Pennsylvania are integrally related. Pennsylvania's wineries have capitalized on their tourist appeal by organizing into several wine trails and conducting annual events throughout the Commonwealth. In Pennsylvania, Erie is the leading grape growing county, accounting for nearly 95 percent of all grapes grown in the state. Lake Erie weather patterns moderate the growing season in the spring and fall, allowing for ideal growing conditions. The Lake Erie Region boasts seven wineries, five of which are located in northeast Erie County.

The economic benefits of the wine industry are not limited to tourism. This industry also impacts three additional sectors of the economy; agriculture, manufacturing, and trade. The total combined impact of Pennsylvania's wine industry is estimated to be approximately \$190 million annually, some \$50 million from winery and associated activities, and \$140 million from other tourism impacts. At this rate, it could be estimated that the five wineries in northeast Erie County could be generating approximately \$11.3 million annually for Erie County.

Residential Development

Greenways can encourage new residents to settle in an area. Young people and families are attracted to places that provide opportunities for easy access to outdoor recreation. Greenway trails provide such accessibility since they connect population centers to parks and other natural amenities. Furthermore, to cater to the needs of recreational users, new service businesses such as bike shops, canoe & kayak rentals, outdoor equipment stores, restaurants, campsites, and bed and breakfasts often spring up around recreational greenways. These new businesses bring new jobs and additional tax dollars to the host municipalities.

Proximity to nature increases the desirability and value of residential property, a factor that increases the profitability of real estate development and the attractiveness of towns, cities, and regions. People have become increasingly willing to pay more to live near natural areas. For example: the Rocky Mountain Institute found that 48 percent of Denver residents were willing to pay more to live near a park or greenbelt in 1990, compared to 16 percent in 1980. In Tucson, Arizona, researchers found that a single-family house near a wildlife habitat would command a price premium of \$4,576 compared to a comparable house a mile farther from the wildlife habitat. This same study found that proximity to a golf course only resulted in a premium of \$2,215.

Beyond these direct economic benefits of greenways, other less-tangible but very important fiscal impacts may be attributed to greenway development. For example, when looking for places to relocate or expand their businesses, employers look at a variety of factors including amenities for their employees. Workers, particularly young people, are attracted to places that provide opportunities for easy access to outdoor recreation. Greenways and trails provide such accessibility since they connect employment centers to parks and other natural amenities.

Conservation Subdivision Design: Price Premiums

Conservation subdivisions have been described as "golf course communities...without the golf courses". A conservation subdivision involves the same attention to site design and the same economic dynamics as a golf course community; a small lot with access to a shared amenity commands a premium price. In the case of a golf course community the proximity to a recreational amenity, the guarantee that the view of the golf course will not change and the exclusivity of the community contribute to desirability in the market despite the more compact arrangement of houses on smaller lots. The same factors drive the market in a conservation subdivision. However, in a conservation subdivision, the shared amenity is protected open space instead of a golf course.

"Walking and biking paths" ranked third among thirty-nine features identified by homebuyers as crucial factors in their home-purchasing decisions, according to a 1994 study by American Lives, a research firm serving the real estate industry. "Community designs that deliver low traffic and quiet streets" were ranked first, and "lots of natural, open space" was second.

Recently published research comparing conservation subdivisions to conventional subdivisions indicates that lots in conservation subdivisions can provide higher profits to developers. The study, which was conducted in Rhode Island, concludes that lots in conservation subdivisions:

- ✓ Carry a price premium - \$13,000 to \$18,000 per acre over conventional subdivision lots
- ✓ Are cheaper to build - average of \$7,400 less to produce a lot
- ✓ Sell more quickly - average selling time of 9.1 months, compared to 17.0 months for
- ✓ Conventional subdivision lots

Source: The Economics of Conservation Subdivisions: Price Premiums, Improvement Costs, and Absorption Rates, by Rayman Mohamed. Published in Urban Affairs Review, January 2006

A study of values and priorities in choosing a home site conducted in Michigan concludes that “nature view from home” was by far the highest priority for residents of conservation subdivisions and conventional subdivisions. The study also concludes that conservation subdivision residents had a far higher level of satisfaction with the nearby environment than their counterparts in conventional subdivisions.

Source: Open Space Communities: Resident Perceptions, Nature Benefits, and Problems with Terminology, by Kaplan, Austin, and Kaplan. Published in the Journal of the American Planning Association, summer 2004

Transportation Benefits

One quarter of all trips taken by Americans are under a mile, but seventy-five percent of those trips are done by car, and only one third of school children who live less than a mile from school now walk to school.

On-road bicycle facilities, sidewalks, and trails:

- ✓ Encourage the use of non-polluting transportation alternatives to the automobile for those short trips to work, school, or the local store.
- ✓ Reduce congestion
- ✓ Improve air quality
- ✓ Provide safe alternatives to residents
- ✓ Provide cost savings in car and road maintenance, and

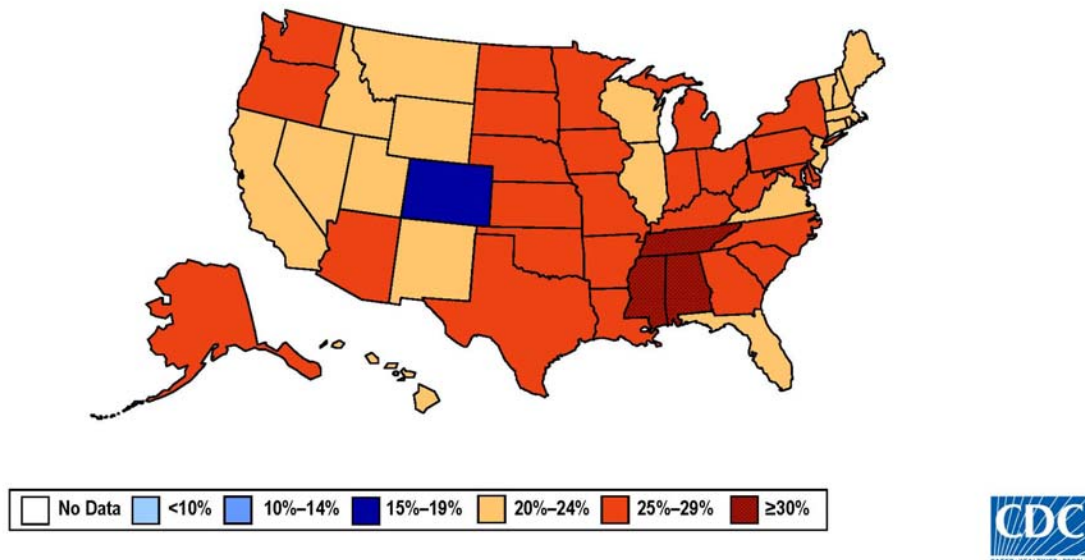
According to the U.S. Bureau of Transportation Statistics:

- ✓ The average pedestrian’s trip for recreation purposes is 1.9 miles
- ✓ The average pedestrian’s trip for non-recreation purposes is 0.8 miles
- ✓ The average bicyclist’s trip for recreation purposes is 5.6 miles
- ✓ The average bicyclist’s trip for non-recreation purposes is 2.2 miles

There are many opportunities to expand choices for alternate modes of transportation, such as developing safe routes to schools and expanding the roadway network to include bicycle facilities.

Obesity Trends* Among U.S. Adults BRFSS, 2007

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



In 2007, only one state had a prevalence of obesity less than 20%. Twenty-seven states had prevalence equal or greater than 25% and less than 30%; three of these states had a prevalence of obesity equal to or greater than 30%.

The Rails to Trails Conservancy's fact sheet "Health and Wellness Benefits," provides the following facts on how greenways and trails benefit health and wellness:

- ✓ In addition to helping control weight, physical activity helps to prevent heart disease, helps control cholesterol levels and diabetes, slows bone loss associated with advancing age, lowers the risk of certain cancers, and helps reduce anxiety and depression. The power of physical activity to improve mood and prevent disabilities and chronic diseases is especially pronounced for older adults.
- ✓ Trails connect people with places, enabling them to walk or cycle to run errands or commute to work. A majority of the daily trips people make are short, providing an opportunity for physical activity that can be built in to the daily routine.
- ✓ Trails connect neighborhoods and schools so children can cycle or walk to their friend's homes or to school, especially in communities that lack sidewalks.
- ✓ Trails and greenways provide natural, scenic areas that cause people to actually want to be outside and physically active. The City of Pittsburgh has transformed unsightly urban decay into an inviting and popular greenway and trail with the Three Rivers Heritage Trail System. This trail attracts visitors, businesses, and residents.

Ecological Benefits

The ecological benefits of greenways are generally the least understood and valued. These benefits are expensive to replace with artificial means to achieve their functions. Ecological benefits include:

- ✓ Preserving vital habitat corridors
- ✓ Promoting plant and animal species diversity
- ✓ Absorbing contaminants of surface runoff
- ✓ Cleansing and replenishing the air
- ✓ Buffering the negative effects of development
- ✓ Mitigating noise, water, thermal and air pollution
- ✓ Controlling property damage due to flooding

Educational Benefits

Greenways and trails provide educational benefits in from a variety of perspectives including cultural and historical, and environmental interpretation.

Our best link to our future can be by examining our past. Greenways serve to promote the unique history and culture of towns, cities and villages all across Pennsylvania by providing:

- ✓ Access to buildings of historic and architectural significance in a community
- ✓ A look back at the events and people that shaped the present
- ✓ An opportunity to preserve historic assets and archeological artifacts

Natural areas that are set aside for educational purposes provide immeasurable opportunities for people of all ages to learn and interact with their natural surroundings. Greenways:

- ✓ Act as living museums, outdoor classrooms and laboratories
- ✓ Provide scenic excursions along water trails or wildlife preserves
- ✓ Assist students, both young and old, in developing concepts and skills by helping them become effective stewards and decision makers concerning our natural resources
- ✓ Promote and encourage interaction with our natural surroundings

Protecting Pennsylvania's Rural Legacy

Pennsylvania's rural landscape is an inextricable link to its history as well as a demonstration of the success that continues to be achieved by its farming community. Studies demonstrate that Pennsylvania has lost much of its agricultural land over the last 25 years to urban areas. This rate of loss has a sizeable economic impact, but it also threatens the unique characteristics that encompass Pennsylvania such as its rural legacy. Development without preservation of this rural character significantly impacts on the future course of the Commonwealth. Greenways help to preserve the rural character of a community by:

- ✓ Protecting ridge lines, river corridors, and scenic resources
- ✓ Providing visual relief by framing and distinguishing neighborhoods in the face of sprawl
- ✓ Preserving farmland, small country settlements and surrounding open space
- ✓ Maintaining the character of place

PROTECTING PRIORITY HABITATS

Erie County contains a variety of forests, wetlands, rivers natural areas, streams as well the Lake Erie shoreline. All of these features provide habitat for a wide array of plants and animals. The Erie County Natural Heritage Inventory (NHI), conducted through the Pennsylvania Natural Heritage Program, has identified numerous natural areas that serve as critical habitat for species of special concern, or that host a variety of habitats and landscape features warranting conservation. Additionally, the Pennsylvania Audubon Society has identified three Important Bird Areas (IBAs), or areas essential to sustaining wild bird populations, in Erie County. Of Pennsylvania's counties, Erie County is ranked the highest in terms of biological diversity. Ecological communities and species that are both rare and biologically significant in Pennsylvania and on a global scale are found in Erie County.

Greenway implementation strategies developed through this planning process will help to conserve these sensitive resources and promote development that respects these resources.

SOUND LAND USE AND SUSTAINABLE GROWTH

Proper planning is essential for ensuring new residential, commercial, and industrial development is implemented in a manner that respects the county's natural infrastructure, along with the aforementioned cultural, historic, and scenic resources.

An example of responsible land use is the in-fill development of land in existing areas of urban or suburban development. For example, developing land in an existing industrial park rather than previously undisturbed land provides easier access to utilities and resources, while preserving an existing area of open space. According to the Erie County Land Use Plan, the County has seen a significant amount of low-density urbanization, despite its lack of population growth over the past 30 years. According to the Erie County Demographic Study from 1980 to 2000, the county experienced less than one percent increase in population. Despite this lack of population growth, new shopping centers, industrial complexes, and housing have taken over many rural landscapes.

Today, approximately 14.3 percent of the County's total land area is developed, while the remaining 85.7 percent of the County's undeveloped land consists of agricultural, open space, and wetland areas. In recent years, the trend has population shifting from densely populated boroughs to more rural township locations. While the population of the urbanized portion of Erie County increased by only one percent between 1970 and 1990. During that same period, the land area considered urbanized rose by 32 percent. Implementation of the NWPA Greenways Plan can help preserve the rural and natural character of the county by conserving the remaining undeveloped land, and in the process limiting the creation of more vacant land.

It is important to note that a thoughtfully-developed Greenway Plan does not oppose development, but rather identifies ways to integrate it with conservation practices. Thus, economic growth will occur in planned areas and will result in healthier communities, economically, socially, and environmentally.

HOW IS A GREENWAY PLAN DEVELOPED?

For many, the term greenway evokes visions of recreational and outdoor pursuits. For others, the term greenway evokes concern over restrictions to development and the loss of property rights. Throughout the planning process, we will take great efforts to ease concerns, educate the

public to confirm the truth and dispel myths on what greenways are and are not, and build consensus by establishing defensible rationale for establishing a greenway network through the Northwest Pennsylvania Region. The resulting recommendations for greenways will promote sustainable development, reduce development costs, and reduce the burden of providing public services on local, county, and state governments.

THREE – STEP PROCESS

Our Greenway planning utilized a three-step process that answers three basic questions:

1. ***Where are we now?*** - In this phase, we gather information about the natural and cultural assets of the County that may form the building blocks of conservation or recreation corridors. For example, we obtain information about important habitat areas warranting protection as well as abandoned rail corridors that could be converted to recreational trails.
2. ***Where do we want to be?*** - In this phase, we develop the “vision.” Specifically, the plan synthesizes the information gathered during the inventory phase into a proposed network of greenways and trails linking important destinations throughout the County.
3. ***How do we get there?*** - This phase identifies and provides strategies that define how the plan can be implemented.

PUBLIC PARTICIPATION

Greenway planning also involves an intensive public participation process that solicits knowledge and expertise from local residents and officials - those who know Clarion, Crawford, Erie, Forest, Venango, and Warren County’s best. During this process, input is obtained by the following methods:

- Study Committee Meetings
- Public Meetings
- Key Person Interviews
- Field Visits

The result of this input is documented throughout this plan, and corresponds to the places in the process at which the input was obtained.

PURPOSE OF THE GREENWAYS PLAN

With the benefits and planning process in mind, this plan examines the various methods by which a greenway network can be developed for Erie County. Once developed, this network will help preserve the region’s essential natural resources and, in turn, its unique character, while enhancing the quality of life for its residents.

The purpose of this project is to develop a network of connections between the diverse natural areas, various cultural, historic, and recreational resources, and local population centers. These

connections will help to conserve natural resources and open spaces while providing valuable recreational opportunities for residents in Erie County.

GOALS AND OBJECTIVES

Conserveing and enhancing Erie County's character and quality of life, and guiding sound land use planning and development is a primary goal of the Erie County Greenways Plan. The following objectives will assist us in obtaining this goal:

- Conserve existing natural areas primarily for ecological health and preservation of wildlife habitat;
- Promote the conservation of agricultural land;
- Provide recreational opportunities for County residents through preservation and connection of existing open spaces;
- Promote economic growth via recreational or eco-tourism;
- Encourage counties and local municipalities to work in unison to help protect their various resources by adopting open-space and land-use tools to guide sound land development practices;
- Educate residents on the aspects and benefits of greenway planning and implementation.

THE GREENWAY AND OPEN SPACE PLAN AS A DECISION-MAKING TOOL

Once finalized and approved by the County the Greenway Plan will serve as a flexible tool for making decisions regarding the conservation of natural, cultural, historic, and scenic resources. By encompassing a variety of issues pertinent to these resources, the plan will lay the foundation for the continued success of open space conservation and increased quality of life in Erie County. Specific policy details and greenway locations may be adjusted as needed throughout the planning process and implementation.

Sound Greenway Planning includes inventory and analysis of natural features, cultural and historic sites, and open spaces such as parks or nature reserves; along with collaboration with local government agencies, private groups, and interested citizens to form policies for development and/or conservation. This multi-layered approach, involving Erie County and its decision-makers, has yielded short-, medium-, and long-term strategies for natural resource conservation and greenway development in harmony with any potential economic development.

CHAPTER ONE

WHERE ARE WE NOW? - Erie County's Resources

CHAPTER ONE – WHERE ARE WE NOW?

ERIE COUNTY'S RESOURCES

GATHERING THE DATA

Most of the background information needed to support the Erie County section of the Northwest Pennsylvania (NWP) Greenways Plan was gathered through project-specific independent research. With the help of the Northwest Pennsylvania Regional Planning and Development Commission, the Erie County Planning Department, and the Erie Port Authority, Pashek Associates obtained and reviewed many studies and reports. These included county and municipal planning documents, trail feasibility studies, watershed and water management plans, and other natural resource-related materials. Additional information was gathered through the public participation process described in the Introduction section of this report, as well as through field observation.

In this section, the plan will describe Erie County's resources and the sources of information we consulted, referring to relevant sections of the various existing planning documents, where appropriate.

EXISTING PLANNING EFFORTS

Thoughtful Greenway Planning will allow Erie County to address issues and follow recommendations set forth in existing planning efforts such as the County's Comprehensive Plan. The Comprehensive Plan was completed to guide development, land use, economic progress, and long-term preservation of the quality of life. The recommendations of the Comprehensive Plan are intended to provide guidance for the best possible methods of growth and development, while maintaining the County's heritage and rural character.

The NWP Greenway Plan will provide an opportunity for Erie County to address issues and follow recommendations set forth in their Comprehensive Plan, as well as recommendations from other plans. The NWP Greenways Plan will also provide an opportunity for the County to have a direct role in conserving natural resources and providing recreational opportunities, possibly attracting new residents and businesses which will in turn stimulate economic activity.

Erie County Comprehensive Plan (2003)

The Erie County Comprehensive Plan was adopted in 2003 and consists of seven elements in four documents. The elements of this plan, most related to the efforts of the NWP Greenways Plan, are the:

- Natural and Historic Resources Plan
- Community Facilities and Utilities Plan (including the Recreation Plan)
- Land Use Plan

Within the Natural and Historic Resources Plan is a section titled Natural Resource Preservation Guidelines. This section of the plan is intended to direct preservation and protection of natural resources throughout Erie County.

The guidelines of this section of the Comprehensive Plan define watersheds, wetlands, aquifers, escarpments and steep slopes, and woodlands as environmentally sensitive areas. The conclusion of the Natural Resources Preservation Guidelines is that growth and development are not, and should not be seen as incompatible with the preservation of a community's natural resources.

The second related section of the Erie County Comprehensive Plan is the Community Facilities and Utilities Plan. This section addresses the question of “Can we grow our communities smarter”. The proposal of this section is to make Growth policies economically and environmentally sound. One of the specific goals that may be fulfilled through the NWPA Greenways Plan is to leave more than 50 percent of land in Erie County connected green space.

Within the Community Facilities and Utilities Plan is the Recreation Plan. The Recreation Plan found that although the countywide inventory suggests many categories of recreation such as playgrounds and ball fields have sufficient resources, many activities aimed at mature users are deficient. Specific needs that this plan concludes should be addressed are:

- Paved, multi-purpose trails for use by hikers, walkers, runners, bikers, and skaters.
- Unpaved, walking and hiking trails in natural terrains designed for wildlife enthusiasts, birders, and walkers.
- Dedicated facilities for skateboarders, in-line skaters, and related activities.

The NWPA Greenways plan will be paramount in helping the County address the needs identified in the Recreation Plan.

The third associated element of the Comprehensive Plan is the Land Use Plan. This plan establishes the official policy of the County, relative to future growth locations of residential, commercial, industrial, and public land uses. The Land Use Plan identifies land areas where any development would be unwise, such as in floodplains, wetlands, or on steep slopes.

Preferred practices of Erie County for land use controls include:

- Conserve Erie County’s natural and scenic assets.
- Maintain a clear edge between town and countryside.
- Build livable communities.
- Preserve historic resources.
- Respect local character in new construction.
- Reduce the impact of the car.

Within the Erie County Land Use Plan is the Future Land Use Plan, which designates major publicly-owned recreation facilities, such as Presque Isle State Park, State Game Lands, major parks, along with major stream corridors/floodplains as Conservation/Public Recreation Areas. These areas are designated as unsuited for intense development.

In addition to the aforementioned Erie County Comprehensive Plan, Pashek Associates studied and considered several other related planning efforts during the Greenway Planning process. Some of these documents are described in this section.

Erie County Natural Heritage Inventory (1993)

Completed in 1993, the Erie County Natural Heritage Inventory (NHI) report identifies maps and discusses important places within the County. The report prioritizes these places based on their attributes and provides recommendations regarding their management and protection. These important places include unique plants, animals, natural ecological communities, and other significant natural resources. The County NHI found Erie County to rank among the highest Pennsylvania counties in biological diversity. The County contains biological communities and species that are considered rare and

biologically significant on a global scale, in addition to in Pennsylvania. Among these ecological communities are the Lake Erie shoreline habitats, including lake bluffs, lake sediment slumps, sandpits, beaches, and beach dunes (which are unique to Erie County and rare to the region). At a global scale, the biological communities within the French Creek drainage basin are of world-wide significance.

Because establishing and/or maintaining natural infrastructure is an essential facet of any Greenway Plan, the information provided in the NHI is extremely important. The natural areas of Erie County can easily be lost without careful planning of growth and development. Planning for long term sustainability can help conduct human activities on the landscape in a way that preserves native species and healthy ecosystems.

The 1993 Erie County Natural Heritage Inventory is currently being updated.

Erie County Greenways and Trails Plan (2000)

The following vision statement was developed to guide the process of the Erie County Greenways and Trails Plan:

“Communities and organizations in the Erie County area value the importance of walking and bicycling for transportation, recreation, health and wellness, and will actively plan and provide for integration of walking and bicycling into all aspects of transportation, recreation, and tourism by developing a plan, network, and education.”

This plan was created in 2000 to serve as a guide for implementation of on/off road, bicycle, and pedestrian facilities and Greenways within Erie County. This plan examines existing and proposed facilities and list recommendations for future development of trails and greenways within Erie County.

Pilot projects to come from this plan:

- Asbury Woods Trail System
- Bayfront Greenway System
- 6th Street Bike Path
- Bike-Ped Access to Waterfront
- Presque Isle Access to Erie City

Existing On/Off Road Facilities:

- Asbury Woods Trail System
- Bayfront Parkway Multi-Use Trail
- Bicycle PA Route Z (PA %)
- E.C.S.A. Snowmobile Clubs Trail System
- Edinboro University Highlands Trail
- Penn State-Behrend trail system
- Pleasant Ridge Park trail system
- Route 6
- Seaway Trail
- Scott Park Trail System

There is also a long list of proposed on and off road facilities.

Pennsylvania Statewide Greenway Plan (2001)

Pennsylvania Greenways: An Action Plan for Creating Connections identifies many needs and recommends complex actions that will enable the gradual implementation of a statewide Greenways Plan. This project fits into the Pennsylvania Greenways Plan, in which the needs to map county / municipal greenways, to build GIS base mapping on a regional scale, and to facilitate regional coordination and cooperation among municipalities were identified as building blocks toward a successful statewide greenways network.

Other needs identified in detail by the Pennsylvania Greenways Plan include:

- More public education about greenways and their benefits;
- Greater effort to conserve land and protect ecological systems;
- Dedication of funding sources for long-term support of greenways and coordination of funding programs;
- A lead state agency for greenway initiatives; and
- State agencies' revision of their guidance documents, policies, and practices and to work cooperatively to support greenways.

Using a "Bottom up" approach, only greenways recognized at the local or county level will be considered as a part of the statewide network. The goal of the state's greenways program is to identify and encourage linkages between and among local and regional greenways, placing them in a wider context. Each county is encouraged to use greenways as a land use strategy and show existing and proposed greenways and open space in their plans. The information from each county would then be shared in a statewide Geographic Information System (GIS). Thus, the NWPA Greenways Plan is building toward not only its own goals, but a greater statewide objective.

Another part of Pennsylvania's greenway objectives, as established by DCNR, is the development of *Major Greenway Corridors*. These are regional greenways greater than 50 miles in length, passing through two or more counties, and are each recognized in at least one official planning document. Major greenways are among the top greenway priorities in the state and will serve as the backbone of the statewide greenways network. Each county's greenway plan is required to discuss major greenway corridors. The only Major Greenway corridors that pass through the Northwest PA Greenways planning region are the Erie to Pittsburgh Greenway, and the North Country National Scenic Trail.

TRAIL FEASIBILITY STUDIES

Erie to Pittsburgh – Developing a Trail Network (2007)

This study was done by the Rails-to-Trails Conservancy (RTC) in 2007. The purpose of the study was to “recognize, complete, and actively promote – a major trail network in northwest Pennsylvania”. This trail network will extend north-south from Lake Erie to Pittsburgh. Establishing this connection will meet many goals similar to those being sought in the work of the NWA Greenways Plan. Some of these goals are:

- Develop a strategy to create a major north-south spine trail from Erie to Pittsburgh
- Connect two of Pennsylvania's major population centers (Pittsburgh & Erie)
- Catalyze and coordinate trail development efforts
- Re-focus single trail developments to be part of this larger whole
- Assist local stakeholders in coming up with their vision
- Help to assure that every inch has a local partner actively pursuing its completion

Erie County Rail Trail Feasibility Study (2001)

The Erie County Rail Trail Feasibility Study was completed in 2001. The purpose of this study was to evaluate four corridors which were identified in the Erie County Trails and Greenways Plan as having the greatest potential for rail-trail development.

The four corridors evaluated consist of the following:

- Corry to Findley Lake Trail (Corry to Clymer Trail) –

This inactive rail line is more than six miles in length, beginning at Elk Street, in the City of Corry, and ending one mile north of the New York State Line, in the town of Clymer. There are minimal obstructions to this trail.

- Thornton Junction Trail (Girard to Albion Trail) –

This inactive rail line is located in the western portion of Erie County and runs north – south along the former Bessemer and Lake Erie Railroad corridor. The right-of-way is currently under various private ownerships and each of the owners was contacted to determine their support for this project. The Material Recovery Group (MRG) owned more than seven miles of the right-of-way and is willing to donate the corridor to a bona fide 501(c)(3) group, contingent to the trail being developed for non-motorized use only.

The remainder of the corridor is made up of smaller parcels under private ownership. There are some concerns from the private owners about developing the corridor into a formal trail.

The recommendation of this study is that ongoing efforts be made to educate the landowners along the corridor about rail trails and the positive benefits that they have to residents and the community in which they live.

Recently, the seven mile MRG section of the proposed Thornton Junction Trail was acquired for public use by the Northwest Pennsylvania Trails Association. This corridor begins at just south of Erie Bluffs State Park and follows the inactive Bessemer and Lake Erie Railroad right-of-way. It begins just south of Route 5, at Girard Junction, and terminates at the intersection of the active B&LE rail line to Conneaut.

- Allegheny and Eastern Railroad Corridor –

This is currently an active railroad line which travels from the City of Corry northwest to the City of Erie, near the Penn State Behrend College.

Due to liability issues, a narrow corridor, and physical constraints; the representatives from Allegheny and Eastern Railroad stated that they have no interest in developing a rail with trail corridor at this time. It was removed from further study.

If this rail line is inactivated in the future, Erie County should investigate the option of either purchasing the rail line or rail banking the line. Also, if the present use of the rail line changes in the future to a tourism rail line, Erie County should work with the rail owner to incorporate the possibility of creating a trail along the rail line.

- Northwest Pennsylvania Rail Authority Corridor –

This is currently an active railroad line which runs from the City of Corry south to Meadville in Crawford County.

Due to liability issues, a narrow corridor, and physical constraints; the representatives from Western New York and Pennsylvania Railroad stated that they have no interest in developing a rail with trail corridor at this time. It was removed from further study.

If this rail line is inactivated in the future, Erie County should investigate the option of either purchasing the rail line or rail banking the line. Also, if the present use of the rail line changes in the future to a tourism rail line, Erie County should work with the rail owner to incorporate the possibility of creating a trail along the rail line.

During this feasibility study another inactive railroad corridor was identified as a potential corridor of study. This corridor is still under the ownership of the Norfolk Southern Railway Company. It was recommended as part of this study that the Northwest Pennsylvania Trail Association and Erie County contact Norfolk Southern (and any other owners identified) to pursue the development of a trail within the inactive rail corridor between Union City and Mill Village. At the release of this study, no contact had yet been made.

Corry Junction Greenway Trail Master Plan (2006)

This master plan builds on the efforts of the Erie County Rail Trail Feasibility Study. The Corry Junction Greenway Trail, also known as the Corry to Clymer Trail, was designated as the top priority for trail development in Erie County.

Based upon previous public input results and that gathered through the Master Plan process, the following ideals and goals were developed for the Corry Junction Greenway Trail:

- Develop the trail as a linear park.
- Keep the trail natural so it complements its rural surroundings.
- Limit the impact of trail development on its neighbors.
- Use the trail to educate users about rural life, forestry, farming, and other features of the natural environment.
- Develop partnerships with local organizations, businesses, and other entities to maximize the use, maintenance, and funding for the trail.

WATERSHED MANAGEMENT PLANS/WATER QUALITY STUDIES

Executive Summary: Health & Management of the Edinboro Lake Ecosystem (2000)

This study is a summary of the lake ecosystem, major stresses to that ecosystem, and recommendations for the protection and management of the lake and its watershed. This report found that the environmental condition of the lake is somewhat degraded.

Edinboro Lake is located in Erie County about fifteen miles south of the City of Erie. This is a calcareous glacial lake. Such lakes are of natural origin, and only eight exist in northwestern, Pa. The lake has four

main tributaries: Conneauttee Creek, Shenango Creek, Whipple Creek, and Lakeside Run. The drainage basin of this lake is approximately sixteen square miles.

In order to bring about and maintain improved conditions at Edinboro Lake, a set of recommendations were provided. The following items from this set are relevant to the NWPAGreenways Plan:

- An Edinboro Lake Conservation Plan should be completed.
- Restoration of certain aspects of the lakes ecosystem and watershed should be a focus of the lake management plan. This includes the restoration of wetlands at the northern end of the lake and the creation of additional wetlands in the watershed where sources of sediment, nutrients, and toxic compounds could be intercepted.

French Creek Watershed Conservation Plan (2002)

The French Creek watershed extends from Chautauqua County, in New York, through Erie County, Crawford County, Venango County, and a small portion of Mercer County. The entire watershed covers an area of approximately 1,235 square miles, and the main stem flows 117 miles from its New York headwaters to its mouth at Franklin.

The French Creek Watershed Plan is intended to compile and present information on watershed resources and potential or unknown threats to those resources. During the development of this plan, a multitude of activities in the French Creek watershed that can potentially threaten water quality, aquatic biota, and ultimately, quality of life for watershed residents, were found. This plan lists recommendations for the restoration, maintenance, enhancement, and overall protection of the resources of the French Creek Watershed. Some of the specific recommendations that may be fulfilled in the NWPAGreenways Plan include:

- Increase Best Management Practices (BMP) Implementation.
- Remove hazardous materials from floodplain.
- Increase public education on sustainable forestry.
- Increase education on construction and urban BMP's.
- Increase public education about benefits of riparian protection.
- Increase public education about natural stream conditions.
- Increase public education about the benefits of forested stream banks.
- Increase public education about urban streams as community assets.
- Encourage a cooperative approach to trail development.

Lake Erie Watershed Conservation Plan

This plan includes a detailed analysis of current conditions within the watershed and culminates in a series of recommendations and actions for addressing many of the issues identified within the plan. These recommendations and actions advance to plan's two overall goals: protecting existing, high-quality natural, aquatic, and cultural/historical resources, and restoring aquatic habitats that have been degraded. In order to improve water resources and other natural resources within the watershed, the plan's recommendations generally include:

- enhancing public education regarding the importance of the watershed and its resources;
- implementing best management practices (BMPs) within the watershed;
- supporting further study of known contamination and pollution causing factors; and
- conserving contiguous forest habitat, wetlands, and other forest land throughout the watershed.

MISCELLANEOUS PLANS

Lake Pleasant Conservation Area Master Plan

This plan was developed for Lake Pleasant which is a 64-acre “kettle” lake located in eastern Erie County. A kettle lake is formed as a result of depressions created by partially-buried glacial ice blocks as they melted. The depressions that filled with water became kettle lakes. The depressions are formed when blocks of ice calve from a receding glacier. This lake is part of the headwaters of French Creek and is surrounded by wetlands that are comprised of unique and natural ecosystems. The Western Pennsylvania Conservancy (WPC) recognized the significance of the lake and initiated an effort to protect it by establishing the Lake Pleasant Conservation Area.

The Lake Pleasant Conservation Area properties owned by the WPC are located in Venango, Greene, Amity, and Waterford Townships.

Development Plan for Overlook Park (Erie County 2002)

Overlook Park is a two-mile linear public park and greenway along an area referred to as ‘the bluff’ that borders the City of Erie and the Bayfront parkway. The design objectives for this plan are to:

- Enhance and expand recreational opportunities.
- Provide a variety of experiences for a variety of users.
- Provide public green space.
- Present the natural and cultural history of the Erie waterfront.
- Connect the city and the waterfront.
- Beautify the bayfront.
- Unify communities with green space as the common thread.
- Stimulate neighborhood stabilization.
- Develop a park sensitive to community needs.
- Have a signature park unique to Erie.

Draft Master Plan for Erie Bluffs State Park (2005)

This Draft Master Plan was created for the Lake Erie shoreline, in Girard and Springfield Townships, to develop Erie Bluffs State Park as a nature-based park. This park was adopted by the Commonwealth as the one hundred seventh State Park on June 4, 2004.

The newest Pennsylvania State Park, Erie Bluffs is 540 acres of Lake Erie shoreline in western Erie County, twelve miles west of the City of Erie. It is the largest undeveloped stretch of Lake Erie shoreline remaining in Pennsylvania. (DCNR)

The park has: one-mile of shoreline; 90-foot bluffs overlooking Lake Erie; world-class shallow stream steelhead fishery; old growth forest; rare, endangered and threatened flora; uncommon oak savannah sand barren ecosystem; exceptional value wetlands; and significant archaeological sites. There are currently no facilities in the park. (DCNR)

Plans for this park feature a trail network that will enable visitors to experience remote regions of the park with lake-view observation points. The park’s Seaway Trail parcel is divided from the main park by an active railroad, but will be developed for uses associated with the Seaway Trail heritage tourism initiative.

Blueprint for Action – Shaping a Sustainable Pennsylvania

The NWPA Greenways Plan addresses many goals set forth in the DCNR's Blueprint for Action Plan. Some of these goals specifically include the following:

- Improve Stewardship and Management of State Parks and Forests.
- Promote Statewide Land Conservation.
- Build and Maintain Sustainable and Attractive Communities.
- Create Outdoor Connections for Citizens and Visitors.

Corridor Management Plan for Pennsylvania's Section of the Seaway Trail (2005)

The Seaway Trail has been designated as a National Scenic Byway, creating an eight hundred eleven-mile corridor in New York, Ohio, and Pennsylvania along the Lake Erie shoreline. Pennsylvania's segment is 43 miles in length. The NWPA Greenways Plan addresses the following recommendations from this corridor management plan:

- Celebrating and protecting the resources along the trail corridor.
- Improving the lakefront experience of motor vehicle drivers and bicyclists.
- Providing interpretive opportunities and physical and visual access to Lake Erie and its tributaries.

Study of the Flora of the Glacial Lakes of Western Pennsylvania (2005)

This study examines the presence and conditions of flora in the glacial lakes of Erie, Crawford, and Mercer Counties. Three glacial lakes are present within Erie County: Edinboro Lake, LeBoeuf Lake, and Lake Pleasant.

The study includes a series of recommendations for management and further study of the lakes. It indicates that the exceptional water quality at Lake Pleasant is due to the limitations on motorized watercraft and suggests continuation of this policy. The plan recommends further study of sedimentation and aquatic plant growth in LeBoeuf Lake. Regarding Edinboro Lake, the plan states that sewage effluent must be effectively addressed. Overall, the plan asserts the following:

“Prevention and control of invasive and exotic species is one of the most important activities that can be undertaken to steward these lakes.”

MUNICIPAL COMPREHENSIVE PLANS AND OTHER LAND USE TOOLS

Of the thirty-eight municipalities in Erie County, the majority have adopted their own comprehensive plans, zoning ordinances, and land development and subdivision ordinances. These land use tools: outline various community objectives related to current and future land use, natural resource preservation, recreation, and community growth; establish land use districts to achieve their land use vision and set forth policies to guide development and the conservation of natural resources. These tools provide a good foundation; and we expect to recommend these be further strengthened in the future to implement the goals and objectives, vision, and strategies for implementation that will result from the NWPA Greenways planning effort.

The following table indicates which municipalities have a comprehensive plan, zoning ordinance, and / or subdivision and land development ordinance:

Erie County Greenways Plan

Municipality	Comprehensive Plan	Municipal Zoning Ordinance	Municipal Subdivision and Land Development Ordinance
Cities			
City of Corry	✓	✓	✓
City of Erie	-	✓	✓
Boroughs			
Albion Borough	✓	✓	✓
Cranesville Borough	-	✓	by County
Edinboro Borough	✓	✓	✓
Elgin Borough	-	✓	by County
Girard Borough	✓	✓	✓
Lake City Borough	✓	✓	✓
McKean Borough	-	✓	✓
Mill Village Borough	✓	✓	by County
North East Borough	✓	✓	✓
Platea Borough	-	-	by County
Union City Borough	✓	✓	✓
Waterford Borough	✓	✓	✓
Wattsburg Borough	✓	✓	by County
Wesleyville Borough	✓	✓	✓
Townships			
Amity Township	✓	✓	by County
Concord Township	✓	✓	by County
Conneaut Township	✓	-	by County
Elk Creek Township	✓	-	by County
Fairview Township	✓	✓	✓
Franklin Township	✓	✓	✓
Girard Township	✓	✓	✓
Greene Township	✓	✓	✓
Greenfield Township	✓	✓	✓
Harborcreek Township	✓	✓	✓
Lawrence Park Township	✓	✓	✓
LeBoeuf Township	✓	✓	by County
McKean Township	✓	✓	✓
Millcreek Township	✓	✓	✓
North East Township	✓	✓	✓
Springfield Township	✓	✓	✓
Summit Township	✓	✓	✓
Union Township	✓	✓	by County
Venango Township	✓	✓	✓
Washington Township	✓	✓	✓
Waterford Township	✓	✓	✓
Wayne Township	✓	✓	by County

Erie County administers a Subdivision and Land Development Ordinance (SALDO) applicable to those municipalities that do not have a SALDO of their own.

Erie County Greenways Plan

In 1980, the Commonwealth of Pennsylvania adopted the Bluff Recession and Setback Act, Act of May 13, 1980, P.L. 122, No. 48, 32 P.S. __ 5201-5215, to minimize shoreline erosion and bluff recession, one of the most significant Lake Erie coastal hazards.

Currently, there are eight municipalities with Lake Erie Bluff setback requirements, and the City of Erie is considering adopting a bluff setback requirement.

Municipalities with Lake Erie Bluff Setback Requirements

Municipality	Residential	Commercial	Industrial
Springfield Township	100	150	200
Girard Township	200	200	200
Lake City Borough	150	150	150
Fairview Township	100	100	100
Millcreek Township	50	75	100
City of Erie	Currently being considered.		
Lawrence Park Township	50	75	100
Harborcreek Township	50	75	100
North East Township	50	75	100

STATEWIDE RECREATIONAL PLANNING: KEYSTONE ACTIVE ZONE (KAZ)

A statewide planning effort that helps to make residents aware of all the recreation resources around them is the Keystone Active Zone (KAZ) program headed by Pennsylvania Advocates for Nutrition and Activity (PANA) - www.panaonline.org. This program presents a valuable opportunity to Erie County. The KAZ encourages Pennsylvanians to have fun and stay fit by engaging in outdoor recreation at a local park, trail, or other outdoor open space. To advance this mission, PANA creates a directory and a website for each county's parks and recreation sites (some of which are described in this section) through the KAZ program.

Erie County's recreation resources have been well-documented in the Keystone Active Zone database which is available at: www.keystoneactivezone.org.

NATURAL INFRASTRUCTURE AND ECOLOGICAL INFRASTRUCTURE INVENTORIES

A complete understanding of the natural and ecological infrastructure of Erie County is essential to developing a greenways plan. For example, sensitive riparian zones or steep slope habitats are candidates for natural systems corridors, while rivers and canoeable streams may provide opportunities for water trail development. Unique natural features may also become important greenway destinations.

Natural Infrastructure Inventory

The following natural infrastructure resources were inventoried and analyzed:

- ✓ Water Resources
- ✓ Wetlands
- ✓ 100 Year Floodplains
- ✓ Special Protection Waters
- ✓ Steep Slopes
- ✓ Soils and Geologic Features
- ✓ Important Bird Areas
- ✓ Forest Blocks and Interior Forest Blocks
- ✓ Upper Slopes and Ridges

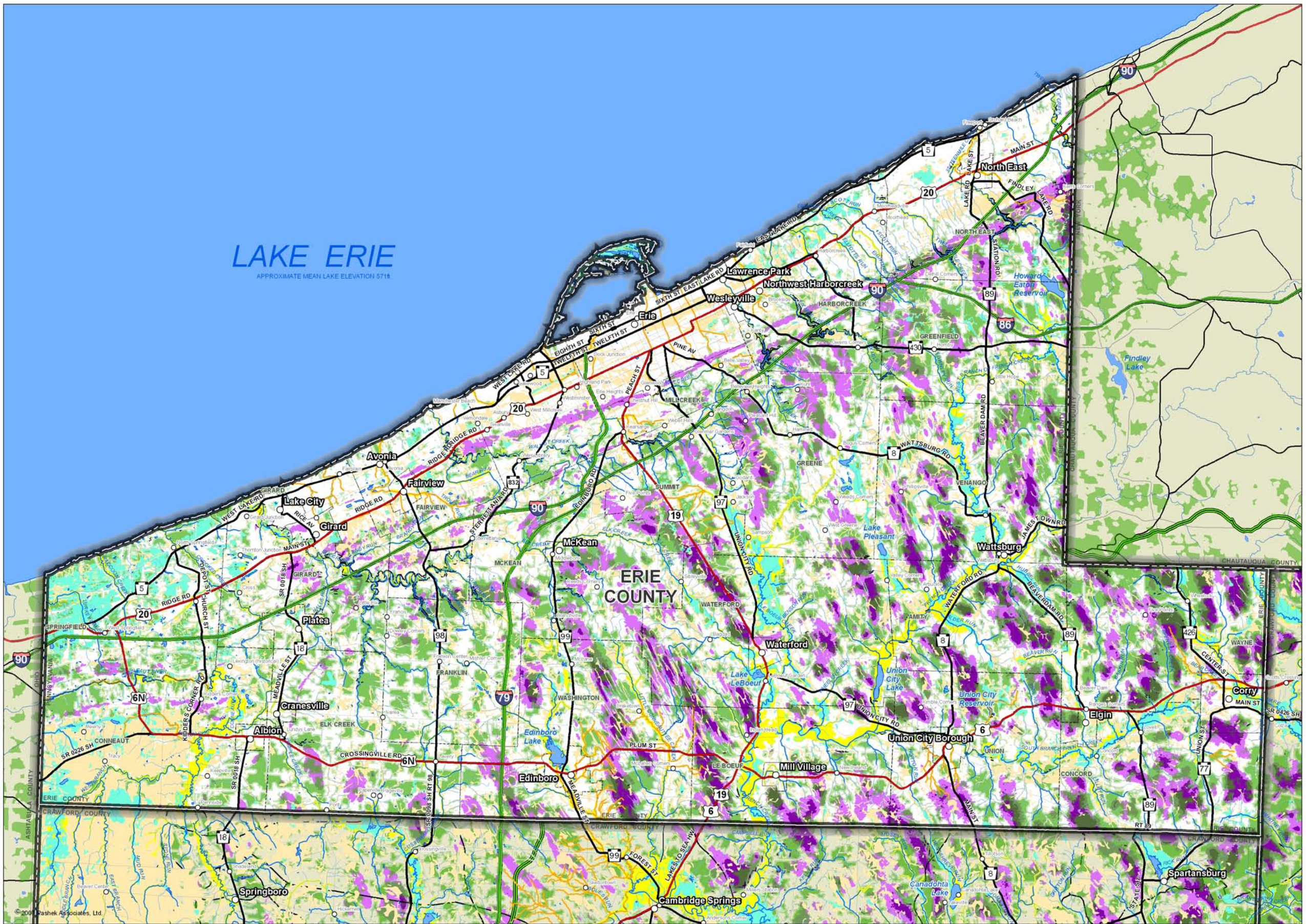
These resources are documented on the Natural Infrastructure Inventory Map.

Ecological Infrastructure Inventory

The following ecological infrastructure resources were inventoried and analyzed:

- ✓ Important Bird Areas
- ✓ Natural Heritage Area Program Natural Heritage Inventory Sites
- ✓ Public and Other Protected Open Space

These resources are documented on the Ecological Infrastructure Inventory Map.



Northwest Pennsylvania Greenways Plan

for

- Clarion County
- Lawrence County
- Crawford County
- Mercer County
- Erie County**
- Venango County
- Forest County
- Warren County

KEY MAP



LEGEND

- County Boundary

Municipal Boundary

Lake

River

Streams

Interstate

PA State Route

US Highway

Sensitive Environmental Features

- Floodplain

FEMA - 100 Year Floodplain

Wetland

National Wetland Inventory

Hydric Soils

NRCS Soils - County Hydric List

Interior Forest Patches

Pennsylvania Natural Heritage Program

Forest Blocks

Pennsylvania Natural Heritage Program

Slope > 25%

USGS Digital Elevation Model

Impaired Streams - DEP Streams 305(b)

Topographic Position Index

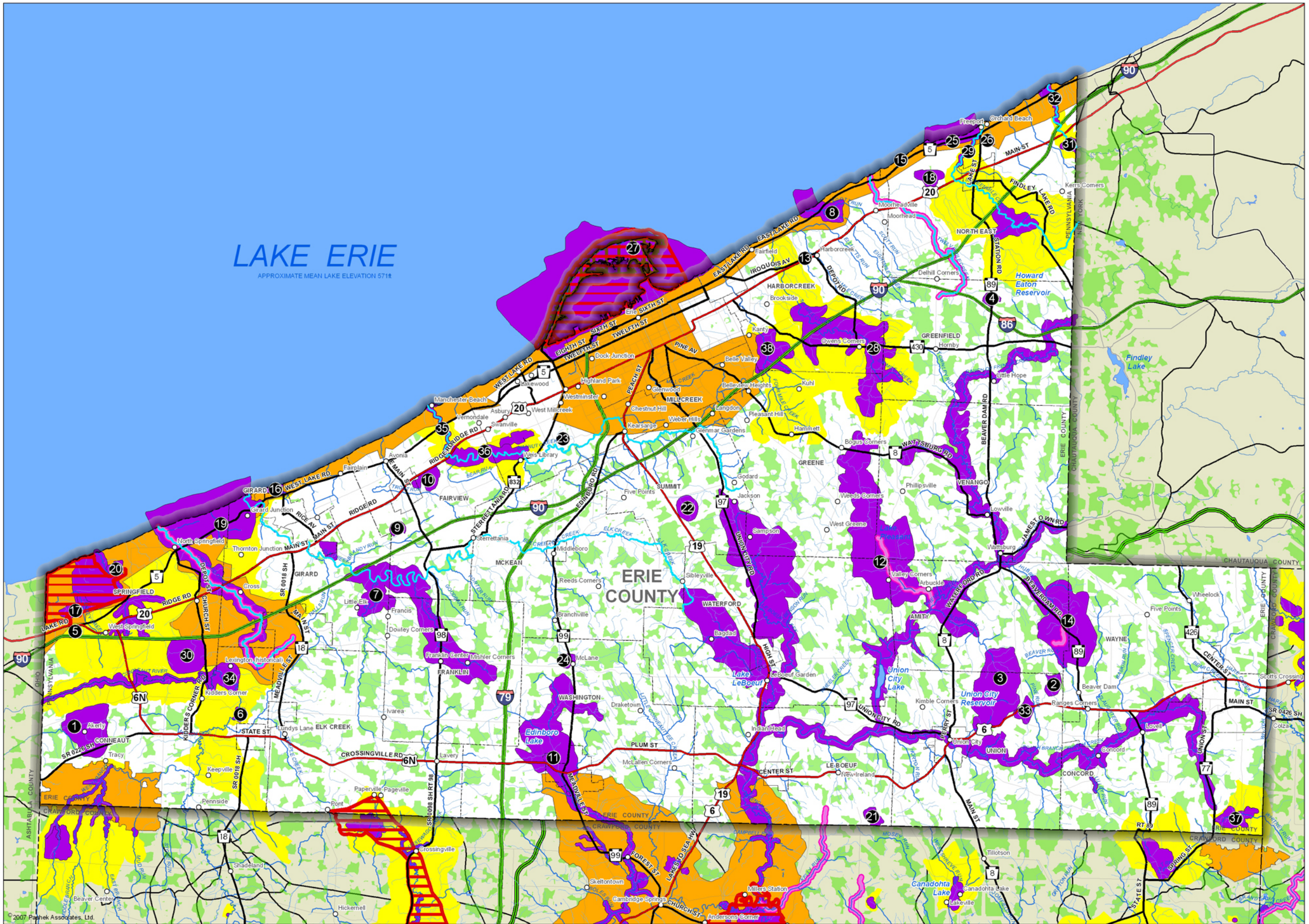
Upper Slope

Ridge

Data Source:
ESRI 2005 Street Map USA Data
US Geologic Survey (USGS)
Pennsylvania Spatial Data Access (PASDA)
Pennsylvania Department of Transportation (PennDOT)
Department of Conservation and Natural Resources (DCNR)
Western Pennsylvania Conservancy (WPC)
Federal Emergency Management Agency (FEMA)
US Army Corps of Engineers - National Wetland Inventory (NWI)
Natural Resources Conservation Service (NRCS) - Soil Data Mart
Pennsylvania Department of Environmental Protection (DEP)

Pashek Associates
makes no claims to
the accuracy of
this data.



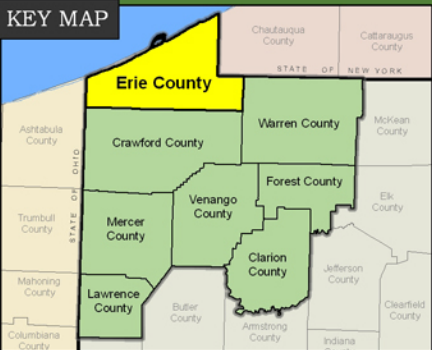


Northwest Pennsylvania Greenways Plan

for

Clarion County Lawrence County
Crawford County Mercer County
Erie County Venango County
Forest County Warren County

KEY MAP



LEGEND

- County Boundary
- Municipal Boundary
- Lake
- Interstate
- River
- PA State Route
- Streams
- US Highway

Pennsylvania Natural Heritage Program

- 2 Biological Diversity Area
- Supporting Natural Landscape
- Landscape Conservation Area
- Interior Forest Patches

Important Bird Area (IBA)

National Audubon Society

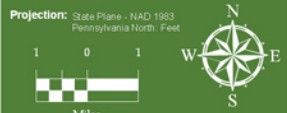
Department of Environmental Protection

PA Code - Chapter 93 Water Quality Standards

- High Quality Cold Water Fishery
- Steelhead Streams

Data Source:
ESRI 2005 Street Map USA Data
US Geologic Survey (USGS)
Pennsylvania Spatial Data Access (PASDA)
Pennsylvania Department of Transportation (PennDOT)
Department of Conservation and Natural Resources (DCNR)
Western Pennsylvania Conservancy (WPC)
Federal Emergency Management Agency (FEMA)
US Army Corps of Engineers - National Wetland Inventory (NWI)
Natural Resources Conservation Service (NRCS) - Soil Data Mart
Pennsylvania Department of Environmental Protection (DEP)

Pashek Associates
makes no claims to
the accuracy of
this data.



Erie County Greenways Plan

Erie County Natural Heritage Inventory Sites

Data Source: Pennsylvania Natural Heritage Partnership Program

NHI #	NHI Name	Description
1	Ashtabula Creek Swamp BDA	Exceptional quality floodplain swamp of state and county significance
2	Beaver Run Headwater Swamp Forest BDA	headwater swamp forest community supports two plant species of concern
3	Bentley Run/Alder Run BDA	Highly diverse area that contains natural communities of global or state significance. Communities provide habitats for several plant species of special concern
4	Calkins Road Grasslands BDA	Open habitats support an animal species of concern
5	Campground Savannah BDA	savannah habitat supports a plant species of concern
6	Conneaut Creek Floodplain BDA	Floodplain wetlands provide habitat for two plant species of concern
7	Devils Backbone Na/BDA	Stream valley contains a rare forest community which is also uncommon federally, rare habitats, a high quality stream community, and a plant species of special concern
8	Eight Mile Creek Gorge BDA	A forest community of county and state significance bordered by a rare shoreline habitat that harbors plant species of special concern
9	Fairview Swamp Forest 2 BDA	swamp forest habitat supporting a plant species of concern
10	Fairview Swamp Forest BDA	Swamp forest supporting two plant species of special concern
11	French Creek #2 BDA	Contains 49 natural communities of global and/or state significance, plus numerous special animal and plant species of special concern
12	French Creek BDA	Contains 49 natural communities of global and/or state significance, plus numerous special animal and plant species of special concern
13	Harborcreek BDA	Habitat for a plant species of special concern
14	Hubble Run BDA	Upper reaches of Hubbell Run contain natural communities and species of special concern that are of global and/or state significance. Three natural communities are natural areas
15	Lake Bluff Seepages BDA	Seepage habitats along the lake bluffs provide habitat for six plant species of concern
16	Lake Erie Community Park BDA	creekside and lakeside habitats support three plant species of concern
17	Lake Plain BDA	Habitat for plant species of special concern
18	Lake Plain Forested Wetland BDA	Contains the exceptional portions of the Lake Plain Shoreline BDA, North East Lake Bluff BDA, and a variety of coastal shoreline habitats that retain their natural character
19	Lake Plain Shoreline BDA	A forest community of state and county significance contains uncommon shoreline habitats that harbor plant species and animal species of special concern
20	Lake Plain Wetland BDA	Habitat for a plant species of special concern

Erie County Greenways Plan

Erie County Natural Heritage Inventory Sites (continued)

Data Source: Pennsylvania Natural Heritage Partnership Program

NHI #	NHI Name	Description
21	Leboeuf Township Woods BDA	Habitat for an animal species of special concern
22	Lee Road Woods BDA	Habitat for an animal species of special concern
23	Love Marsh BDA	Habitat for plant species of special concern, regionally as well as state wide
24	Mclane Fens BDA	Contains natural communities of global and state concern that provide habitats for plant species of special concern
25	North East Lake Bluff BDA	Lake bluff habitat of unusual quality, containing a rare habitat that harbors plant species of special concern
26	Orchard Beach Road Grasslands BDA	open habitats support an animal species of concern
27	Presque Isle BDA/oha	Inter-related natural communities (lake littoral zone, embayment, and shoreline habitats) that are of special concern in state and federally. Communities provide habitat for 63 species of special concern as well as other significant species
28	Sixmile Creek Gorge BDA	High quality stream community, forest community critically imperiled in state, and an uncommon cliff community in state. Two natural communities contain habitat for plant species of concern
29	Sixteenmile Creek BDA	The floodplain of the creek supports a plant species of concern
30	Stoker Road Swamp Forest BDA	swamp forest habitats support a plant species of concern
31	Twentymile Creek BDA	A calcareous seep community that provides habitat for a plant species of special concern
32	Twentymile Creek Mouth BDA	creek and lakeshore support a fish species of concern and numerous rare plants
33	Union Township BDA	Habitat for a plant species of special concern
34	Upper Conneaut Creek BDA	Habitat for plant species of special concern
35	Walnut Creek Mouth BDA	The mouth of Walnut Creek provides habitat for several plant species of concern
36	Walnut Creek Valley BDA	Contains a forest community and a calcareous seep community of special concern that provides habitat for several plant species of special concern
37	Whitney Run Headwater Wetlands BDA	Two plant species of concern are located in the wetland and bog areas within this site.
38	Wintergreen Gorge BDA	Partially mature forest community of county and state significance, in which there are two rare habitats that harbor plant species of special concern

The following descriptions describe the natural and ecological infrastructure elements identified on the maps.

Water Resources

Lake Erie is one of Pennsylvania's most unique waterways, not only because of its size, but also for its abundance of game fish. On average, 1.5 million fish are caught by anglers each year in the lake, Presque Isle bay, and tributaries (PA Fish & Boat). Lake Erie provides a world-class steelhead fishery. Overall, angler effort estimates (trips) have nearly tripled in the last decade, increasing from 72,413 trips in 1993 to 200,816 trips in 2003. Based on a catch rate of 0.630 steelhead per hour and a harvest rate of 0.150 steelhead per angler hour, anglers caught an estimated 533,873 steelhead and harvested an estimated 126,880 steelhead on Pennsylvania's Lake Erie tributaries during the 2003-2004 steelhead season.

The Erie steelhead fishery is actively enjoyed by thousands of anglers. Because the fishery attracts a large number of visitors to the region, it provides a notable contribution to the Erie County economy. Survey results suggest that anglers attracted to the Erie County, Pennsylvania stream and shoreline steelhead fishery spent nearly \$9.5 million on trip-related expenditures in 2003. Overall, this activity generates \$5.71 million in new value-added activity in Erie County, supporting 219 jobs in the economy through direct and indirect effects (Creel Analysis & Economic Impact....).

In addition to Lake Erie, Erie County contains three of the eight glacial lakes of western Pennsylvania: Lake Pleasant, Lake LeBoeuf, and Edinboro Lake. Glacial Lakes are some of the most exceptional natural features in Pennsylvania. Of the 2500 water bodies in Pennsylvania called lakes, only 70 were naturally formed. Glacial lakes provide unique recreational and scenic resources, and are major focus of tourism. Additionally, these lakes provide habitat for many plants and animal species that would not otherwise inhabit Pennsylvania.

The location of Erie County's water resources is shown on:

Map: Natural Infrastructure Inventory

Wetlands

Erie County contains nearly twenty-five thousand (25,000) acres of wetlands. These are divided among three classifications: Lake Edge (1,365 acres), Marsh Edge (22,837 acres) and River Edge (534 acres). Significant wetland areas can be found on Presque Isle, in western Erie County, and bordering LeBoeuf Creek and LeBoeuf Lake, Lake Pleasant and Lake Pleasant Outlet, and the South and West Branches of French Creek. These wetlands are home to thousands of wetland plants and animals, as well as sources of food and nesting to an estimated 50% of North America's bird population. Additionally, more than 46% of U.S. endangered and threatened species need wetlands to live.

In addition to sustaining habitat, wetlands are a necessary resource for the environment. Wetland soils absorb water from precipitation and their plants slow the water's flow. These benefits enable wetland areas to hold and release the water slowly into streams. Natural wetlands also filter out chemicals and fertilizer that people have put on their farms, lawns, or discharged from their businesses.

The location of Erie County's wetlands is shown on:

Map: Natural Infrastructure Inventory

100-year Floodplain

Erie County's streams are bordered by many miles of floodplains. The Federal Emergency Management Agency (FEMA) delineates floodplains for the nation through its floodplain management program. In the State of Pennsylvania, the PA Code has regulations designed to encourage planning and development in floodplains which are consistent with sound land use practices. Protecting the people and properties within floodplains from floodwaters is essential. In addition, preserving and restoring the efficiency and carrying capacity of streams within the Commonwealth is a vital component to maintaining a sound ecological system.

Pashek Associates utilizes FEMA floodplain mapping to locate sensitive natural infrastructure areas within Erie County. This information can be used to further promote the preservation and restoration of streams within the study area.

The location of Erie County's floodplains is shown on:

Map: Natural Infrastructure Inventory.

Special Protection Waters

Erie County is also traversed by over 1,900 miles of streams in 118 watersheds. The Pennsylvania Code Chapter 93 on Water Quality Standards designates streams with special protection water uses. One of these designated uses is Cold Water Fishery (CWF). A CWF supports fish, plants, and animals that best live and reproduce in colder temperatures. Many times this classification is based on the presence of trout. High Quality (HQ) waters are defined as having long-term water quality which exceeds the levels necessary to support the propagation of fish, shellfish, and wildlife and recreation in and on the water. Of Pennsylvania's 83,000 miles of streams only about 25% is designated as High Quality Coldwater Fisheries.

Erie County has six (6) streams that qualify as High Quality Cold Water Fisheries (HQCWF), as defined by Pennsylvania Code Chapter 93. Some of these streams have a Migratory Fishes (MF) protected use because they support the passage, maintenance, and propagation of fishes that ascend to flowing waters to complete their life cycle. All of the Protected Use streams within Erie County are described briefly here:

- Crooked Creek is located in northwestern Erie County, where it flows through Platea Borough, Elk Creek Township, Conneaut Township, Girard Township and Springfield Township before out-letting into Lake Erie. The waters of Crooked Creek have a protected use designation of HQ-CWF-MF.
- Godfrey Run is located in the northwestern section of Erie County, west of Trout Run. This creek is completely located within Girard Township and outlets into Lake Erie. Godfrey Run is a nursery where fishing is prohibited. When lake conditions are favorable, fishing at the mouth of this creek for steelhead and walleye is popular. The waters of Godfrey Run have a protected use designation of HQ-CWF-MF.
- Thomas Run is located west of the City of Erie, where it is a tributary of Walnut Creek. The waters of Thomas Run have a protected use designation of HQ-CWF-MF.
- Twelvemile Creek is located in eastern Erie County, where it flows through Greenfield Township, North East Township, and Harborcreek Township before out-letting into Lake Erie. The waters of Twelvemile Creek have a protected use designation of HQ-CWF-MF.

- Lake Pleasant Outlet is located in eastern Erie County where it flows through Venango Township and Waterford Township before out-letting into French Creek in Amity Township. The waters of Lake Pleasant Outlet have a protected use designation of HQ-CWF.
- Spring Creek is located west of the City of Corry where it is a tributary of Brokenstraw Creek. The waters of Spring Creek have a protected use designation of HQ-CWF.

Erie County also has one (1) stream with an Exceptional Value (EV CWF) designation. This stream is described briefly here:

- Beaver Run is located west of the City of Corry, where it flows through Amity Township, Wayne Township, and Elgin Borough before out-letting into French Creek in Concord Township. The waters of Spring Creek have a protected use designation of EV-CWF.

Also, Elk Creek in western Erie County does not carry a High Quality Pennsylvania Code Chapter 93 protected use, but is a PA Fish and Boat Commission approved trout water and the largest and most popular fishing stream in the County. Elk Creek is nationally recognized for its world-class steelhead fishing.

Having a high-quality, cold water fishery in a community will not stop a development from being constructed, but rather it insists that new or enlarging activities do not degrade the existing water quality. This usually entails a more rigorous permit review by the Department of Environmental Protection before any new development is permitted to proceed.

Additionally, being categorized as High Quality Waters may also have positive influences on a surrounding community. The presence of an HQ improves a community's odds of attaining funding for the upgrading local infrastructure, such as sewage treatment facilities and road maintenance.

Erie County's special protection waters are shown on:

Map: Ecological Infrastructure Inventory

Steep Slopes > 25%

The United States Geological Survey (USGS) created maps detailing the topography of the entire United States. From this mapping, a Digital Elevation Model (DEM) was created, which has been utilized to do a surface analysis of Erie County. From this analysis, areas with slopes greater than twenty-five percent have been delineated as steep slopes. These areas are typically considered environmentally sensitive and in need of protection.

Soils in areas with steep slopes are generally unstable, which can result in landslides causing safety concerns for communities. When disturbed, these unstable soils also create erosion and sedimentation problems, which can lead to the increased degradation of water quality downstream.

Steep slopes are features that are essential to the natural system because they contribute to open space networks. They typically connect forested areas to water resources (which protects the

quality of the water), and they provide habitat for wildlife and vegetation, and provide travel corridors for animal and avian species.

The location of Erie County's steep slopes is shown on:

Map: Natural Infrastructure Inventory.

Soils and Geologic Features

Key soil types for the purposes of greenway planning include hydric soils. The Natural Resource Conservation Service (NRCS) has a hydric soils section which presents information on hydric soils. Hydric soils are soils that are sufficiently wet enough during the growing season to support the growth of wetland vegetation. Hydric soils are designated by individual county soils surveys. The Erie County conservation district was contacted to obtain a list of hydric soils for the County. Once this list was obtained, these soils were mapped and analyzed as part of the Natural Infrastructure Inventory. It is generally recommended that development in or around hydric soils be done sensitively so as to preserve the potential benefits that these soils provide.

Hydric soils are depicted on ***Map: Natural Infrastructure Inventory***

There are four scenic geological features in Erie County:

- Devils Backbone, in Girard Township, is a unique topographic feature created by stream erosion. This feature got its name from the shape of the land within a series of stream meanders in the Little Elk Creek that resembles a backbone.
- Drumlins, found in Venango Township, approximately two miles North East of Wattsburg near State Game Lands No. 191, are very common to glaciated northwest Pennsylvania. These unique geologic features are low, smoothly rounded, elongated hills, mounds, or ridges of compacted glacial till, formed by glacial movement. Drumlins at this site are almost perfect text book examples.
- Presque Isle was created after the retreat of glaciers from northwest Pennsylvania. The peninsula formed from sand deposits brought into the area from the west by lake currents.
- Titus Bog, in Amity Township, and nearby Wattsburg Fen, are registered National Natural Landmarks.

Forests and Woodland Areas

Erie County's forests have been significantly impacted by agriculture, logging, and urban and suburban development. While large areas of forest remain protected in State Game Lands and State and local parks, much of the woodlands remain in danger of being developed. The forests of Erie County differ in species composition and age from the primary growth forests that covered the County long ago. The majority of the forest land in the County was previously cut, sometimes more than once, leaving second and third growth forest today.

Since basically all of the forests have been logged at least once, the native beech-maple forests that once covered the County are not seen today. Present day Erie County forests are beech-birch-maple, northern hardwood forest, and oak-tulip poplar. The species typically contained here are red maple, hemlock, white ash, black cherry, basswood, sweet birch, northern red oak, white pine, American elm, and eastern hop-hornbeam. Because of the history of logging, Old Growth Stands are rare.

The Pennsylvania Natural Heritage Program has created a map of large tracts of contiguous forest blocks throughout the state of Pennsylvania. These forest blocks should be maintained as best as possible to preserve habitat and sustain flyways. For this study, these forest blocks were reduced to include only interior forest areas. This was done by creating an interior buffer measuring three hundred feet from the forest edge and removing it from each forest block.

Presently, more than half the state of Pennsylvania (12 million acres) is covered in forest. These forests help to clean our air and water, while providing habitat for wildlife. They also provide areas for recreation and enhance the beauty of the state. Economically, Pennsylvania's hardwood forests are some of the most valuable and productive in North America. "Each year, the timber industry processes 1.2 billion board feet of lumber, employs nearly 100,000 people, and produces annual shipments valued at more than \$5 billion. The state's forests also support a vast repository of biodiversity, including more than 3,500 species of plants and animals". *Penn State College of Agricultural Sciences, 2007*

The location of Erie County's woodlands and interior forests is shown on:
Map: Natural Infrastructure Inventory.

Important Bird Areas

Selected by the Audubon Society, Important Bird Areas (IBAs) have been designated in over 80 locations across the state and include more than 1 million acres. All combined, IBAs encompass over 3.5% of the state of Pennsylvania.

According to the Pennsylvania Chapter of the Audubon Society (Audubon Pennsylvania), "to qualify as an IBA, a site must meet at least one of four criteria, each associated with a different type of vulnerability. It must support endangered or threatened species; species that are not widely distributed; species that are restricted to a single extensive habitat or biome; or high densities of congregating species, such as waterfowl or shorebirds." Sites that are important flyways for migrating birds in spring and fall may also qualify as IBAs. Further information on IBAs, including interactive mapping, is available at <http://pa.audubon.org.iba>.

Audubon Pennsylvania has designated three (3) Important Bird Areas (IBAs) at least partially located within Erie County – Presque Isle State Park IBA, Roderick Wildlife Preserve IBA, and the Presque Isle Bay Martin Roost IBA.

The Presque Isle State Park IBA is located on a peninsula, north of the City of Erie, jutting into Lake Erie. It is a "narrow spit of land composed mainly of broad-leaved deciduous woodland and freshwater marshes." The size of this IBA is 3,115 acres, including 500 feet offshore into the waters of Lake Erie and Presque Isle Bay. This site contains a very diverse array of important avian habitats, such as forest land containing mixed oak, northern hard woods, pine plantations, and eastern cottonwood stands; sand dunes and lake shore habitat; extensive wetlands comprised of emergent, scrub shrub, forest, open water, and old field habitat.

According to Audubon Pennsylvania's description, Presque Isle State Park is "arguably the single best location for birds in Pennsylvania." At least 321 species of birds (82% of the species on the Official List of Birds of Pennsylvania) have been recorded there. The geography of Presque Isle makes it attractive, especially to migratory birds. Many land birds stop at this site during migration, as the Lake Erie shore acts as a leading line for migrants in spring and fall. The peninsula also shelters waterfowl and other birds from winter storms. A number of endangered and threatened species have nested here including the Common Tern, Sedge Wren, and Prothonotary Warbler.

Roderick Wildlife Preserve IBA is located in the western most portion of the Lake Erie shoreline, at the Ohio border. This site includes two and a half miles of lakefront which happens to be the longest stretch of undeveloped shoreline on the southern shore of Lake Erie. This site is characterized by steep bluffs along the lake shore, backed by gentle uplands abundant with wetlands, streams, abandoned fields, second growth forest, and shrub land. Nearly half of this site is wetlands. Forested habitat includes Aspen, American Beech, White Oak, Sugar Maple, and silky dogwood.

The combination of wetlands, second growth forest, and dense thickets make this one of the most important sites in the state for the American Woodcock. During migration periods in the spring and fall, more than one hundred species of birds have been seen in migration here. Additionally, wetlands restoration is focusing on providing habitat for waterfowl, wading birds, and other wetland species. The increase on development surrounding this site could mean that it will become important in the future as an island of habitat.

The Presque Isle Bay Martin Roost IBA is located in the western portion of Presque Isle Bay and is recognized as the only known roost site and staging area for Purple Martins in Pennsylvania. This site may host one hundred thousand martins at its peak.

The attention that Important Bird Areas can bring to a community can also bring with it funding for species and habitat conservation, ecological, and biological restoration in areas with rare species, as well as attention from the Department of Environmental Protection to curb further resource depletion in the vicinity. IBAs can also impact recreation and tourism by attracting bird watchers, ornithologists, and horticulturists to visit them.

Erie County's Important Bird Areas are shown on:

Map: Ecological Infrastructure Inventory

Natural Areas: The Pennsylvania Natural Heritage Program

Another essential source of information about important habitat areas is the Erie County Natural Heritage Inventory (NHI), completed in 1993 by the Western Pennsylvania Conservancy. This document provided mapping and information on the known outstanding floral, faunal, geologic, and scenic features in Erie County. During the research and analysis phase of this project the Pennsylvania Natural Heritage Program updated the 1993 NHI mapping for use in the NWPA Greenways Plan. This updated data is integrated with the 1993 data and described below.

At the time of the 1993 report, Erie County was noted as containing the richest biological diversity of any county in the state of Pennsylvania. The biological communities and species found here are both rare and biologically significant within Pennsylvania, as well as on a global scale. Among these ecological communities are the lake shoreline habitats, including lake bluffs, lake sediment slumps, sandpits, beaches, and beach dunes, which are unique to Erie County, Pennsylvania and rare in the region. From a global standpoint, the biological communities within the French Creek drainage basin are of world-wide significance.

These natural resources contribute to the quality of life of Erie County residents. If the designated sites are properly protected and managed, they can become significant long-term assets to the natural infrastructure and recreation opportunities of the County.

The NHI classifies natural areas within the county as either Biodiversity Areas Core Habitat (BDAs), Supporting Natural Landscapes of the BDA (SNL), or Landscape Conservation Area (LCA). The definitions of these classifications, as given in the NHI report, are as follows:

- A BDA is an area containing: 1) one or more locations of plants, animals, or natural communities recognized as a state or federal species (or natural community) of concern; or 2) high-quality examples of natural communities or areas supporting exceptional native diversity. The two levels of a BDA consist of the Core Habitat and its Supporting Natural Landscape and are defined as:
 - The Core Habitat areas are the essential habitat that cannot absorb significant levels of activity without substantial impact to the plants, animals, or unique natural communities of special concern contained within them. Core Habitats include those that house species of special concern, areas found to possess a high diversity of plants and animals native to the county, or rare or exemplary natural community (assemblage of plants and animals), including the highest quality and least disturbed examples of relatively common types of communities.
 - The Supporting Natural Landscape is an area surrounding the core habitat that is necessary to maintain vital ecological processes or secondary habitat that may be able to accommodate some types of lower level impacts. Activities within the Supporting Natural Landscape should be conducted with the needs of the Core Habitats in mind.
- An LCA is a large contiguous area that is important because of its size, open space and habitats, and/or the inclusion of one or more BDAs. Although including many different land uses, it typically has not been heavily disturbed and thus retains much of its natural character.

Natural areas or “areas of significance” as they are deemed by the NHI, are ranked according to their significance to the protection of biodiversity and ecological integrity of the region. These significance rankings were given a rating of 0 to 3, with 0 being of the highest significance and designated for no use; 1 being suitable for nature observation without trails; 2 being suitable for passive recreation/pedestrian trail development; and 3 being suitable for active recreation.

Fifty-nine Areas of Significance were identified in the NHI: forty-five are BDAs, eleven are SNLs, and three are LCAs.

There are five BDAs given a rating of “0”. These BDAs are seen as the most significant of any in the County by the 2007 NHI report update. They are described briefly below:

- Calkins Road Grasslands BDA
- LeBoeuf Township Woods BDA
- Lee Road Woods BDA
- Orchard Beach Road Grasslands BDA
- Twentymile Creek BDA

There are twenty-eight BDAs and one SNL given a rating of “1”. These BDAs are seen as highly significant and designated as suitable for nature observation, but not for trails. They are:

- Ashtabula Creek Swamp BDA
- Beaver Run headwater Swamp Forest BDA
- Bentley Run/Alder Run BDA
- Conneaut Creek Floodplain BDA
- Devils Backbone Natural Area BDA
- Eightmile Creek Gorge BDA
- Fairview Swamp Forest BDA
- French Creek BDA
- French Creek #2 BDA
- Hubble Run BDA
- Lake Bluff Seepages BDA
- Lake Plain BDA
- Lake Plain Forested Wetland BDA
- Lake Plain Shoreline BDA
- Love Marsh BDA
- McLane Fens BDA
- North East Lake Bluff BDA
- Presque Isle BDA
- Sixmile Creek Gorge BDA
- Sixteenmile Creek Gorge BDA
- Sixteenmile Creek BDA
- Union Township BDA
- Upper Conneaut Creek BDA
- Upper French Creek BDA
- Walnut Creek Mouth BDA
- West Branch Conneaut Creek BDA
- Wintergreen Gorge BDA
- West Branch Conneaut Creek SNL

There are nine BDAs, twelve SNLs, and two LCAs given a rating of “2”. These sites are seen as notable and designated as suitable for passive recreation such as: hiking, cross-country skiing, and nature observation. They are:

- Asbury Woods Nature Center BDA
- Battles Museum BDA
- Campground Savannah BDA
- Fairview Swamp BDA
- Fairview Swamp Forest 2 BDA
- Harbor Creek BDA
- Lake Erie Community Park BDA
- Lake Plain Wetland BDA
- Raccoon Creek and Lake Plain BDA
- Stoker Road Swamp Forest BDA
- Conneaut Creek SNL

- Crooked Creek and Raccoon Creek SNL
- Cussewago Creek SNL
- Fourmile Creek SNL
- French Creek SNL
- Sixmile Creek SNL
- Sixteenmile Creek SNL
- Sparta Lake Complex SNL
- Twentymile Creek SNL
- Upper French Creek SNL
- Whitney Run Headwaters SNL
- French Creek LCA
- State Game Land No. 101 Forest LCA

There is one LCA given a rating of “3”. This site is seen as locally significant and suitable for active recreation such as: mountain biking, ATV use, snowmobile riding, motor boating, and Jet Ski use. This site is:

- Lake Shoreline LCA

Erie County’s Natural Heritage Inventory data is shown on:

Map: Ecological Infrastructure Inventory

Steelhead Streams

Erie County’s steelhead streams are a result of high quality natural and ecological resources that help to conserve the resources that support the habitat for these fish. Further, steelhead streams attract many anglers from across the state. Therefore these streams are important to the economy of Erie County.

These streams include:

- Turkey Creek
- Raccoon Creek
- Crooked Creek
- Conneaut Creek
- Elk Creek
- Godfrey Run
- Trout Run
- Walnut Creek
- Cascade Creek
- Fourmile Creek
- Sixmile Creek
- Sevenmile Creek
- Eightmile Creek
- Twelvemile Creek
- Sixteenmile Creek
- Orchard Beach Creek
- And Twentymile Creek

Erie County’s Steelhead Streams are shown on:

Map: Ecological Infrastructure Inventory

The Greenways Plan incorporates all NHI designated sites into the final Natural Systems Greenways Plan. The sensitivity ranking given in the 2007 NHI update will be used in the corridor criteria ranking for proposed Natural Systems corridors.

Public and Other Protected Open Space

Presque Isle State Park is a 3,200 acre peninsula that arches into Lake Erie. This park is also designated as a National Natural Landmark and is a popular spot for migrating birds. Because of Presque Isle's many unique habitats, it contains a greater number of Pennsylvania's endangered, threatened, and rare species than any other area of similar size in the state.

Erie Bluffs State Park is the newest of Pennsylvania's State Parks. Located approximately 12 miles west of the City of Erie along the Lake Erie Shore, this 540 acre park comprises the largest undeveloped stretch of Lake Erie shoreline remaining in Pennsylvania.

Erie Bluffs State Park's one mile of shoreline features ninety foot bluffs overlooking Lake Erie. The park also comprises of a shallow stream steelhead fishery that is world class; old growth forest; rare, endangered and threatened flora; an uncommon oak savannah sand barren ecosystem; exceptional value wetlands; and significant archaeological sites. Currently, there are no facilities in the park.

Wattsburg Fen Natural Area, also known as Titus Bog and Wattsburg Fen, is a rare wetland community located between the City of Corry and Wattsburg in eastern Erie County. This fen is a registered National Natural Landmark. Much of this land is managed or owned by the Western Pennsylvania Conservancy, Presque Isle Audubon, and the Botanical Society of Western Pennsylvania.

Asbury Woods in Millcreek Township is a 200-acre tract of wetlands, trails, forests, streams, fields, and historic properties. It has five distinct natural and recreational areas – Asbury Woods Nature Center, Asbury Community Park, Brown's Farm, Greenway Trail, and James Wildlife Preserve.

Headwaters Park and Headwaters Natural Resource Center in Millcreek Township is a 35-acre site conservation and recreation facility. This site is also home to the Erie County Conservation District.

Sixmile Creek County Park, in Harborcreek Township, is a 450-acre tract of open space that is almost entirely forested. The topography of the park is defined by narrow flood plains and steep ravines created by Sixmile Creek carving its way through the landscape. Sixmile Creek Park was purchased by the County in the late 1960s and is currently the only County-owned Park.

Lake Pleasant is a 64-acre glacial lake in Venango Township. This lake is surrounded by wetlands on three sides and supports twenty-four (24) plant species and three fish species of special concern, as designated by the Pennsylvania Natural Heritage Program. Lake Pleasant is the only remaining glacial lake in northwest Pennsylvania that has managed to escape threats from development. The Western Pennsylvania Conservancy holds easements on many properties around this lake and intends to protect this lake from future development.

The Fairview Gravel Pits, in Fairview Township, is a site owned by the Commonwealth and managed by the Pennsylvania Fish and Boat Commission. This site is made up of Upper and Lower pits. The game commission stocks the ten acre Upper Gravel Pit with trout numerous times throughout the year. Boating is limited to electric and non-motorized crafts. There is a boat launch and parking facilities.

In addition to the aforementioned parks and natural areas, nearly 16,700 acres are protected in the fifteen State Game Lands that are at least partially within Erie County. These lands are managed by the PA Game Commission for wildlife conservation, hunting, and trapping.

GRAY INFRASTRUCTURE INVENTORY

Transportation Corridors

- Inactive Rail Lines - Erie County has several stretches of inactive or discontinued rail lines. In reviewing the Erie County Rail Trail Feasibility Study and the County of Erie Trails and Greenways Plan, it was discovered that five inactive rail line segments have potential for trail development. These segments are described briefly here:
 - (1) The former rail corridor from the City of Corry to the New York state line is also known as the Corry to Clymer trail. This corridor is approximately five miles long and is currently in use as a trail, but not yet designated as an existing rail trail.
 - (2) The inactive Bessemer to Lake Erie (B&LE) Rail Line known as Thornton Junction is a former rail corridor between Seaway Trail and Old Albion Road (northwest of Albion). This section is also referred to as the Girard to Albion Trail. Prior to being acquired by the B&LE, this rail line was part of the Erie and Pittsburgh Branch that was deactivated in 1973. Today, walkers, cyclists, and motorized vehicle users currently use this corridor, but it has not yet been designated as a rail trail.
 - (3) An inactive rail corridor from Old Albion Road to the Crawford County line was once part of the Penn Central Rail Line. This corridor connects the Thornton Junction section south to Crawford County, with potential to connect to Pymatuning State Park.
 - (4) Between Union City and the Crawford County line is the former Erie-Lackawanna Railroad. This inactive rail corridor is now owned by Norfolk Southern. This corridor was identified as a potential rail trail in the County of Erie Trail and Greenway Plan. Throughout the majority of the corridor, the railroad ties have been removed, but in some places the ballast remains intact. Development of a trail along this corridor would provide connections with the City of Corry and Crawford County's trail system.
 - (5) The former Penn Central Railroad line, running south from the City of Corry, is proposed as the Clear Lake Trail. This five-mile stretch of inactive rail line connects Corry to Clear Lake in Crawford County. These activities remain tantamount.
- Highway Bike Lanes – Erie County has three BicyclePA routes designated by the Pennsylvania Department of Transportation. PennDOT has established a series of bicycle routes that are marked and publicized. These routes are known as BicyclePA routes. BicyclePA routes were designed by experienced bicyclists to provide bicycling members of the traveling public who wish to traverse the state with a guide to some of the Commonwealth's highways and rail-trails. Few of these routes contain bike lanes or other facilities designed specifically for bicyclists. The Pennsylvania Department of Transportation does not guarantee the safety of bicyclists as they access those roads and rail-trails. Every bicyclist is responsible for his or her personal safety and welfare and for remaining alert and mindful of conditions on the roads or trails. BicyclePA users

are expected to be licensed drivers or persons at least sixteen years of age who have several years of road bicycling experience and who are comfortable in bicycling in a vehicular environment.

- (1) BicyclePA Route “A” stretches nearly 200 miles from Erie, PA to Greene County, PA, just north of Morgantown, WV. This route enters Erie County on State Route 98, west of Edinboro, heading north. Before the S.R. 98 interchange with Interstate 90, the bike route turns east and onto S.R. 832, which it follows north all the way to its northern terminus with Bicycle PA Route “Z”, the Seaway Trail, and the entrance to Presque Isle State Park.
 - (2) BicyclePA Route “Y” is the second longest route in PA at over 400 miles. This route enters Erie County on US Highway 6/19 southwest of Mill Village and follows north to the intersection with US Highway 6 North, where it turns east and follows US Highway 6 through Union City and Corry, then on to Warren County.
 - (3) BicyclePA Route “Z” is the shortest route in PA at approximately 46 miles. This route follows the Lake Erie shoreline mostly utilizing US Highway 5. This bike route connects the New York Seaway trail to the Ohio border, passing through the City of Erie, and providing easy access to Presque Isle State Park.
- Shared Use Paths – As described earlier, several shared-use paths exist in Erie County. These include the Presque Isle State Park Trail, Corry to Clymer Greenway, Bayshore Connector, and Western Pennsylvania-Erie Port Authority Bayfront Seaway Trail.
 - Park and Ride Lots – There is a park and ride facility in Erie, off the Bayfront parkway, near the Pepsi Amphitheatre at Liberty Park. This park and ride lot is used with the Bayfront water taxi system and with the Bay Liner Trolley.
 - Bus, Train, and Water Taxi Terminals – The Erie Metropolitan Transit Authority (EMTA) operates local and county-wide bus service. Local service is provided throughout the City of Erie, while county-wide service extends to Edinboro, Corry, Albion, and Harborcreek. In 2002, the city opened the Intermodal Transportation Center at the Holland Street Pier, which includes a bus terminal. The Bayliner Trolley service runs from the Intermodal Transportation Center and the Bayfront Park and Ride into downtown Erie daily. This service runs from the Bayfront into downtown along State Street to 14th Street. There is also a shuttle service and water taxi service in Erie that runs from the Bayfront to Liberty Park and also out to Presque Isle.

According to the Amtrak website (www.amtrak.com), passenger train service in Erie County is accessible from the Amtrak station on West 14th in Erie. Greyhound Bus Lines (www.greyhound.com) has a station in Erie and at Edinboro University.

- Canals – Through researching the American Canal Society Canal Index, it was discovered that there was one known canal system that formerly operated in parts of Erie County. This canal system is described briefly below:
 - (1) The Beaver & Erie Division of the Pennsylvania Canal System connected Pittsburgh with Erie. This route ran from Pittsburgh along the Ohio River to Beaver, then north through New Castle and Conneaut Lake by way of the Beaver and Shenango Rivers before terminating in Erie. The canal system operated from 1844 to 1871.

Recreation Opportunities Inventory

Various recreation facilities, including the community parks in municipalities throughout the county, are depicted on *Map: Recreation Opportunities Inventory*. Though the recreation facilities in Erie County are too numerous to describe in detail here, this section describes regionally significant recreational assets that are relevant to the NWPA Greenways Plan.

- Public Recreation Facilities

- (1) Presque Isle State Park is a 3,200-acre peninsula that arches into Lake Erie. This park features many recreational activities, such as swimming, boating, fishing, hiking, biking, in-line skating, water-skiing, scuba diving, boat tours, hunting, wildlife watching, cross-country skiing, and snow shoeing. Amenities at the park include beaches, boat launches, marinas, canoe and boat livery, picnic pavilions and shelters, concessions, restroom and shower facilities, and the Tom Ridge Environmental Center.
- (2) Erie Bluffs State Park is the newest of Pennsylvania's State Parks. Located approximately 12 miles west of the City of Erie along the Lake Erie Shore, this 540-acre park comprises the largest undeveloped stretch of Lake Erie shoreline remaining in Pennsylvania. Currently, there are no facilities in the park.
- (3) Nearly 16,700 acres are designated as State Game Lands in Erie County. These lands are managed by the PA Game Commission for wildlife conservation, hunting, and trapping. In addition to hunting, these lands offer other recreational opportunities, such as, bird watching, fishing, and hiking. The following table lists the 15 State Game Lands that are located at least partially in Erie County, their location, and their total acreage.

Erie County State Game Lands (Acreage)

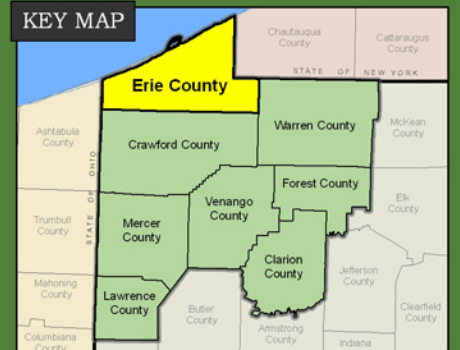
State Game Land	Town	Acres
101	Tracy	4,272
102	Union City	384
109	Waterford	1,639
154	Wheellock	1,415
155	Phillipsville	391
161	West Greene	235
162	Wattsburg	354
163	Colt Station	332
167	Union City	627
190	Waterford	327
191	Little Hope	1,224
192	Phelps Corners	333
218	Bogus Corners	1,344
263	Corry	668
314	Conneaut	3,131

- (4) Sixmile Creek County Park, in Harborcreek Township, is a 450-acre tract of open space that is almost entirely forested. The topography of the park is defined by narrow flood plains and steep ravines created by Sixmile Creek carving its way through the landscape. Sixmile Creek Park was purchased by the County in the late 1960s and is currently the only County-owned Park.

Northwest Pennsylvania Greenways Plan

for
 Clarion County Lawrence County
 Crawford County Mercer County
Erie County Venango County
 Forest County Warren County

KEY MAP



LEGEND

- County Boundary
- Municipal Boundary
- Urban Areas
- Lake
- River
- Interstate
- PA State Route
- US Highway
- Active Railroad

Managed Land

- State Park
- Regionally Significant County & Local Parks
- State Game Land

Trails

- Potential Trail
- Existing Trail
- Snowmobile Trails
- BicyclePA Route
- Proposed Bicycle Route
- Seaway Trail - National Scenic Byway
- PA Canoeable Waters



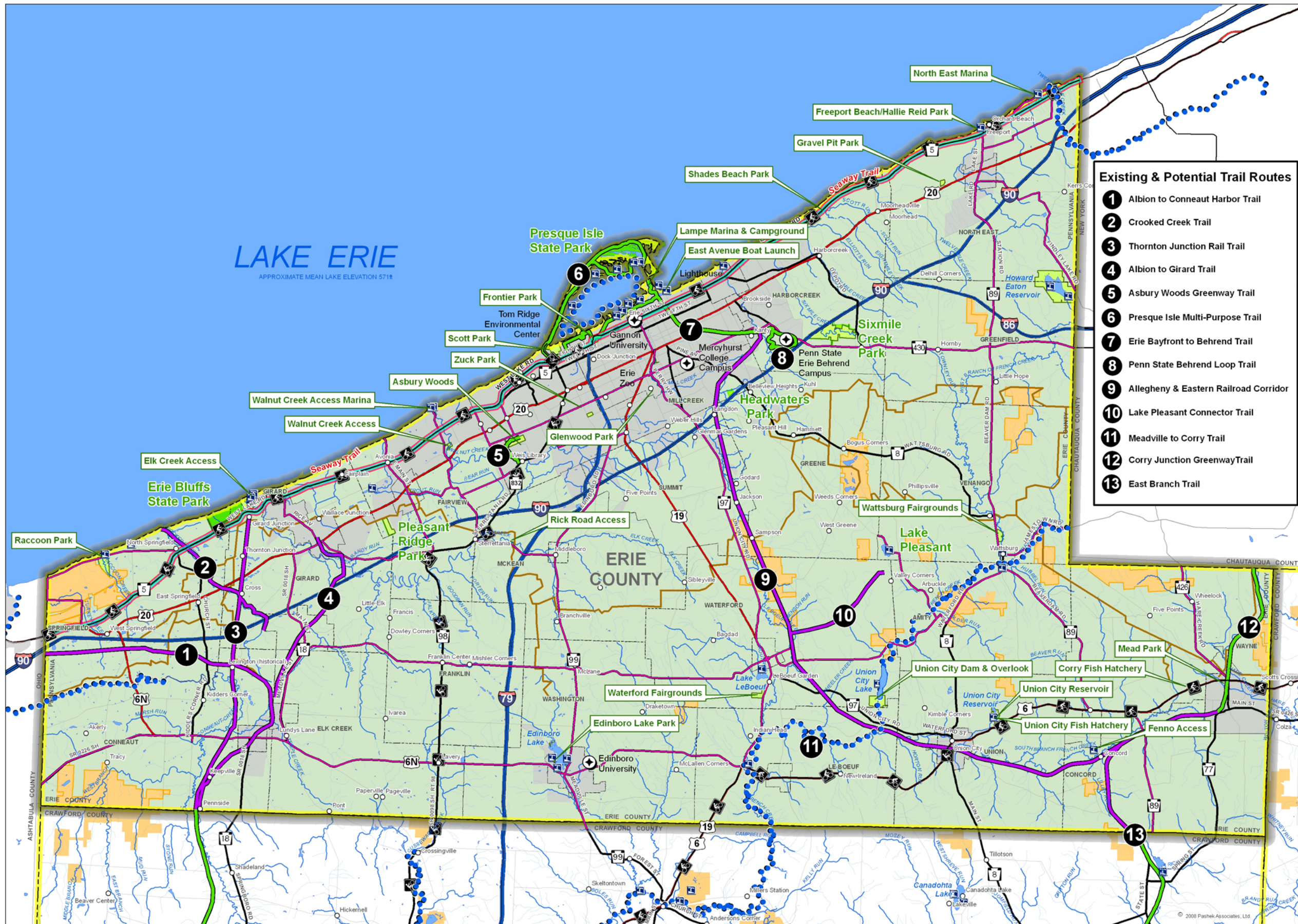
Data Source:
 ESRI 2005 Data
 USGS
 PASDA
 PennDOT

Projection: State Plane - NAD 1983
 Pennsylvania North Feet



Pashek Associates makes no claims to the accuracy of this data.

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Existing & Potential Trail Routes

- 1 Albion to Conneaut Harbor Trail
- 2 Crooked Creek Trail
- 3 Thornton Junction Rail Trail
- 4 Albion to Girard Trail
- 5 Asbury Woods Greenway Trail
- 6 Presque Isle Multi-Purpose Trail
- 7 Erie Bayfront to Behrend Trail
- 8 Penn State Behrend Loop Trail
- 9 Allegheny & Eastern Railroad Corridor
- 10 Lake Pleasant Connector Trail
- 11 Meadville to Corry Trail
- 12 Corry Junction Greenway Trail
- 13 East Branch Trail

- Private Recreation Facilities

- (1) Headwaters Park and Headwaters Natural Resource Center, in Millcreek Township, is a 35-acre site conservation and recreation facility. This site is also home to the Erie County Conservation District.
- (2) Asbury Woods, in Millcreek Township, is a 200-acre tract of wetlands, trails, forests, streams, fields, and historic properties. With five distinct natural and recreational areas – Asbury Woods Nature Center, Asbury Community Park, Brown's Farm, Greenway Trail, and James Wildlife Preserve – Asbury Woods is one of the premier environmental centers in northwestern Pennsylvania, providing educational and recreational opportunities to more than 130,000 visitors annually.

Asbury Wood's activities and programs range from hiking and mountain biking in the summer, to cross-country skiing and snowshoeing in the winter.

- (3) The YMCA of Greater Erie offers a branch in downtown Erie, and two other Erie branches in Glenwood Park and Eastside. Additional branches are located in Edinboro and Lake City.
- (4) The Erie & Crawford Snowmobile Alliance is a private club that has developed a network of snowmobile trails across Erie County. Most of these trails are provided courtesy of the property owners and are only approved for use by snowmobiles.

- Community and Neighborhood Parks –

Nearly every municipality in the County has a park or recreation facility. These facilities are depicted on Recreation opportunities Inventory Map. Community and Neighborhood Parks that are regionally significant and thus relevant to the NWPA Greenways Plan are:

- (1) Raccoon Park, Springfield Township
- (2) Albion Borough Public Park, Albion Borough
- (3) Lake Erie Community Park, Girard Township (bordering Lake City)
- (4) Pleasant Ridge Park, Fairview Township
- (5) Zuck Park, Millcreek Township
- (6) Glenwood Park, City of Erie
- (7) Scott Park, City of Erie
- (8) Frontier Park, City of Erie
- (9) Liberty Park, City of Erie
- (10) Shades Beach Park, Harborcreek Township
- (11) Highmeyer Park, Harborcreek Township
- (12) Mead Park, City of Corry
- (13) Howard Eaton Reservoir, North East Township & Greenfield Township

- Campgrounds – there are several campground facilities in Erie County, including:

- (1) Creekside Campgrounds, North East
- (2) Erie KOA Campground, McKean Township
- (3) Family Affair Campground, North East
- (4) Folly's End Campground, Girard Township

- (5) Harecreek Campground, Corry
 - (6) Higby's Campground, Union City
 - (7) Hill's Family Campground, Fairview Township
 - (8) Lampe Marina Campground, Erie
 - (9) Liana's Lake Campground, Edinboro
 - (10) Moon Meadows Campground, Erie
 - (11) Pine Lane Campground, East Springfield
 - (12) R & K Campground, Fairview Township
 - (13) Sara Coyne Campground, Erie
 - (14) Shore Haven Campground, Waterford
 - (15) Sparrow Pond Family Campground & Rec Center, Waterford
 - (16) Uncle John's Elk Creek Campground, Lake City
 - (17) Virginia Beach Campground, Springfield
- Bikeways – As described earlier, Erie County has three Bicycle PA routes designated by the Pennsylvania Department of Transportation, including Routes A, Y, and Z.
 - Pedestrian Paths – Urban areas in and around the large population centers of Erie County have paved sidewalks.
 - Waterfront Access Areas – There are no Pennsylvania Fish & Boat Commission (PFBC) Designated Water Trails in Erie County. The PAFBC does however list twenty-nine (29) water access areas. These water access points are listed in the following table. Additionally, there are three streams in Erie County that are listed as canoeable in the canoeing guide to western Pennsylvania. These streams are: Conneaut Creek, from Cherry Hill to Conneaut, Ohio; Twentymile Creek from just south of Ripley (New York) to Lake Erie; and French Creek.

PA Fish & Boat Water Access Points

Waterbody	Owner	Access Name
Elk Creek/Lake Erie	PFBC	Elk Creek Access
French Creek	Unknown	French Creek Canoe
Eaton Reservoir	North East Township	Eaton Reservoir
Lake Pleasant	PFBC	Lake Pleasant
Edinboro Lake	Edinboro Boro	Lakeside Boat Ramp
Edinboro Lake	Neil Milligan	Indianhead Marina & Rental
Edinboro Lake	Perry Thomas/ Boro	Thomas Lakeside Marina
Lake LeBoeuf	PFBC	Lake LeBoeuf
Union City Lake	COE	Union City Lake
Union City Lake	Union City	Union City Reservoir
Beaver Run Dam	PFBC	Beaver Run Dam
Lake Erie	Springfield Township	Raccoon Park
Lake Erie	Virginia's Beach Campground	Virginia's Beach
Lake Erie	Girard Township	Elk Creek
Fairview Gravel Pit	PFBC	Fairview Gravel Pit
Lake Erie	PFBC	Walnut Creek
Presque Isle Bay - Lake Erie	Bureau of State Parks	Vista Launch
Presque Isle Bay - Lake Erie	Bureau of State Parks	Niagra Launch
Presque Isle Bay - Lake Erie	City of Erie	Chestnut Street Boat Ramp
Presque Isle Bay - Lake Erie	Erie Port Authority	Bay Harbour Public Ramp
Lake Erie	Lawrence Park Township	Lawrence Park Boat Ramp
Lake Erie	Erie Port Authority	East Avenue Boat Ramp
Lake Erie	Erie Port Authority	Lampe Marina
Lake Erie	Bureau of State Parks	New Lagoon
Lake Erie	Bureau of State Parks	Old Lagoon
Lake Erie	Bureau of State Parks	West Pier Launch
Lake Erie	Unknown	Charley's Boat Livery
Lake Erie	PFBC	North East
Eaton Reservoir	North East Township	Eaton Reservoir

- Fishing is a very popular outdoor recreation activity among Erie County residents. The waterways of Erie County offer many opportunities for a range of different fish species. Some of the most popular species in Erie are: Steelhead, Walleye, Bass (small & large mouth), Rock Bass, Yellow Perch, Crappie, and Bluegill.

In 2007, twelve of Erie County's streams, in addition to Edinboro Lake, LeBoeuf Lake, Presque Isle Bay, and Union City Reservoir, were on the Pennsylvania Fish & Boat Commission's (PFBC's) list of trout-stocked waterways. Trout-stocked streams within Erie County include:

- (1) Conneaut Creek
- (2) Crooked Creek
- (3) Elk Creek
- (4) Fourmile Creek
- (5) French Creek
- (6) Godfrey Run

- (7) Raccoon Creek
- (8) Sevenmile Creek
- (9) Trout Run
- (10) Twelvemile Creek
- (11) Twentymile Creek
- (12) Walnut Creek

There are four special protection trout waters or, “special regulation” areas, as designated by the PFBC, in Erie County. These special regulation waters, designated Nursery Waters, are Trout Run and its tributaries, Godfrey Run, Orchard Beach Run and Crooked Creek. It is unlawful to fish, wade, or possess fishing equipment while in or along Lake Erie tributary streams designated as Nursery Waters.

Two of Erie County’s streams are designated as Class A wild Trout streams. These streams are Beaver Run and Trout Run. Class A waters are streams that support a population of naturally produced trout of sufficient size and abundance to support a long-term and rewarding sport fishery. These streams naturally reproduce trout and are not stocked.

- o Steelhead Fishing Opportunities in Erie County

According to the results of the “Study of Economic Impact of Sports Fishing in Erie County”, completed in 2004, steelhead fishing activity in Pennsylvania nearly tripled in the last decade, going from around 70,000 trips in 1993 to over 200,000 trips in 2003. As interest in the fishery has grown, attracting anglers from across Pennsylvania and the country, it has become a notable part of the local tourism economy. Steelhead fishing in Pennsylvania’s Lake Erie tributaries generates \$9.5 million in economic activity annually.

Popular steelhead fishing destinations in Erie County are primarily located west of the City, however there are also a few opportunities east of the City. They include:

West of Erie

Crooked Creek:	Third largest of western streams.
Elk Creek:	Largest and most popular tributary stream in Erie County.
Godfrey and Trout Runs:	Nursery waters and fishing in the creeks is prohibited. However, fishing at the mouth of each is popular when stream conditions are favorable. The mouth of Trout Run is the most popular place in the Lake to fish for steelhead and walleye.
Walnut Creek:	Second largest and most popular creek for steelhead fishing.

East of Erie

Twelvemile Creek:	Good steelhead fishery.
Sixteenmile Creek:	Steelhead fishery.
Twentymile Creek:	Largest steelhead fishery on the east side of Erie, good shore fishing at the lake.

The remaining tributaries are to provide habitat and limited fishing opportunities for steelhead.

○ Water Trails and Canoeable Streams

When discussing greenways and trails, it is important to consider opportunities for blueways (water trails). Blueways provide another recreation alternative and venue for residents to get outdoors, enjoy, and explore Erie County. In this section, we inventory the potential opportunities that exist for blueways in Erie County.

The “Canoeing Guide to Western Pennsylvania and Northern Western Virginia”, published in 1991 by Weil and Shaw, documents the canoeable streams in Erie County. The following canoeing opportunities are documented in this resource. Shuttle points are noted in the guide as put in and take out locations. The ownership status of these locations is unknown.

Lake Erie Shore Line

Weil and Shaw indicate canoeing opportunities along the Lake Erie shoreline are best during July and the first half of August. Before July, water temperatures are too cold. After mid-August, weather patterns are unpredictable, and storms can last for several days. Waves on the lake can vary from very small to very large during storm events. It is best to check the weather before you put your boat in the water. When small craft warnings are posted, it is best to find an inland location to canoe, or canoe the lagoons of Presque Isle State Park.

Most of the shoreline is undeveloped. The properties are generally either privately held or part of a State Park. Limit your access to the land to Shuttle areas.

Non-powered boats must display one of the following: boat registration; launching permit or mooring permit from Pennsylvania State Parks, available at most state park offices; or launching permit from the Pennsylvania Fish and Boat Commission.

Conneaut Ohio to Walnut Creek – 18.5 miles

Shuttle Points:

- Conneaut, Ohio Municipal Pier
- Pennsylvania Fish and Boat Commission Access at Elk Creek
- Pennsylvania Fish and Boat Commission Access Walnut Creek

Walnut Creek to Erie Public Dock – 12 to 15 miles, depending on route through Presque Isle Bay

Shuttle Points:

- Pennsylvania Fish and Boat Commission Access Walnut Creek
- Beach 8 (Pettinato Beach), located in the center of Presque Isle 1/3 mile portage from Beach 8 to Marina Lake along Canoe Portage Trail
- City of Erie Public Boat Launch

City of Erie Public Boat Launch to Ripley New York – 21 miles

Shuttle Points:

- City of Erie Public Boat Launch
- Shades Beach Park near Eightmile Creek
- Northwest Municipal Park near Sixteenmile Creek
- Lakeside Campground just over New York border, fee charged at launch

Presque Isle State Park - Grave Yard Pond to Grave Yard Pond – 4.0 miles

Shuttle Points:

- Canoe and Boat Rental near Grave Yard Pond

There are a series of six boat landings located throughout the pond's complex. A concessionaire offers, on a seasonal basis, canoe and kayak eco-tours of the ponds from this location as well.

Conneaut Creek – Cherry Hill to Conneaut, Ohio – 26.5 miles

Canoeable during the high water season (January through April).

Shuttle Points:

- At Covered Bridge on Barney Road (State Route 3003)
- At concrete arch bridge on Center Road – also known as Farnham take-out
- At Kingsville, take-out is below bridge on left
- In Conneaut at ballfield

Twentymile Creek – South of Ripley, New York to Lake Erie – 10.6 miles

Canoeable during the high water season (January through April).

Shuttle Points:

- Wattlesburg Road to County Road 9, continue until road cross stream
- Mouth on Lake Erie, or at US Route 5 Bridge near mouth

Scout Gage Gorge (gradient 100 feet per mile) and Railroad Bridge (sloped chute and three foot drop) immediately upstream of U.S. Route 20.

French Creek – 74 miles

Although not officially recognized by the Pennsylvania Fish and Boat Commission as a water trail, French Creek has functioned as a transportation corridor throughout history, including George Washington's 1753 campaign.

A "Canoe Guide from the French Creek Project" was published in the mid 1990's. The French Creek Project was initiated in May of 1995 by: the Pennsylvania Environmental Council, the Western Pennsylvania Conservancy, The Nature Conservancy, and Allegheny College.

This canoe guide documents canoeing opportunities associated with French Creek, from Union City Dam in Erie County, to its confluence with the Allegheny River at the City of Franklin in Venango County. It covers a distance of seventy-four miles. Over this length of seventy-four miles, French Creek winds its way through the towns of Edinboro, Cambridge Springs, Saegertown, Meadville, Cochran, and Franklin.

The guide identifies twelve Shuttle points along this route's length. They are located at:

Mile 0.0 Union City Dam
Mile 8.4 Routes 6N and 19
Mile 25.5 Cambridge Springs
Mile 27.0 Cambridge Springs Borough
Mile 28.2 Conneaut Creek
Mile 38.2 Saegertown Access
Mile 44.5 Bicentennial Park
Mile 49.5 Wilson Schute
Mile 55.0 Shaw's Landing
Mile 63.8 Utica Access
Mile 74 Franklin Access

At this point, the French Creek joins the Allegheny River Water Trail.

Conversations held during this planning process indicate two canoe liveries were present along the creek, but both have closed in recent years.

Cultural Resources Inventory

Historic Sites

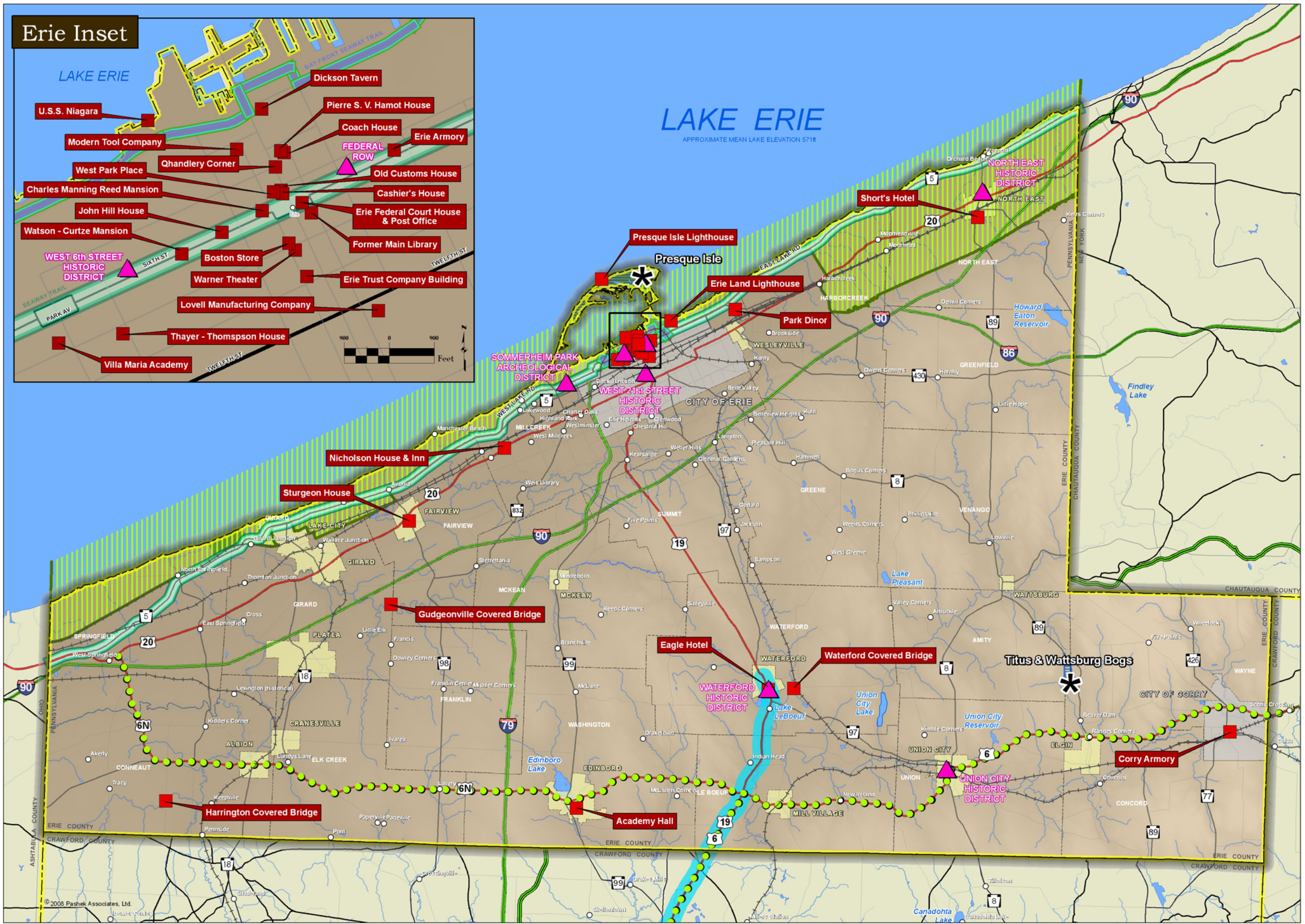
The following discussion highlights the variety of historically significant sites and districts in Erie County. These historic features fall into two major categories: sites or districts identified on the National Register of Historic Places (NRHP) and sites featuring Pennsylvania Historical and Museum Commission (PHMC) Historic Markers.

The National Register of Historic Places

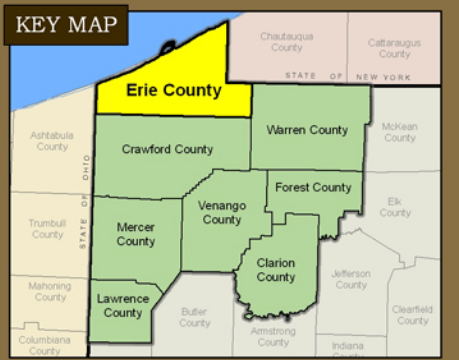
The NRHP is a list of structures, sites, and districts worthy of preservation due to their historic significance. The list was established by the 1966 National Historic Preservation Act (NHPA), which also establishes the process for adding properties to the list. The NRHP is administered by the National Parks Service (NPS) with the goal of helping identify and protect historic sites.

Erie County currently features seven (7) historic districts and thirty-four (34) individual sites/structures on the NRHP. The City of Erie itself houses twenty-three (23) of these historically significant sites/structures and encompasses four (4) historic districts. Three other older communities within the County: North East, Waterford, and Union City Boroughs, also feature individual historic districts. The other NRHP sites are scattered throughout the County. The Cultural and Historic Resources Inventory Map depicts the locations of the NRHP properties described above.

The PHMC maintains an inventory of properties that are not on the NRHP but are eligible for inclusion on this list. Currently, there are approximately one hundred (100) properties included within the PHMC's inventory of eligible properties. Similarly to those on the NRHP, many of these properties are situated within the City of Erie. Others are concentrated in the older areas of the County's boroughs, and still others are scattered throughout the less densely populated areas of the County.



Northwest Pennsylvania Greenways Plan
for
Clarion County Lawrence County
Crawford County Mercer County
Erie County Venango County
Forest County Warren County



LEGEND

- County Boundary
- Borough
- City
- Lake / Reservoir
- Major Stream or River
- Interstate
- PA State Route
- US Highway
- Active Rail Lines

Cultural & Historic Resources

- US Route 6 - Scenic Highway
- National Recreational Trail
- Washington's Trail
- Bay Front - Seaway Trail
- Seaway Trail
- State Park Land
- National Natural Landmarks
- Erie Coastal Management Zone

National Register of Historic Places

- Historic District
- Historic Site

Data Source:
ESRI 2006 Street Map USA Data
US Geologic Survey (USGS)
Pennsylvania Spatial Data Access (PASDA)
Pennsylvania Department of Transportation (PennDOT)
Department of Conservation and Natural Resources (DCNR)
Western Pennsylvania Conservancy (WPC)
Federal Emergency Management Agency (FEMA)
US Army Corps of Engineers - National Wetland Inventory (NWI)
Natural Resources Conservation Service (NRCS) - Soil Data Mart
Pennsylvania Department of Environmental Protection (DEP)



- *Federal Row, Erie, PA*
This collection of Federal style houses is a largely intact display of the typical character of mid-nineteenth century homes in Erie. The homes were each built between 1820 and 1850 and sit near the intersection of East 5th and Holland Streets.
- *North East Historic District, North East, PA*
This commercial center has served the surrounding borough and farms since the mid-nineteenth century. Many of the structures remain intact and well-preserved within the historic district.
- *Sommerheim Park Archeological District, Millcreek Township, PA*
This historic district was established to promote the archeological investigation of Native American and aboriginal cultures in the greater Erie area. The archeological potential of other prime areas within the Erie area has been constrained due to urban development.
- *Union City Historic District, Union City, PA*
The business center of Union City began its construction and evolution in 1865, with businesses associated with a wood products economy. Since this time, the industry has played a major role in the community. The historic district features many of the community's commercial structures, which reflect commercial development from the late nineteenth century to the mid-twentieth century.
- *Waterford Borough Historic District, Waterford, PA*
The Borough of Waterford's Historic District features building constructed between 1820 and 1939 in a variety of styles. The district includes High and Walnut Streets, as well as First through Third Streets.
- *West 21st St. Historic District, Erie, PA*
The West 21st St. Historic District covers portions of 21st and Sassafras Streets in Erie, PA. This district features many late nineteenth and early twentieth century residential structures. These homes feature a variety of styles such as Italianate, Queen Anne, Romanesque, and Victorian.
- *West Sixth Street Historic District, Erie, PA*
The historic district includes areas along West Sixth Street between Poplar and Peach Streets. The district is also known as "Millionaires Row" due to the elaborate mansions that line the street. The homes within the district highlight the lifestyles of Erie's wealthy residents during the nineteenth century. The Watson-Curtze Mansion, home of the Erie County Historical Society, is situated within the West Sixth Street Historic District.
- *Academy Hall, Edinboro University*
Academy Hall was originally constructed in 1857. Originally named Austin Hall, it was the first building constructed as part of Edinboro Academy. It is currently located on the campus of Edinboro University. Academy Hall is Pennsylvania's oldest surviving Normal School building.
- *Boston Store, Erie, PA*
For a significant period of time during the nineteenth century, the Boston Store was Erie's largest department store and situated prominently in Erie's commercial core. The original portion of the structure was constructed in 1931.

- *Cashier's House and Coach House, Erie, PA*
The Cashier's House was named for its original tenant (circa 1839) Peter Benson, then the Chief Financial Officer of the Erie's branch of the Second Bank of the United States. The Greek revival structure was designed by William Kelly, an architect from Philadelphia. The Cashier's House and Coach House were built as part of a three building group. The third structure is included on the NRHP as the "Old Customs House."
- *Corry Armory, Corry, PA*
The Armory was built in 1906 to house a battalion of the Pennsylvania National Guard. The structure was designed by Corry resident A.P. Mount and his son.
- *Dickson Tavern, Erie, PA*
The structure commonly known as Dickson Tavern is believed to be the oldest building in the City of Erie. It recently underwent a major renovation spurred by a private developer.
- *Eagle Hotel, Waterford, PA*
The Eagle Hotel was built in 1826 using locally quarried stone. The stagecoach between Erie and Pittsburgh utilized the Eagle Hotel as its office. The structure now houses a restaurant.
- *Erie Armory, Erie, PA*
The Armory was built in 1920 to house several units of the Pennsylvania National Guard. A second portion of the structure was completed in 1929. The structure was designed by the Wilkins Company of Pittsburgh, a company famous for designing many armories throughout western Pennsylvania.
- *Erie Federal Courthouse and Post Office, Erie, PA*
The structure was built in 1937 and designed to accommodate the U.S. District Court and offices, as well as a U.S. Post Office. The building was designed in a modified classic design by Rudolph Stanley-Brown.
- *Erie Land Lighthouse, Erie, PA*
The Erie Land Lighthouse, built in 1818, is one of the first light stations established on Lake Erie. The tower was reconstructed and renovated several times throughout its existence. It was most recently renovated in 2004.
- *Erie Trust Company Building, Erie, PA*
This building was constructed in 1925 at a prominent location in downtown Erie. It was and remains Erie's tallest building. The structure remains in much the same appearance and condition as it did when it was constructed.
- *Hamot, Pierre S. V., House, Erie, PA*
Pierre Hamot was a successful French businessman that was very active in Erie. His home, located at 302 French Street, was constructed circa 1827 after his previous home burned down. The house on French Street has been restored and is home to the Hamot Second Century Foundation.
- *Harrington Covered Bridge, Albion, PA*
The Harrington Covered Bridge, located in Conneaut Township, was constructed in 1870 and is one of three covered bridges in Erie County.
- *John Hill House, Erie, PA*

The John Hill House, built circa 1836, is demonstrative of the Italian Villa style of home occupied by many of Erie's late nineteenth century wealthy families.

- *Koehler, Jackson Eagle Brewery, Erie, PA*
Constructed in 1891, the Eagle Brewery is significant as it represents the brewing industry in Erie during the late nineteenth and early twentieth centuries. The brewery closed in 1978.
- *Lovell Manufacturing Company, Erie, PA*
Lovell Manufacturing is the largest and most complete factory from this time period in Erie. The site's many structures were built at various times from 1883 to 1946.
- *Main Library, Erie, PA*
The Main Library is one of Erie's few remaining public buildings from the period circa 1880. The designer, Alden and Harlow was also commissioned to design the original Carnegie Library in Pittsburgh. The Main Library is part of the Federal Courthouse.
- *Modern Tool Company, Erie, PA*
The Modern Tool Company, originally constructed in 1895, is industrially significant within the region. It is also the region's only surviving public market house. The Modern Tool Plant was also the largest tool-and-die plant in Erie in the early twentieth century.
- *Nicholson House and Inn*
This Erie County Inn was constructed in 1827 and is exemplary of the stagecoach inns, of that time period, within the region.
- *Old Customhouse, Erie, PA*
The Old Customhouse, a Greek revival style structure, was originally constructed in 1839 and housed the Erie Branch of the United States Bank of Pennsylvania. Since this time, it has accommodated many other tenants. Among these are a Post Office, Customs House, and offices of the Erie County Historical Society.
- *Park Dinor, Lawrence Park, PA*
The Park Dinor is one of the few surviving twentieth century diners remaining in the region. The Park Dinor began operation in 1948 and is a streamlined prefabricated structure.
- *Chandlery Corner, Erie, PA*
The site, known as Chandlery Corner, is the home to Erie's original candle and soap maker's plant and store. The business evolved as demand for other goods became apparent. The first of the significant structures within Chandlery Corner was constructed in 1832.
- *Reed, Charles Manning, Mansion, Erie, PA*
Constructed in 1849, this Greek revival style mansion was home to Charles Reed, one of Erie's earliest residents and business leaders. The home received many accolades within a variety of architectural publications and other venues.
- *Short's Hotel, North East Borough, PA*
Short's Hotel, also known as the Palace Hotel, was constructed in 1877 and spurred economic development within North East Borough. Short's Hotel was one block from North East's train depot. Short's other business ventures surrounded the hotel and included manufacturing uses, a barbershop, and pool room, as well as an opera house.

- *Sturgeon House, Fairview, PA*
The Sturgeon House, built circa 1838, is architecturally rare in northwestern PA. The structure features a federal style molded cornice and front door frame, as well as a salt box type roof and recessed porch.
- *Thayer-Thompson Home, Erie, PA*
The Thayer-Thompson Home was constructed in 1861 and was home to several prominent Erie businessmen. The house is considered a well-preserved example of an Italianate mansion.
- *U.S.S. Niagara, Erie, PA*
The U.S.S. Niagara, also known as the Flagship Niagara, was one of six U.S. Navy ships built in Erie in 1813. It was the largest of a fleet of nine ships that fought the British Naval Force in Lake Erie in 1813.
- *Villa Maria Academy, Erie, PA*
The structures comprising the Villa Maria Academy were constructed from 1892 to 1927. The Academy was the first all girls school in Erie and the first college for women in northwestern Pennsylvania.
- *Warner Theater, Erie, PA*
The Warner Theater was constructed in 1930 as a venue for both live performances and motion pictures. It functioned as an entertainment node for the City. The theater was designed by Rapp and Rapp from Chicago, IL, a firm associated with significant movie theater design across the country.
- *Waterford Covered Bridge, Waterford, PA*
The Waterford Covered Bridge crosses LeBoeuf Creek, in Waterford Township. The bridge was constructed in 1875 and is one of three covered bridges in Erie County.
- *Watson-Curtze Mansion, Erie, PA*
The Watson-Curtze Mansion is situated within the West Sixth Street Historic District of the City of Erie. The mansion is named for H.F. Watson and F.F. Curtze, a paper maker and banker respectively. The structure is a shining example of Richardsonian Romanesque architecture. Currently, the mansion houses the Erie County Historical Society.
- *West Park Place, Erie, PA*
West Park Place is bounded by N. Park Row, Peach, 5th, and State Streets in Erie, PA. West Park Place is a typical mid-nineteenth century business complex. Twelve of the thirteen original structures, built between 1857 and 1865, remain standing today. This area was at the center of commercial prosperity in the late nineteenth century.

Erie County's NRHP districts and sites are shown on:

Map: Cultural and Historic Resources Inventory

Pennsylvania Historical and Museum Commission (PHMC) Historic Markers

The PHMC has created and maintains a network of over 2,000 historic markers throughout the Commonwealth to promote knowledge and recollection of historically significant people, places, and events. These markers exhibit a common design featuring gold text on a blue metal pole and sign. The text provides a brief description of the location, person, or event. Currently, the PHMC has placed approximately forty nine of these markers in Erie County.

U.S. Route 6 – Scenic Highway

Pennsylvania's Route 6 covers over 400 miles within northern Pennsylvania. Route 6 stretches beyond Pennsylvania's borders both east and west and continues on to our country's Atlantic and Pacific coasts. Route 6 enters Erie County from the south near Mill Village where it turns east to pass through Union City, Elgin, and Corry before entering Warren County. Another segment of the scenic byway is also present in the County. Route 6N begins near Erie County's western border at its intersection with U.S. Route 20. From this point Route 6N generally travels east through Albion and Edinboro before it links up with the other segment of Route 6 near Mill Village.

U.S. Route 6 in Erie County is shown on:

Map: Cultural and Historic Resources Inventory

Washington's Trail

Washington's Trail is a historic and scenic driving route commemorating George Washington's first military and diplomatic journey in 1753 and 1754. In Erie County, the trail extends south from Waterford to Cambridge Springs along U.S. 19.

Washington's Trail in Erie County is shown on:

Map: Cultural and Historic Resources Inventory

Seaway Trail

The Seaway Trail, in Erie County, is a combination recreational (bike) trail and Pennsylvania Scenic Byway. The trail follows sixty four miles of PA Route 5 and is an extension of the Seaway Trail of New York. The trail begins at the County's western border and extends to its eastern border, following Route 5. The trail passes through the City of Erie and its Millionaire's Row, also known as the West Sixth Street Historic District, and the Federal Row Historic District. Throughout the trail, Route 5 travels parallel to Lake Erie and provides extraordinary views of the lakeshore.

The Seaway Trail in Erie County is shown on:

Map: Cultural and Historic Resources Inventory

Bayfront Seaway Trail

Within the City of Erie, the Seaway Trail includes a spur that accesses Erie's bayfront area. The Bayfront Seaway Trail is a multi-use bikeway trail that runs almost directly along the Port of Erie's waterfront.

The Bayfront Seaway Trail in Erie County is shown on:

Map: Cultural and Historic Resources Inventory

National Natural Landmarks

Administered by the National Parks Service (NPS), the National Natural Landmarks (NNL) Program promotes conservation of natural features that significantly contribute to the country's history. Throughout the country, less than six hundred (600) NNLs have been designated. NNLs can be publicly or privately owner. The NPS supports private and public owners with management and conservation of the sites. Erie County's NNLs include: Presque Isle State Park and the Titus and Wattsburg Bogs.

National Natural Landmarks in Erie County are shown on:

Map: Cultural and Historic Resources Inventory

Cultural Destinations

An array of cultural sites in Erie County was inventoried, including schools, interpretive centers, community centers, museums, and public facilities. Because of the abundance of cultural destinations, only the ones with regional significance are relevant to the NWPA Greenways Plan. These cultural destinations are:

- Erie Zoo & Botanical Gardens, Erie
- Erie Bayfront, Erie
- Presque Isle Downs Casino & Race Track, Erie
- Tom Ridge Environmental Center, Erie
- Splash Lagoon Indoor Waterpark Resort, Summit Township
- Waldameer Park & Water World, Erie
- Great Lakes Wine Region, North East
- Pennsylvania Scenic Route 6
- Seaway Trail, Lake Erie Shore
- Union City Museum & Historical Society, Union City
- Hazel Kibler Memorial Museum, Girard
- Goodell Gardens & Homestead, Waterford
- Erie Land Lighthouse, Erie

Erie County also has four colleges with campus facilities. They are:

- Mercyhurst College, Erie
- Gannon University, Erie
- Penn State Behrend, Harborcreek
- Edinboro University, Edinboro

Population Centers and Destinations

Erie County has thirty-eight incorporated municipalities: two cities, fourteen boroughs, and twenty-two townships. The following table lists the ten largest municipalities in terms of population, based on 2006 population estimates from the U.S. Census Bureau.

Ten Largest Municipalities (Population 2006)	
Municipality	Total Population (2006)*
Erie City	102,036
Millcreek Township	52,541
Harborcreek Township	17,027
Fairview Township	10,033
North East Township	6,700
Edinboro Borough	6,682
Corry City	6,496
Summit Township	6,162
Girard Township	5,257
Greene Township	4,785

**Source: U.S. Census Bureau 2006 Population Estimates*

A large portion of Erie County's population resides within the communities along Lake Erie, extending both east and west from the city of Erie. Eight of the ten largest municipalities, based on population, listed above are situated within this area of the County. Only Edinboro Borough, 6th largest, and the City of Corry, 7th largest, are found beyond the County's lakeshore area. These communities are both situated along the Route 6 corridor.

While large numbers of residents call the City of Erie's surrounding communities home, these residents are spread over a large geographic area. Several distinct population centers are overlooked by the analysis of total population simply due to the smaller geographic size of these communities. In order to determine where the highest concentrations of Erie County residents are located, the population density of each municipality was examined. The impact of population density on greenways is significant. Creating greenways that serve densely populated areas generally requires a smaller area to serve a large segment of potential users. Greenways will generally require longer segments to serve the same population in a less densely populated portion of a community. The following table lists the municipalities with the highest population density, in 2006, based on U.S. Census Bureau population estimates.

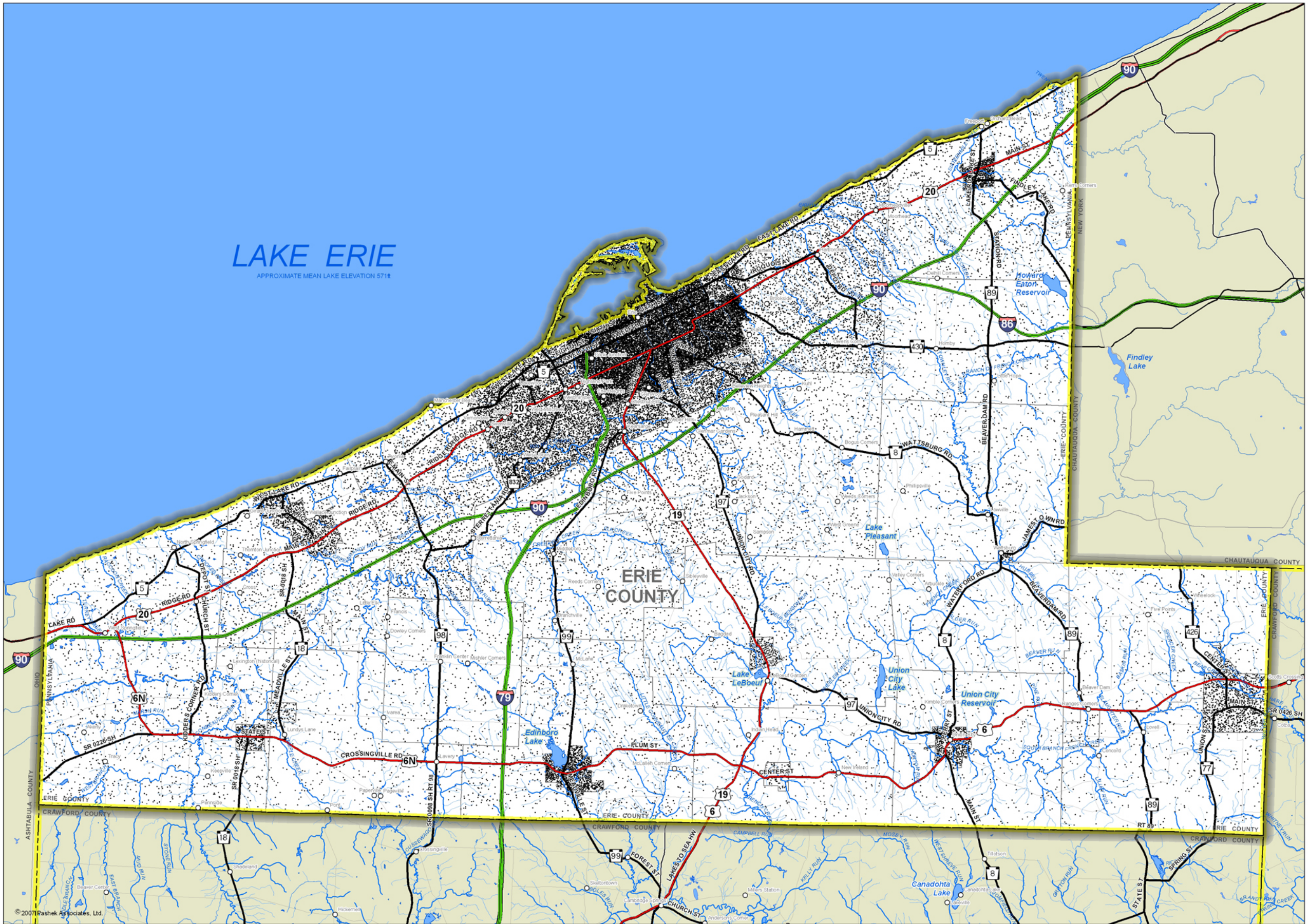
The most densely populated portions of Erie County are found within the City of Erie and its immediate surroundings or along major transportation corridors. A large portion of the County's overall population is centered in Erie City itself. However, Erie is second to Wesleyville Borough in population density. Wesleyville is immediately adjacent to the City of Erie's eastern border along U.S. Highway 20. Several of the townships that border the City are also densely populated including Lawrence Park Township and Millcreek Township. Most of the other densely populated communities in the County are situated along major transportation routes. Girard Borough and North East Borough are located along U.S. Highway 20 southwest and northeast of the City of Erie, respectively. Albion Borough, Edinboro Borough, and Union City Borough are each located along the Route 6 Corridor in southern Erie County.

Ten Most-Densely Populated Municipalities

Municipality	Total Population (2006)*	Population per Square Mile (2006)
Wesleyville Borough	3,413	6,228
Erie City	102,036	5,326
North East Borough	4,302	3,402
Edinboro Borough	6,682	2,744
Lawrence Park Township	3,809	2,082
Union City Borough	3,361	1,848
Millcreek Township	52,541	1,657
Lake City Borough	2,963	1,648
Albion Borough	1,548	1,420
Girard Borough	3,011	1,309

**Source: U.S. Census Bureau 2006 Population Estimates*

The following map illustrates the population density within Erie County.

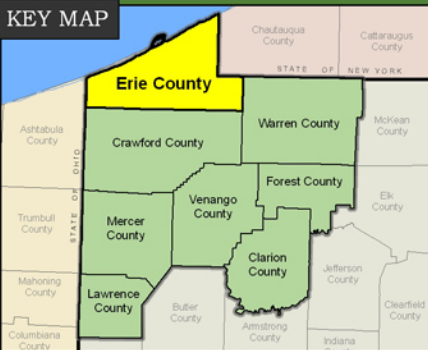


Northwest Pennsylvania Greenways Plan

for

- | | |
|--------------------|-----------------|
| Clarion County | Lawrence County |
| Crawford County | Mercer County |
| Erie County | Venango County |
| Forest County | Warren County |

KEY MAP



LEGEND

- State Boundary
- County Boundary
- Lake / Reservoir
- River
- Stream
- Interstate
- PA State Route
- US Highway

Population Density

1 dot = 5 people

Based on 2006 Population Estimates
from the U.S. Census Bureau
www.census.gov

Data Source:
ESRI 2005 Street Map USA Data
US Geologic Survey (USGS)
Pennsylvania Spatial Data Access (PASDA)
Pennsylvania Department of Transportation (PennDOT)
Department of Conservation and Natural Resources (DCNR)
Western Pennsylvania Conservancy (WPC)
Federal Emergency Management Agency (FEMA)
US Army Corps of Engineers - National Wetland Inventory (NWI)
Natural Resources Conservation Service (NRCS) - Soil Data Mart
Pennsylvania Department of Environmental Protection (DEP)

Pashek Associates
makes no claims to
the accuracy of
this data.

Projection: State Plane - NAD 1983
Pennsylvania South Feet



Population Density

PASHEK
ASSOCIATES
a pennsylvania corporation

Erie County

Population Trends

Erie County increased in population approximately 1.54% between 1990 and 2006. According to the U.S. Census Bureau, there were approximately 279,811 residents within the County in 2006. 20 of the County's 39 municipalities contributed positively to this population growth. However, the growth was concentrated in three townships. Millcreek, Harborcreek, and Conneaut Townships increased by 5,721, 1,919, and 2,134 residents between 1990 and 2006. However, this population growth was somewhat offset by the remaining 19 municipalities in the County, such as the City of Erie and Edinboro Borough that lost population over the same time period. Erie lost 6,682 residents, while Edinboro lost 1,054 from 1990 to 2006. Detailed figures highlighting the population of Erie County municipalities between 1990 and 2006 are included in the following table.

*note: due to the unique situation regarding Fairview Borough and Fairview Township, these communities were not discussed relative to their contributions to population gain and loss within Erie County between 1990 and 2006. Fairview Borough became part of Fairview Township in 1998.

Population Trends of Erie County Municipalities

	Population		
	1990	2000	2006*
Erie County	275,572	280,843	279,811
Erie City	108,718	103,717	102,036
Millcreek Township	46,820	52,129	52,541
Harborcreek Township	15,108	15,178	17,027
Fairview Township	7,839	10,140	10,033
North East Township	6,283	7,702	6,700
Edinboro Borough	7,736	6,950	6,682
Corry City	7,216	6,834	6,496
Summit Township	5,284	5,529	6,162
Girard Township	4,722	5,133	5,257
Greene Township	4,959	4,768	4,785
Washington Township	4,102	4,526	4,596
McKean Township	4,503	4,619	4,551
North East Borough	4,617	4,601	4,302
Conneaut Township	1,938	3,908	4,072
Waterford Township	3,402	3,878	3,919
Lawrence Park Township	4,310	4,048	3,809
Wesleyville Borough	3,655	3,617	3,413
Union City Borough	3,537	3,463	3,361
Springfield Township	3,218	3,378	3,299
Girard Borough	2,879	3,164	3,011
Lake City Borough	2,519	2,811	2,963
Venango Township	2,235	2,277	2,334
Greenfield Township	1,770	1,909	1,984
Elk Creek Township	1,738	1,800	1,803
Wayne Township	1,679	1,766	1,781
Franklin Township	1,429	1,609	1,674
LeBoeuf Township	1,521	1,680	1,663
Union Township	1,735	1,663	1,649
Albion Borough	1,575	1,607	1,548
Waterford Borough	1,492	1,449	1,458
Concord Township	1,384	1,361	1,355
Amity Township	1,034	1,140	1,156
Cranesville Borough	598	600	590
Platea Borough	467	474	453
Mill Village Borough	429	412	397
McKean Borough	418	389	366
Wattsburg Borough	486	378	355
Elgin Borough	229	236	230
Fairview Borough	1,988	0	0

*Source: U.S. Census Bureau 2006 Population Estimates

CHAPTER TWO

WHERE DO WE WANT TO BE?

- The Greenways Vision

CHAPTER TWO – WHERE DO WE WANT TO BE?

CREATING THE VISION: DESIGNING A GREENWAYS NETWORK

THE CRITERIA

Greenways can serve many functions with regional and local impact. When determining the guiding principles used to designate greenways for Erie County, we considered the objectives established in the early part of the planning process. The following goals and objectives offer insight into the function of the greenways to be developed in the County:

Preserving and enhancing Erie County's character and quality of life is the main goal of the Greenways Plan, and these specific objectives support this main goal:

- Protect existing natural areas primarily for ecological health and preservation of wildlife habitat;
- Provide recreation opportunities for County residents through preservation and connection of existing open spaces;
- Promote economic growth via recreational or eco-tourism;
- Encourage local municipalities to work in unison to help protect their various resources by adopting open-space and land-use regulations;
- Educate County residents on the aspects and benefits of Greenways Planning, including the benefits of implementation of the goals listed above.

These goals and objectives support the two general functions that define proposed Greenways in Erie County:

- 1) Natural Systems Greenways are corridors whose primary function is preservation of unique Natural Infrastructure including habitats, such as wetlands; steep slopes; floodplains; and exceptional value water-quality streams; high-value natural areas identified by the County Natural Heritage Inventory; Interior Forests; Important Bird Areas; and Important Mammal Areas. They are linear tracts of essentially undeveloped open space. Some low impact activity, like hiking or wildlife observation, is acceptable in these corridors, but intense development and motorized vehicle use are not recommended.
- 2) Recreation and Transportation Greenways are corridors in which trail development is recommended, or trails already exist. These greenways connect population centers and points of interest. They bring people in contact with the outdoors and engender an appreciation of the natural world. These trails also provide alternative, environmentally-friendly transportation opportunity for commuters and visitors. In some cases, recreational trails overlay areas where conservation of natural assets is also an objective. To avoid conflicts, recreational uses should be planned to minimize impacts. For example, a biking trail along a river or stream corridor should be designed to conserve steep slopes, wetlands, and other sensitive areas.

THE STRUCTURE OF THE NETWORK

Building the framework of the greenway network began with laying out the Natural Systems Greenways. These corridors follow the existing natural features within the county, such as: forests, ridgelines, significant stream corridors, and wildlife habitats. Overlaying this Natural Systems backdrop, the plan adopts a “hubs and spokes” structure for its recreational and transportation greenways. Pennsylvania’s Plan entitled *Pennsylvania Greenways: An Action Plan for Creating Connections* describes the product of this overlay method as follows:

Pennsylvania’s greenways network will ultimately take the form of “hubs and spokes.” The “hubs” of this network will be the state’s parks, forests, game lands, lakes, and other destinations areas, including our towns. The “spokes” of the network will be greenways – connecting our natural areas and recreational and cultural destinations with the places where we live. The landscape connections that will result throughout Pennsylvania will create a “green infrastructure” of open space vital to the health of Pennsylvania’s ecological systems and human communities.

The “hubs,” sometimes called nodes, are the significant destination points – trail towns and important recreation areas. The spokes or corridors will provide the links between them. In some areas, natural systems corridors are distinct from recreation and transportation greenways; in other cases, they coincide. Finally, because streams, mountain ridges, wildlife habitats, state parks, and many recreation and transportation greenways do not terminate at the County’s boundaries, the greenways network proposes that recreation and transportation corridors continue outward and form connections to natural and recreational assets in neighboring counties and states.

It should also be noted that any plan to develop greenways will encounter some obstacles, such as incompatible land uses, environmental constraints, and unwilling private and public land owners. These issues should not prevent the County from creating its vision of a greenway network. Conflicts can be addressed at a later time, when segments of the plan proceed to design and implementation at the local level.

Natural Systems Greenways

The process of developing the Natural Systems Greenways network utilized a green infrastructure approach in identifying the building blocks which contribute to the region’s well-being, and, identified strategies to assure these resources are available to provide their valuable functions for future generations of Erie County residents. The process of establishing this network in Erie County will not take away the rights of property owners, nor will it restrict development in the region. Instead, Natural Systems Greenways will promote sustainable development, lower development costs, and reduce the burden of providing public services on local, county, and state governments.

Green infrastructure can be defined as an interconnected network of natural areas and other open space that helps conserve natural ecosystem values and functions, sustains clean air and water, and provides a variety of benefits to people and wildlife. Many people see open space as areas that are not yet developed and green space as land conserved for parks or natural areas. This plan promotes the development of Natural Systems Greenways within existing open space and green space networks.


The way that this plan will differ from conventional approaches to land conservation and natural resource protection is that it will look at conservation in harmony with development. This approach will help communities develop with minimal stress on the sensitive environmental resources in their area.

Erie County Greenways Plan

The inventory of natural and ecological infrastructure enables planners to generate the building blocks of the proposed Natural Systems Greenway. Understanding the natural resources of Erie County, is fundamental to developing a Greenways Plan.

The Natural Systems Greenway network was established using a system of weighted values given to the building blocks that are identified in the natural and ecological infrastructure inventories. The project study committee, with the help of Pashek Associates, assigned values to these building blocks based on their county-wide significance. Each building block was then mapped individually, and all natural resources were overlaid onto each other and depicted on the Natural Systems Building Blocks map. When more than one building block overlapped, their respective values were added together creating a cumulative value. Areas with the highest total values included the most building blocks, and thus merited inclusion in the conservation greenways network.

Weighted values given to the county's various building blocks are shown in the table below:

Ranking Criteria	<div style="display: flex; justify-content: space-between; align-items: center;"> Less Important  More Important </div>									
	1	2	3	4	5	6	7	8	9	10
Biological Diversity Area - No Activity										
Biological Diversity Area - Nature Observation										
Biological Diversity Area - Passive Recreation										
Wetland										
Slopes > 25%										
Biological Diversity Area - Active Recreation										
Floodplain										
Exceptional Value Stream										
Landscape Conservation Area - No Activity										
National Wildlife Refuge										
Landscape Conservation Area - Nature Observation										
High Quality Cold Water Fishery										
National Forest										
State Forest										
State Game Land										
Steelhead Streams										
Landscape Conservation Area - Passive Recreation										
Landscape Conservation Area - Active Recreation										
State Park										
Supporting Natural Landscape										
Interior Forest										
Exceptional Value Watershed										
Hydric Soils										
Important Bird Area										
Important Mammal Area										
Other Managed Land										
County Park										

This criterion describes the scientific side of identifying the important natural systems corridors. To develop feasible Natural Systems Greenways, common sense must also be applied. In some instances, areas receiving a cumulative value less than the stated minimum were included in the network. These areas are necessary for creating logical connections between natural systems corridors in close proximity to one another to ensure continuity of proposed Natural Systems Greenways.

NATURAL SYSTEMS GREENWAYS DESCRIPTIONS, PRIORITIES & SENSITIVITY LEVEL

Using the green infrastructure approach, the project study committee, with the help of Pashek Associates, identified twenty-four Natural Systems Greenway corridors throughout Erie County.

To establish a priority level for these proposed Natural Systems Greenways, the cumulative values calculated as part of the corridor selection method above were utilized to determine the most sensitive greenways. This priority selection process was accomplished through separating each value assigned to lands, within the corridor, into its own class. These classes were then totaled and divided by the number of classes, resulting in a weighted value for each greenway corridor. This weighted value was then used to rank greenways based on the amount and importance of the sensitive resources within each corridor. Regardless of the priority, the conservation of all of the corridors is important and necessary.

The greenway corridors were also analyzed for their inclusion of existing development, or urban areas, and for existing protected lands. Protected lands included any state parks, forests, or game lands; county parks; and other lands managed for conservation purposes. The table below describes the total acreage of each greenway, the acreage of developed or urban land, the protected acreage, and the remaining acreage susceptible to future development.

Each of these greenway corridors are also broken down by their sensitivity level and designated as having exceptional, high, or moderate value. Exceptional value natural system corridors are those areas receiving a cumulative value greater than twenty-four (24). These corridors contain the most sensitive green infrastructure in Erie County. High value corridors received a cumulative value between eighteen (18) and twenty-four (24), whereas moderate value corridors received a cumulative value between seven (7) and eighteen (18). While all Natural Systems Greenways are important, the sensitivity level ranking allows planners to determine the highest priority areas within each greenway, based on the amount and importance of natural resources contained in the proposed corridor.

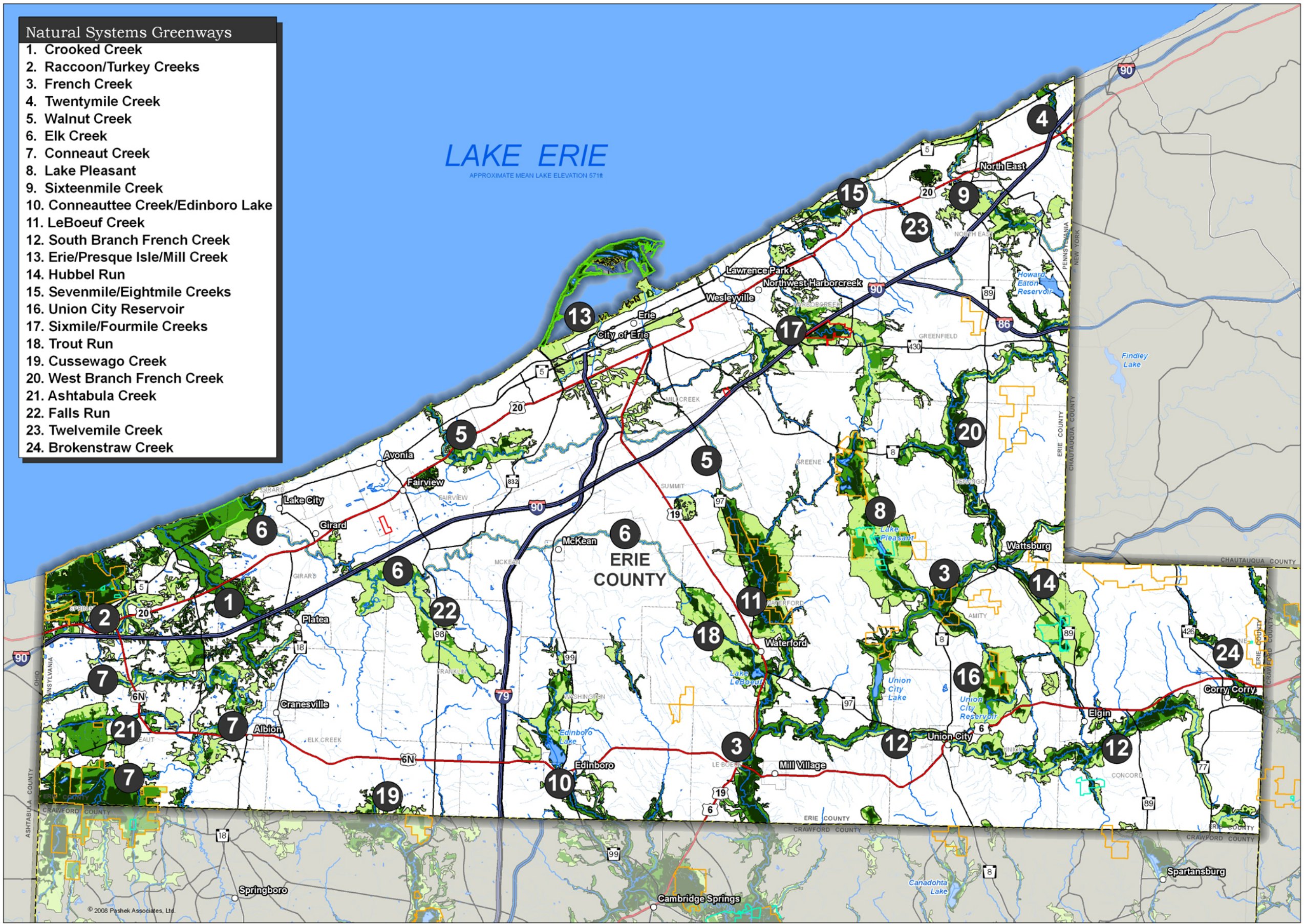
These greenway corridors, as well as the location of exceptional, high, and moderate areas within them, are depicted on the Natural Systems Greenways map. Descriptions of each greenway can be found on the pages thereafter.

Priority	Ranking	Greenway Name	Sensitivity Ranking	Total Acres	Conserved Acres	Percent Conserved	Developed Acres	Percent Developed	(Developed & Not Developed)	Total Not Conserved & Not Developed	Percent Not Conserved and Not Developed	Managed (conserved) Lands
Exceptional	1	Crooked Creek	28.95	7,713	574	7.4%	901	11.7%	48	6,238	80.9%	Erie Bluffs State Park
	2	Raccoon/Turkey Creeks	24.7	7,256	3,000	41.3%	407	5.6%	58	3,849	53.0%	
	3	French Creek	24.3	8,434	604	7.2%	477	5.7%	12	7,353	87.2%	State Game Land No. 167 & 190
	4	Twentymile Creek	24.3	497	0	0.0%	110	22.1%	0	387	77.9%	
	5	Walnut Creek	23.9	2,837	0	0.0%	601	21.2%	0	2,236	78.8%	
	6	Elk Creek	23.5	4,859	0	0.0%	461	9.5%	0	4,398	90.5%	
	7	Conneaut Creek	23.3	10,033	2,707	27.0%	230	2.3%	18	7,096	70.7%	Erie Bluffs State Park, State Game Land No. 101 and privately managed land
	8	Lake Pleasant	22.6	6,947	1,995	28.7%	384	5.5%	97	4,568	65.8%	State Game Land No. 155, 161, 218, Lake Pleasant, and privately managed land
Significant	9	Sixteenmile Creek	22.57	3,751	0	0.0%	840	22.4%	0	2,911	77.6%	
	10	Conneauttee Creek/Edinboro Lake	22.5	4,110	0	0.0%	603	14.7%	0	3,507	85.3%	
	11	LeBoeuf Creek	22	7,038	1,640	23.3%	525	7.5%	21	4,873	69.2%	State Game Land No. 109
	12	South Branch French Creek	21.3	7,448	0	0.0%	627	8.4%	0	6,821	91.6%	
	13	Erie/Presque Isle/Mill Creek	20.7	5,297	1,311	24.7%	3,040	57.4%	175	946	17.9%	Presque Isle State Park, Gull Point Special Management Area, Field House (County/Local Park)
	14	Hubbel Run	20.7	4,095	544	13.3%	127	3.1%	9	3,424	83.6%	Wattsburg Fen Natural Area, Titus Bog, State Game Land No. 167
	15	Sevenmile/Eightmile Creeks	20.2	1,108	0	0.0%	167	15.1%	0	941	84.9%	
	16	Union City Reservoir	19.5	3,425	386	11.3%	137	4.0%	2	2,902	84.7%	State Game Land No. 102
High	17	Sixmile/Fourmile Creeks	19.4	6,793	486	7.2%	978	14.4%	9	5,329	78.4%	Sixmile Creek
	18	Trout Run	19.2	3,820	0	0.0%	460	12.0%	0	3,360	88.0%	
	19	Cussewago Creek	18.9	828	0	0.0%	13	1.6%	0	815	98.4%	
	20	West Branch French Creek	18.9	6,379	0	0.0%	464	7.3%	0	5,915	92.7%	
	21	Ashtabula Creek	18.4	2,592	37	1.4%	112	4.3%	1	2,443	94.3%	State Game Land No. 101
	22	Falls Run	18	2,825	0	0.0%	0	0.0%	0	2,825	100.0%	
	23	Twelvemile Creek	16.5	431	0	0.0%	0	0.0%	0	431	100.0%	
	24	Brokenstraw Creek	15.2	1,277	0	0.0%	95	7.4%	0	1,182	92.6%	
Totals				109,793	13,284	12.1%	11,759		450	84,750	23%	77.2%

Natural Systems Greenways

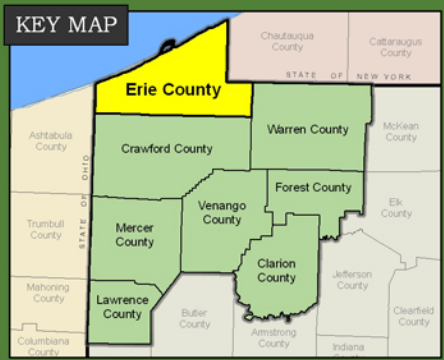
1. Crooked Creek
2. Raccoon/Turkey Creeks
3. French Creek
4. Twentymile Creek
5. Walnut Creek
6. Elk Creek
7. Conneaut Creek
8. Lake Pleasant
9. Sixteenmile Creek
10. Conneauttee Creek/Edinboro Lake
11. LeBoeuf Creek
12. South Branch French Creek
13. Erie/Presque Isle/Mill Creek
14. Hubbel Run
15. Sevenmile/Eightmile Creeks
16. Union City Reservoir
17. Sixmile/Fourmile Creeks
18. Trout Run
19. Cussewago Creek
20. West Branch French Creek
21. Ashtabula Creek
22. Falls Run
23. Twelvemile Creek
24. Brokenstraw Creek

LAKE ERIE
APPROXIMATE MEAN LAKE ELEVATION 571'



Northwest Pennsylvania
Greenways Plan

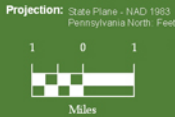
for
Clarion County | Lawrence County
Crawford County | Mercer County
Erie County | Venango County
Forest County | Warren County



LEGEND

- County Boundary
- Municipal Boundary
- Lake
- River / Major Stream
- Tributary
- TRANSPORTATION
 - Interstate
 - PA State Route
 - US Highway
- Managed Land (DCNR Data)
 - State Park
 - County Park
 - State Game Land
 - Other Managed
- NATURAL SYSTEMS SENSITIVITY
 - Exceptional
 - Significant
 - High

Data Source:
ESRI 2005 Data
USGS
PASDA
PennDOT



Natural Systems Greenways

- 1) Crooked Creek Greenway – This corridor is situated along the Erie Lakeshore, in western Erie County, encompassing a portion of Erie Bluffs State Park and running adjacent to Crooked Creek. There is one BDA included within this greenway:

Lake Plain Shoreline BDA is a forest community of state and County significance containing uncommon shoreline habitats that harbor plant species and animal species of special concern.

In addition to protecting the BDA described above, this greenway will also be of benefit in preserving the High Quality Cold Water Fishery status designated along Crooked Creek. Crooked Creek is also a steelhead fishery.

Approximate Size: The total length of the Crooked Creek Greenway corridor is approximately 10 miles. The width varies from just under 1,500 feet near Platea, to over a mile within Erie Bluffs State Park.

The total acreage of this greenway is estimated to be just over 7,700 acres, of which 7.4% is protected within Erie Bluffs State Park. Over 10% of this greenway is designated as developed or urban land.

Associated Municipalities: Springfield and Girard Townships and Lake City Borough.

- 2) Raccoon/Turkey Creeks Greenway – This greenway corridor is situated along the e Erie Lakeshore, in western Erie County, bordering Ohio. Included within this greenway are State Game Land No. 101, several privately managed lands, Roderick Wildlife Preserve Important Bird Area, and three BDA's.

- Campground Savannah BDA is a savannah habitat which supports a plant species of special concern.
- Lake Plain BDA is designated due to its ability to provide habitat for plant species of special concern.
- Lake Plain Wetland BDA also is designated due to its ability to provide habitat for a plant species of special concern.

Approximate Size: The total acreage of this greenway is estimated to be approximately 7,300 acres, of which 41.3 % is protected within State Game Land No. 101 and through privately managed land. Approximately 5.5% of this greenway is designated as developed or urban land.

Associated Municipalities: Springfield Township.

- 3) French Creek Greenway – Situated in south eastern Erie County, this greenway corridor runs adjacent to French Creek encompassing State Game Land No.'s 167, 162, & 190, Union City Lake, and the French Creek BDA.

French Creek BDA contains 49 natural communities of global and/or state significance, plus numerous species of plant and animal species of special concern.

In addition to the unique natural features mentioned above, French Creek Greenway also contains part of Lake Pleasant outlet, which is a High Quality Cold Water Fishery that drains into French Creek.

Approximate Size: The total length of the French Creek Greenway corridor is approximately 21 miles. The width varies from just under 1,500 feet near the New York Stateline, to over a mile and a half near the mouth of Lake Pleasant Outlet.

The total acreage of this greenway is estimated to be just over 8,400 acres, of which 7.2% is protected within State Game Land No.'s 167, 162, and 190. Nearly 6% of this greenway is designated as developed or urban land.

Associated Municipalities: Venango, Amity, Waterford, and LeBoeuf Townships, as well as Mill Village and Wattsburg Boroughs. This greenway also has the potential to connect to Crawford County and to Chautauqua County in the State of New York.

- 4) Twentymile Creek Greenway – Located in the extreme northeastern section of Erie County along the border with the State of New York, this greenway is adjacent to Twentymile Creek and encompasses two BDA's. Twentymile Creek is also a steelhead fishery.

- Twentymile Creek BDA surrounds a calcareous seep community that provides habitat for a plant species of special concern.
- Twentymile Creek Mouth BDA surrounds the creek and lake shore in support of a fish species of special concern and numerous rare plants.

Approximate Size: The total length of the Twentymile Creek Greenway corridor is nearly 3 miles. The width varies from less than 1,000 feet near where the stream passes under Interstate 90, to over a mile near the border of New York.

The total acreage of this greenway is estimated to be just under 500 acres, none of which is currently protected. Over 22% of this greenway is designated as developed or urban land.

Associated Municipalities: North East Township. This greenway also has potential to connect into the state of New York.

- 5) Walnut Creek Greenway – This BDA contains Asbury Woods Nature Center, as well as two BDA's and their Supporting Natural Landscape. Walnut Creek is also a Pennsylvania Fish and Boat Commission Trout Stocked Fishery. Walnut Creek is also a steelhead fishery.

- Walnut Creek Mouth BDA has been designated because the mouth of Walnut Creek provides habitat to several plant species of special concern.
- Walnut Creek Valley BDA contains a forest community and a calcareous seep community of special concern that provides habitat for several plant species of special concern.

Approximate Size: The total acreage of this greenway is estimated to be nearly 2,900 acres. Approximately 2.5% of this greenway is designated as developed or urban land.

Associated Municipalities: Fairview, Millcreek, and Summit Townships.

- 6) Elk Creek Greenway – Located in west central Erie County, Elk Creek Greenway runs adjacent to parts of Elk Creek, Little Elk Creek, Brandy Run, and Falls Run. This greenway contains a portion of Erie Bluffs State Park and one BDA. Elk Creek is also a steelhead fishery.

- Devils Backbone BDA surrounds a stream valley that contains a rare forest community, which is also uncommon federally, as well as rare habitats and a high quality stream community, all of which also have the ability to support a plant species of special concern.

Approximate Size: The total length of the Elk Creek Greenway corridor is approximately 9 miles. The width varies from less than 500 feet near the mouth of Brandy Run at Elk Creek, to around 7,000 feet surrounding portions of Falls Run and Little Elk Creek.

The total acreage of this greenway is estimated to be over 4,800 acres, none of which is currently protected. Approximately 8.3% of this greenway is designated as developed or urban land.

Associated Municipalities: Fairview, McKean, Waterford, and Girard Townships as well as Girard, McKean, and Lake City Boroughs.

- 7) Conneaut Creek Greenway – Located in western Erie County, this greenway corridor is found adjacent to Conneaut Creek and the West Branch of Conneaut Creek and also contains State Game Land No. 101, as well as three BDA's.

- Upper Conneaut Creek BDA is habitat for a plant species of special concern.
- Stoker Road Swamp Forest BDA contains a swamp forest habitat that supports a plant species of special concern.
- Conneaut Creek Floodplain BDA encompasses floodplain wetlands which provide habitat for two plant species of special concern.

Approximate Size: The total acreage of this greenway is estimated to be just over 10,000 acres, of which 27% is protected within State Game Land No.101, as well as within some privately managed lands. Approximately 2.5% of this greenway is designated as developed or urban land.

Associated Municipalities: Conneaut and Springfield Townships, as well as Albion Borough. This greenway also has the potential to connect to Crawford County and to Ashtabula County in the State of Ohio.

- 8) Lake Pleasant Greenway – This corridor is located in eastern Erie County surrounding Lake Pleasant, its source, and Lake Pleasant Outlet. Lake Pleasant Outlet is a designated High Quality Cold Water Fishery. Additionally, the entire greenway encompasses part of the French Creek BDA.

Approximate Size: The total length of the Lake Pleasant Greenway corridor is nearly 8 miles. The width varies from just under 2,000 feet near the mouth of Lake Pleasant Outlet at French Creek, to over two miles surrounding Lake Pleasant.

The total acreage of this greenway is estimated to be nearly 7,000 acres, of which 28.7% is protected within State Game Land No.'s 155, 161, & 218, as well as through privately managed land around Lake Pleasant. Approximately 5.5% of this greenway is designated as developed or urban land.

Associated Municipalities: Venango, Amity, Waterford, and Greene Townships.

- 9) Sixteenmile Creek Greenway – Situated in northeastern Erie County near the border with New York, this greenway runs adjacent to Sixteenmile Creek and encompasses five BDA's.
- Sixteenmile Creek Gorge BDA is a recovering natural area that includes a high gradient stream and a northern hardwood forest with mature and old growth stands.
 - North East Lake Bluff BDA supports a lake bluff habitat of unusual quality containing a rare habitat that harbors plant species of special concern.
 - Orchard Beach Road Grasslands BDA is an area of open habitats that support an animal species of special concern.
 - Sixteenmile Creek BDA encompasses the floodplain of Sixteenmile Creek due to its ability to support a plant species of special concern.
 - Lake Plain Forested Wetland BDA contains a variety of coastal shoreline habitats that retain their natural character.

Sixteenmile Creek is also a steelhead fishery.

Approximate Size: The total length of the Sixteenmile Creek Greenway corridor is nearly seven miles. The width varies from less than 500 feet in some places, to approximately two miles along Lake Erie shoreline and just south of Interstate 90.

The total acreage of this greenway is estimated to be over 3,700 acres, none of which is currently protected. Approximately 23% of this greenway is designated as developed or urban land.

Associated Municipalities: North East Borough and North East Township.

- 10) Conneauttee Creek/Edinboro Lake Greenway – This greenway is situated in south central Erie County around Edinboro Lake and adjacent to Conneauttee Creek. The lake is a PFBC Trout Stocked Waterway. Additionally, the entire corridor contains part of the French Creek BDA.

Approximate Size: The total length of the Conneauttee Creek/Edinboro Lake Greenway corridor is over 8 miles. The width varies from less than 500 feet along Conneauttee Creek in Edinboro, to over a mile in some places surrounding Edinboro Lake.

The total acreage of this greenway is estimated to be more than 4,000 acres, none of which is currently protected. Nearly 15% of this greenway is designated as developed or urban land.

Associated Municipalities: Washington Township and Edinboro Borough. This greenway also has potential to connect into Crawford County.

11) LeBoeuf Creek Greenway

Approximate Size: The total length of the main stem of the LeBoeuf Creek Greenway corridor is over 8 miles. The width varies from less than 2,000 feet near the stream's mouth at French Creek, to over two and a half miles near the confluence of LeBoeuf Creek and East Branch LeBoeuf Creek.

The total acreage of this greenway is estimated to be more than 7,000 acres, of which 23.3% is currently protected in State Game Land No. 109. Approximately 7.5% of this greenway is designated as developed or urban land.

Associated Municipalities: Summit, Greene, LeBoeuf, and Waterford Townships and Waterford Borough.

12) South Branch French Creek Greenway – Running adjacent to South Branch French Creek, this greenway corridor encompasses parts of the French Creek BDA, as well as one other BDA.

- Whitney Run Headwaters Wetlands BDA contains two plant species of special concern within a wetland and bog area.

Approximate Size: The total length of the South Branch French Creek Greenway corridor is nearly 24 miles. The width varies from less than 1,000 feet in some places through Union City, to nearly a mile near the City of Corry.

The total acreage of this greenway is estimated to be nearly 7,500 acres, none of which is currently protected. Over 8% of this greenway is designated as developed or urban land.

Associated Municipalities: LeBoeuf, Union, Concord, and Wayne Townships, as well as Elgin and Union City Boroughs and a small portion of the City of Corry. This greenway also has potential to connect into Crawford and Warren Counties.

13) Erie/Presque Isle/Mill Creek Greenway – This greenway is situated adjacent to Mill Creek, Cascade Creek, and West Branch Cascade Creek. Included within this greenway is the Erie Bayfront, Presque Isle State Park, Presque Isle State Park IBA, Presque Isle Bay, and one BDA.

- Presque Isle BDA has inter-related natural communities, such as lake littoral zone, embayment, and shoreline habitats that are of special concern within the state and at the federal level. These communities provide habitat for an estimated sixty-three (63) species of special concern, as well as other significant species.

Approximate Size: The total acreage of this greenway is estimated to be nearly 5,300 acres, of which nearly 25% is currently protected within Presque Isle State Park. Approximately 53% of this greenway is designated as developed or urban land.

Associated Municipalities: City of Erie and Millcreek Township.

- 14) Hubbel Run Greenway – This corridor is located in southeastern Erie County, near the New York border, adjacent to Hubbel Run. The upper segment of Hubbel Run is designated as a High Quality Cold Water Fishery. Additionally, this greenway contains Titus Bog and Wattsburg Fen Natural Area and portions of State Game Land No. 167. There is also one BDA associated with this greenway.

- Hubbel Run BDA was designated because the upper reaches of Hubbel Run contain natural communities and species of special concern that are of global and/or state significance.

Approximate Size: The total length of the Hubbel Run Greenway corridor is over 5 miles. The width varies from less than 500 feet near the mouth of the creek at French Creek, to nearly two miles surrounding the Natural Areas.

The total acreage of this greenway is estimated to be over 4,000 acres, of which approximately 13% is currently protected. Approximately 3% of this greenway is designated as developed or urban land.

Associated Municipalities: Amity and Wayne Townships.

- 15) Sevenmile/Eightmile Creeks Greenway – Situated in northeastern Erie County, this greenway corridor is found adjacent to the lower reaches of Sevenmile and Eightmile Creeks, as well as Scott and Elliot Runs. Also contained within this greenway is Shades Beach Park, as well as one BDA.

- Eightmile Creek Gorge BDA contains a forest community of County and State significance bordered by a rare shoreline habitat that harbors plant species of special concern.

Approximate Size: The total acreage of this greenway is estimated to be just over 1,100 acres, none of which is currently protected. Approximately 15% of this greenway is designated as developed or urban land.

Associated Municipalities: Harborcreek Township.

- 16) Union City Reservoir Greenway – This greenway is located in southeastern Erie County surrounding the Union City Reservoir and containing all of State Game Land No. 102. Additionally, this greenway contains parts of Alder and Bentley Runs, as well as one BDA.

- Bentley Run/Alder Run BDA is a highly diverse area that contains natural communities of global or state significance. These communities provide habitat for several plant species of special concern.

Approximate Size: The total acreage of this greenway is estimated to be nearly 3,500 acres; of which 11.3% is currently protected within State Game Land No. 102. Approximately 4% of this greenway is designated as developed or urban land.

Associated Municipalities: Amity and Union Townships.

- 17) Sixmile/Fourmile Creeks Greenway – Located east of the City of Erie, this greenway is adjacent to most of Sixmile and Fourmile Creeks. Also found within this greenway is Sixmile Creek Park and three BDA's.

- Sixmile Creek Gorge BDA surrounds a high quality stream community, a forest community that is critically imperiled in the state, and a cliff community that is uncommon in the state. Two associated natural communities contain habitat for plant species of concern.
- Wintergreen Gorge BDA, along Fourmile Creek, is a partially mature forest community of County and state significance, within which there are two rare habitats that harbor plant species of special concern.

Approximate Size: The total length of the Sixmile/Fourmile Creeks Greenway corridor is estimated to be nearly 7,000 acres, of which 7% is currently protected within Sixmile Creek Park. Approximately 14% of this greenway is designated as developed or urban land.

Associated Municipalities: Harborcreek, Greene, Greenfield, and Millcreek Townships.

- 18) Trout Run Greenway – Situated in central Erie County, Trout Run Greenway encompasses Trout Run, the headwaters of Elk Creek, Lake LeBoeuf, and a portion of the French Creek BDA.

Approximate Size: The total length of the Trout Run Greenway corridor is approximately 5 miles. The width varies from a mile to a mile and a half throughout the entire corridor.

The total acreage of this greenway is estimated to be over 3,800 acres, none of which is currently protected. Approximately 10% of this greenway is designated as developed or urban land.

Associated Municipalities: McKean and Waterford Townships as well as Waterford Borough.

- 19) Cussewago Creek Greenway – The majority of the corridor is found in Crawford County. A small portion of the upper reaches of this greenway are found in southern Erie County along portions of Cussewago Creek and West Branch Cussewago Creek. The portion of the Cussewago Creek Greenway, within Erie County, contains the supporting natural landscape for Pont Road Wetland BDA, as well as Cussewago Bottom IBA.

Approximate Size: The total acreage of this greenway, within Erie County, is estimated to be around 472 acres, none of which is currently protected. Approximately 2.8% of this greenway is designated as developed or urban land.

Associated Municipalities: Elk Creek Township.

- 20) West Branch French Creek Greenway – This corridor is found adjacent to West Branch French Creek and some sections of Alder Brook, Townley Run, Bailey Brook, and Darrow Brook. Additionally, a portion of the French Creek BDA is found within this greenway.

Approximate Size: The total length of the West Branch French Creek Greenway corridor is roughly 15 miles. The width varies from around 1,500 feet within Wattsburg, to nearly a mile near the mouth of Alder Brook.

The total acreage of this greenway is estimated to be over 6,300 acres, none of which is currently protected. Approximately 7.3% of this greenway is designated as developed or urban land.

Associated Municipalities: Venango and Greenfield Townships, as well as Wattsburg Borough. This greenway also has potential to connect to Chautauqua County, New York.

- 21) Ashtabula Creek Greenway – Situated in western Erie County, near the Ohio line, this greenway encompasses sections of Ashtabula Creek and Marsh Run, part of State Game Land No. 101, as well as one BDA.

- Ashtabula Creek Swamp BDA is an exceptional quality floodplain swamp of state and County significance.

Approximate Size: The total acreage of the Ashtabula Creek Greenway is estimated to be over 2,500 acres, of which approximately 1.4% is currently protected within State Game Land No. 101. Approximately 4.3% of this greenway is designated as developed or urban land.

Associated Municipalities: Conneaut Township. This greenway also has potential to connect to Ashtabula County, Ohio.

- 22) Falls Run Greenway – Located in western Erie County, Falls Run is a tributary to Elk Creek and encompasses part of the Devils Backbone BDA.

- Devils Backbone BDA surrounds a stream valley that contains a rare forest community, which is also uncommon federally, as well as rare habitats and a high quality stream community, all of which also have the ability to support a plant species of special concern.

Approximate Size: The total acreage of the Fall Run Greenway is estimated to be over 2,800 acres, none of which is protected or developed.

Associated Municipalities: Franklin and Fairview Townships.

- 23) Twelvemile Creek Greenway – Located in the North Eastern section of Erie County, this greenway is found adjacent to Twelvemile

This greenway will also be of benefit in preserving the High Quality Cold Water Fishery status designated along Twelvemile Creek. Twelvemile Creek is also a steelhead fishery.

Approximate Size: The total length of the Twelvemile Creek Greenway corridor is nearly 4 miles. The width is less than 500 feet from the Creek's headwaters to it's mouth at Lake Erie.

The total acreage of this greenway is estimated to be over 400 acres, none of which is currently protected or developed.

Associated Municipalities: Harborcreek, North East, and Greenfield Townships.

- 24) Brokenstraw Creek Greenway – Located in the extreme eastern section of Erie County, this greenway is found adjacent to Brokenstraw Creek and includes the mouth of Bear Creek in Corry.

Approximate Size: The total length of the Brokenstraw Creek Greenway corridor is roughly 5.5 miles. The width varies from less than 1,000 feet near the headwaters of the creek, to nearly 4,000 miles near the mouth of Bear Creek.

The total acreage of this greenway is estimated to be nearly 1,100 acres, none of which is currently protected. Approximately 8.4% of this greenway is designated as developed or urban land.

Associated Municipalities: Wayne Township and the City of Corry. This greenway also has potential to connect to Warren County.

Level of Recommended Conservation

Many of the greenways in Erie County have large or small areas that are protected in places such as state parks and state game lands. However, the majority of the lands found within the greenways are privately owned and unprotected. Acquisition of all the land within these greenways is not feasible or necessary. The municipalities associated with the proposed Natural Systems Greenways corridors should strive to educate and work with landowners to promote conservation.

While regulatory tools may protect some areas from development, they ignore other threats such as logging or mining, and can also be a heavy hand to deal when attempting to form friendly relationships with landowners. Easements and other agreements with conservation-minded landowners can be customized to meet the needs of both parties and may protect some targeted natural resources. Acquisition of small tracts near very vulnerable resources, such as exceptional value water quality stream and wetlands should be considered, but only when feasible and directly beneficial.

Specific tools for conservation, along with specific recommendations, are described in detail in a later section of this report.

RECREATION AND TRANSPORTATION GREENWAYS

Recreation and transportation greenways were identified by first reviewing existing and potential trail corridors within Erie County. After determining existing trails, what potential trail connections exist, and which connections are feasible; a Recreation and Transportation Greenway network was laid out for the County. After this trail network was mapped, key destinations and points of interest along this network were analyzed.

The steering committee, with the assistance of Pashek Associates, developed a criteria system for determining key destinations and points of interest for designation as Trail Towns, Major Hubs, and/or Hubs along the Recreation and Transportation Greenways network. This criteria system involved assessing towns or sites based on the facilities and amenities they offer.

Trail Towns were determined based on their presence of the following elements: a Main Street, food, lodging, and fuel. In order to meet the criteria, and be designated as a trail town, the town had to have at least three of the four elements. Optional elements used to determine Major Hubs and Hubs included the presence of: entertainment, recreation opportunities, historic, and other attractions. The table below details the matrix for determining Trail Towns, Major Hubs, and Hubs in Erie County.

Potential Hub and Trail Town Opportunities	Must have Three of Four for Trail Town Status				Optional				Status		
<i>Erie County</i>	<i>Main Street</i>	<i>Food</i>	<i>Lodging</i>	<i>Fuel</i>	<i>Entertainment</i>	<i>Recreation</i>	<i>Historic Site(s)</i>	<i>Other Attraction(s)</i>	<i>Potential Trail Town</i>	<i>Major Hub</i>	<i>Hub</i>
Albion		X		X			X			X	
Girard	X	X	X	X		X	X		X		
Corry	X	X	X	X		X	X		X		
Edinboro	X	X	X	X	X	X	X	X	X		
Erie / Erie Bayfront	X	X	X	X	X	X	X	X	X		
Northeast	X	X	X	X		X		X	X		
Waterford	X	X	X	X		X	X		X		
Presque Isle State Park			X			X	X	X		X	
Erie Bluffs State Park						X				X	
Shades Beach Park						X				X	
Asbury Woods Nature Center						X				X	
Penn State Erie Berhend						X					X

Proposed Trail Towns

- 1) Girard
- 2) Corry
- 3) Edinboro
- 4) Erie/Erie Bayfront
- 5) North East
- 6) Waterford

Major Hubs

- 1) Albion
- 2) Presque Isle State Park
- 3) Erie Bluffs State Park
- 4) Shades Beach Park
- 5) Asbury Woods Nature Center

Hub

- 1) Penn State Erie Behrend

Recreation and Transportation Greenways - Trails

- 1) Presque Isle Multi-Purpose Trail – Also known as the Karl Boyes National Recreational Trail. This existing multi-purpose trail follows a 13.5-mile loop around Presque Isle State Park and is fully ADA accessible throughout. The trail connects to the Bayfront Seaway Trail and also to the Tom Ridge Environmental Center. On road shared-use lanes provide additional trail opportunities throughout the park.

Approximate Length: 22 miles

Associated Municipalities: Millcreek Township.

- 2) Erie Bayfront to Behrend Trail – This trail follows the Bayfront Connector from the Erie Bayfront area to Penn State Erie – Berhend Campus. This trail connects the college to downtown Erie, as well as the Bayfront area and Presque Isle State Park.

Approximate Length: 8 miles

Associated Municipalities: Harborcreek Township and the city of Erie.

- 3) Asbury Woods Greenway Trail – This existing trail is a four and a half mile dirt, wood chip, and board walk trail and is the only greenway currently designated in Erie County. This trail links to the Asbury Woods Environmental Education Center and to the rest of the county trail system via bike lanes.

Approximate Length: 4.5 miles

Associated Municipalities: Millcreek Township

- 4) Seaway Trail (National Scenic Byway) - The Seaway Trail is a combination recreation trail and Pennsylvania Scenic Byway. The trail follows forty-three miles of PA Route 5 and is an extension of the Seaway of New York. The trail begins at the County's western border and extends to its eastern border following Route 5. The trail passes through the City of Erie and its Millionaires Row, also known as the West Sixth Street Historic District, and the Federal Row Historic District. Throughout the trail, Route 5 travels parallel to Lake Erie and provides extraordinary views of the lakeshore.

Within the City of Erie, the Seaway Trail includes a spur that accesses Erie's bayfront area. The Bayfront Seaway Trail is a multi-use bikeway trail that runs almost directly along the Port of Erie's waterfront.

- Erie Bayfront Parkway Multi-Use Trail – This existing shared use trail follows along the Erie Bayfront connecting recreation and commercial areas including Presque Isle State Park. The trail parallels Route 5, which is also the BicyclePA Route Z corridor, and is part of the Seaway Trail.

The Seaway Trail is part of the western section and loop for the proposed Pittsburgh to Erie Trail.

Approximate Length: 43 miles

Associated Municipalities: Springfield, Girard, Fairview, Millcreek, Lawrence Park, Harborcreek, and North East Townships, as well as Lake City Borough and the City of Erie.

- 5) Corry Junction Greenway Trail – This existing trail follows a former railroad corridor north out of the City of Corry, extending through Chautauqua County, New York to Findley Lake. The Corry Junction Rail Trail is part of the eastern route of the Pittsburgh to Erie Trail.

Approximate Length: 6 miles

Associated Municipalities: City of Corry and Wayne Township.

- 6) East Branch Trail – This proposed trail connects the City of Corry, via the Mill Village to Corry Junction Greenway Trail, with Clear Lake in Crawford County. Following along an inactive railroad corridor, this trail segment is part of the proposed eastern route of the Pittsburgh to Erie Trail system. The section of this trail, within Erie County, runs from the Erie County line, northwest of Spartansburg in Crawford County, to the Mill Village to Corry Junction Greenway Trail passing State Game Land No. 144.

Approximate Length: 4 miles

Associated Municipalities: Concord Township and the City of Corry.

- 7) Albion to Conneaut Harbor Trail – This proposed trail follows the Bessemer & Lake Erie Railroad corridor, linking the Thornton Junction Trail to Albion and on to the Conneaut, Ohio.

Approximate Length: 15 miles

Associated Municipalities: Conneaut and Springfield Townships, as well as Albion and Cranesville Borough.

- 8) Thornton Junction Trail – This proposed trail follows the inactive Bessemer & Lake Erie Railroad corridor from the Crawford County line at Pennside, to Girard Junction at Erie Bluffs State Park, and on to Camp Fitch. This trail is part of the western route of the Pittsburgh to Erie Trail system, linking the Seaway Trail and Erie Bluffs State Park to Crawford County, and eventually Pymatuning State Park. This trail also has potential to link up with the proposed Albion to Girard Trail.

Approximate Length: 12.5 miles

Associated Municipalities: Conneaut and Girard Townships.

- 9) Mill Village to Corry Junction Greenway Trail – This inactive Norfolk Southern Railroad Corridor will connect Mill Village, through Union City, to the City of Corry. This trail could eventually link into the Erie National Wildlife Refuge in Crawford County.

Approximate Length: 19 miles

Associated Municipalities: LeBoeuf, Union, and Concord Townships, along with Mill Village and Union City Boroughs and the City of Corry.

- 10) Albion to Girard Trail – This proposed trail follows a Bessemer & Lake Erie Railroad corridor from Cranesville, north of Albion, to Wallace Junction, north of Girard, and on to Lake Erie Community Park, passing through Lake City along the way. The Albion to Girard Trail also connects to the Seaway Trail.

Approximate Length 10 miles

Associated Municipalities: Elk and Girard Townships, as well as Cranesville, Platea, Lake City and Girard Boroughs.

- 11) Freeport Trail – This proposed trail follows Freeport Road, State Route 89 connecting North East Borough with the Seaway Trail, Halli Reid Park, and Freeport Beach.

Approximate Length 1.75 miles

Associated Municipalities: North East Township and North East Borough

- 12) French Portage Trail – This proposed trail follows a former trade route between Fort LeBoeuf, near present day Waterford Borough and Fort Presque Isle. This overland trade route was used to transport goods from Lake Erie to French Creek where they could be canoed down stream to the Allegheny, the Ohio, and the Mississippi Rivers. This trail would connect the City of Erie and Presque Isle State Park to Waterford and on to Crawford County via the Washington Trail.

Approximate Length 17.29 miles

Associated Municipalities: Summit, Waterford and Mill Creek Townships and Waterford Borough, as well as the City of Erie.

- 13) Washington Trail – This proposed trail follows the route which commemorates George Washington's first military and diplomatic venture in the fall and winter 1753-1754. Today, the route primarily follows major roads. Within Erie County, this trail follows Route 19 from north of Cambridge Springs, Crawford County to Waterford Borough.

Approximate Length 6.8 miles

Associated Municipalities: LeBoeuf and Waterford Townships, as well as Waterford Borough.

- 14) Lake Pleasant Connector Trail – This proposed trail connects the Allegheny and Eastern Railroad Corridor to Lake Pleasant following Dublin Road.

Approximate Length 4.5 miles

Associated Municipalities: Waterford Township

- 15) Allegheny and Eastern Railroad Corridor Trail – This proposed trail follows active Allegheny and Eastern Railroad lines from Union City, to the Erie Bayfront, to Berhend Trail near the Penn State – Berhend Campus. This trail links with the Mill Village to Corry Junction Greenway Trail, connecting the towns of Mill Village and Corry to the City of Erie, the Seaway Trail, and Presque Isle State Park.

Bike Lanes

PennDOT has established a series of bicycle routes that are marked and publicized. These routes are known as BicyclePA routes. BicyclePA routes were designed by experienced bicyclists to provide bicycling members of the traveling public who wish to traverse the state with a guide to some of the Commonwealth's highways and rail-trails. Few of these routes contain bike lanes or other facilities designed specifically for bicyclists. The Pennsylvania Department of Transportation does not guarantee the safety of bicyclists as they access those roads and rail-trails. Every bicyclist is responsible for his or her personal safety and welfare and for remaining alert and mindful of conditions on the roads or trails. BicyclePA users are expected to be licensed drivers or persons at least sixteen years of age who have several years of road bicycling experience and who are comfortable in bicycling in a vehicular environment.

The existing bike lanes in Erie County are well established and should be maintained in the future. Some issues with existing routes discovered during a field visit include:

- Bicycle Route along PA State Route 832 does not have proper signage/trail marking.
- PA State Route 98 needs to expand lane width and add marking/signage.
- Presque Isle to Sterrettania Road (PA State Route 832) needs to be studied further to make for a safer connection out of the City of Erie.
- PA State Route 5, east of the City of Erie, has plenty of room to create a bikeway, but one was not constructed. Further studies should be done to examine the feasibility and need for a bike lane along this route.

Bicycle PA Route Z – is, for the most part, an on-road route following PA State Route 5 for approximately forty miles, from the western border with Ohio, to eastern border with New York. The trail is designated by Bicycle PA, a state cycling organization.

Bicycle PA Route Y – is the second longest route in PA at over 400 miles. This route enters Erie County on US Highway 6/19, southwest of Mill Village, and follows north to the intersection with US Highway 6 North, where it turns east and follows US Highway 6 through Union City and Corry, then on to Warren County.

Bicycle PA Route A – stretches nearly 200 miles from Erie, PA to Greene County, PA, just north of Morgantown, WV. This route enters Erie County on PA State Route 98, west of Edinboro, heading north. Before the PA State Route 98 interchange with Interstate 90, the bike route turns east onto PA State Route 832, which it follows north all the way to its northern terminus with Bicycle PA Route “Z”, the Seaway Trail, and the entrance to Presque Isle State Park.

PA Route 6 is an on-road bike route designated by PennDOT, and sponsored by the PA Route 6 Tourist Association. Route 6 is also a designated scenic route throughout the state.

Snowmobile Trails

The Erie Crawford Snowmobile Association is a snowmobile club in Erie County, as well as some of the surrounding area, with a designated trail system. This significantly large trail system should be formalized with property owner agreements to ensure that it is there for future use.

Recreation Greenways Legend

Existing Trail Routes

- Presque Isle Multi-Purpose Trail
- Erie Bayfront to Behrend Trail
- Asbury Woods Greenway Trail
- Seaway Trail- National Scenic Byway
- Corry Junction Greenway Trail

Proposed Trail Routes

- Albion to Conneaut Harbor Trail
- Thornton Junction Trail
- Albion to Girard Trail
- Washington's Trail
- Mill Village to Corry Trail
- East Branch Trail
- Lake Pleasant Connector Trail
- French Portage Trail
- Allegheny & Eastern Rail Corridor
- Freeport Trail

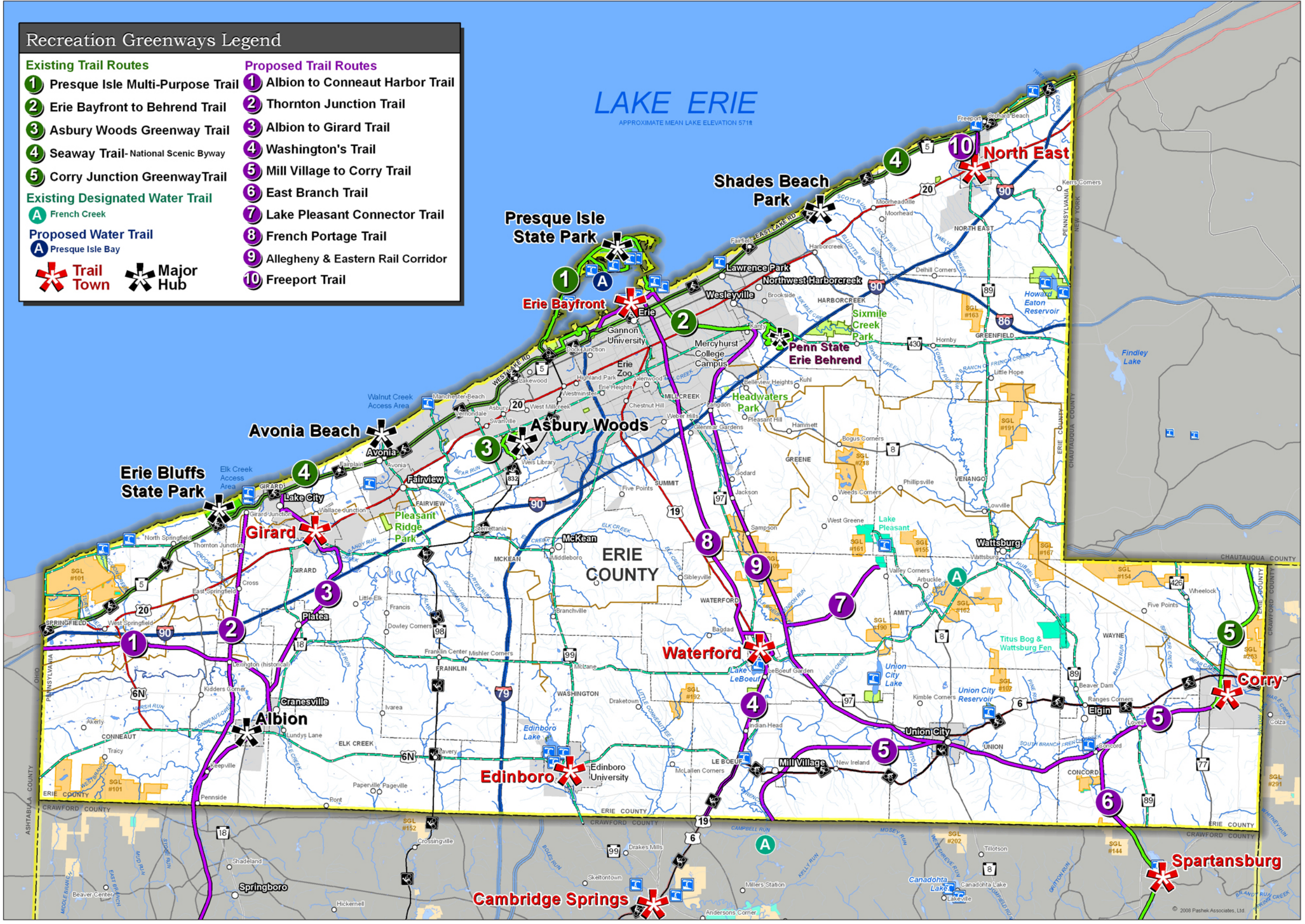
Existing Designated Water Trail

A French Creek

Proposed Water Trail

A Presque Isle Bay

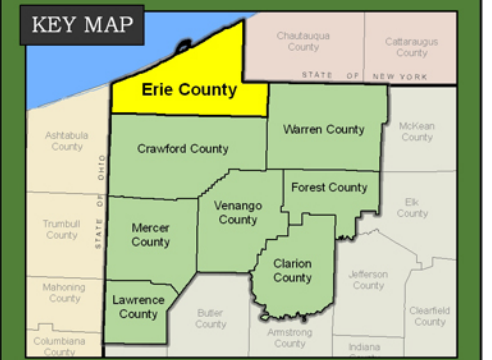
Trail Town
Major Hub



Northwest Pennsylvania Greenways Plan

for

Clarion County	Lawrence County
Crawford County	Mercer County
Erie County	Venango County
Forest County	Warren County



LEGEND

County Boundary
 Municipal Boundary
 Urban Areas
 Lake
 River
 Interstate
 PA State Route
 US Highway
 PFBC Access Points

Managed Land

- State Park
- County & Local Parks (Regionally Significant)
- State Game Land
- Other Managed Land

Trails

- Proposed Trail
- Existing Trail
- Snowmobile Trails
- BicyclePA Route
- Proposed Bicycle Route
- Existing Water Trail
- Proposed Water Trail

Data Source:
ESRI 2005 Data
USGS
PASDA
PennDOT

Projection: State Plane - NAD 1983
Pennsylvania North - Feet

Pashek Associates makes no claims to the accuracy of this data.

Recreation and Transportation Greenways - Water Trails

Water trails are boat routes suitable for canoes, kayaks and small motorized watercraft. Like conventional trails, water trails are recreation and transportation corridors between specific locations. Water trails are comprised of access points, boat launches, day use sites, and, in some cases, overnight camping areas. Each water trail is unique, a reflection of Pennsylvania's diverse geology, ecology and communities.

The Pennsylvania Fish and Boat Commission has a process of evaluating and designating potential water trails. The Commission is the sole agency to designate official Pennsylvania Water Trails. However, individual water trails and trail corridors are conceived and maintained by a network of volunteers, property owners, civic groups and associations. Upon designation of a water trail, the Pennsylvania Fish and Boat Commission will provide local counties, municipalities, and community organizations with support and guidance in developing and marketing the designated water trail.

There are no designated water trails in Erie County. Several years ago, the French Creek Conservancy prepared and published the French Creek Water Trail Guide. Today, the Conservancy no longer markets this as a water trail. We recommend efforts be renewed, and that counties, municipalities, and advocacy groups approach the Pennsylvania Fish and Boat Commission to inquire whether a French Creek Water Trail can be officially designated.

- 1) French Creek Water Trail – This water trail offers access to several points in south-eastern Erie County. The water trail extends into New York State, as well as through Crawford and Mercer Counties, before French Creek outlets into the Allegheny River, in Venango County, at Franklin.

Although not officially recognized by the Pennsylvania Fish and Boat Commission as a water trail, French Creek has functioned as a transportation corridor throughout history, including George Washington's 1753 campaign.

A "Canoe Guide from the French Creek Project" was published in the mid 1990's. The French Creek Project was initiated in May of 1995 by: the Pennsylvania Environmental Council, the Western Pennsylvania Conservancy, The Nature Conservancy, and Allegheny College.

This canoe guide documents canoeing opportunities associated with French Creek, from Union City Dam in Erie County, to its confluence with the Allegheny River at the City of Franklin in Venango County, covering a distance of seventy-four miles. Over this length of seventy-four miles, French Creek winds its way through the towns of Edinboro, Cambridge Springs, Saegertown, Meadville, Cochranton, and Franklin.

The French Creek canoe guide identifies twelve Shuttle points along this route's length. They are located at:

- Mile 0.0 Union City Dam
- Mile 8.4 Routes 6N and 19
- Mile 25.5 Cambridge Springs
- Mile 27.0 Cambridge Springs Borough
- Mile 28.2 Conneautee Creek
- Mile 38.2 Saegertown Access
- Mile 44.5 Bicentennial Park
- Mile 49.5 Wilson Schute
- Mile 55.0 Shaw's Landing
- Mile 63.8 Utica Access
- Mile 74 Franklin Access

At this point the French Creek joins the Allegheny River Water Trail.

Conversations held during this planning process indicate two canoe liveries were present along the creek, but both have closed in recent years.

Approximate Length: 74 miles (20 miles in Erie County)

Associated Municipalities: Venango, Amity, Waterford, and LeBoeuf Townships, as well as Wattsburg Borough.

- 2) Presque Isle Bay Water Trail – This 3,718-acre bay is situated between Presque Isle and the City of Erie. There are eleven public boat access points along the Presque Bay, operated by the City of Erie, the Erie Port Authority, and the State Park.

Presque Isle State Park - Grave Yard Pond to Grave Yard Pond – 4.0 miles

Shuttle Points:

- Canoe and Boat Rental near Grave Yard Pond

There are a series of six boat landings located throughout the ponds complex. A concessionaire offers, on a seasonal basis, canoe and kayak eco-tours of the ponds from this location as well.

In addition to boating opportunities in the bay, there is existing water; with service from the bayfront to Presque Isle State Park; with stops at Dobbins Landing, Liberty Park, and the Water Works on Presque Isle.

Approximate Length: NA

Associated Municipalities: City of Erie and Millcreek Township.

- 3) Lake Erie Shoreline – Weil and Shaw indicate canoeing opportunities along the Lake Erie shoreline are best during July and the first half of August. Before July, water temperatures are too cold, and after mid-August weather patterns are unpredictable, and storms can last for several days.

Most of the shoreline is undeveloped. The properties are generally either privately held or part of a State Park. Limit your access to the land to Shuttle areas.

Non-powered boats must display one of the following: boat registration; launching permit or mooring permit from Pennsylvania State Parks, available at most state park offices; launching permit from the Pennsylvania Fish and Boat Commission.

Conneaut Ohio to Walnut Creek – 18.5 miles

Shuttle Points:

- Conneaut, Ohio Municipal Pier
- Pennsylvania Fish and Boat Commission Access at Elk Creek
- Pennsylvania Fish and Boat Commission Access Walnut Creek

Walnut Creek to Erie Public Dock – 12 to 15 miles, depending on route through Presque Isle Bay

Shuttle Points:

- Pennsylvania Fish and Boat Commission Access Walnut Creek
- Beach 8 (Pettinato Beach), located in the center of Presque Isle 1/3 mile portage from Beach 8 to Marina Lake along Canoe Portage Trail
- City of Erie Public Boat Launch

City of Erie Public Boat Launch to Ripley New York – 21 miles

Shuttle Points:

- City of Erie Public Boat Launch
- Shades Beach Park near Eightmike Creek
- Northwest Municipal Park near Sixteenmile Creek
- Lakeside Campground just over New York border, fee charged at launch

Approximate Length: 55 miles

Associated Municipalities: Springfield, Girard, Fairview, Millcreek, Lawrence Park, Harborcreek, and North East Townships, as well as the City of Erie, Lake City Borough

CHAPTER THREE

HOW DO WE GET THERE?

- The Action Plan

CHAPTER THREE – *HOW DO WE GET THERE?*

By taking the recommendations presented herein to heart, Erie County has the opportunity to:

- ✓ Guide growth and development in a sustainable manner
- ✓ Improve the economy in Erie County by enhancing tourism opportunities and venues and by providing goods and services to meet the needs of our residents and tourists
- ✓ Provide alternate forms of transportation to improve air and water quality and to reduce traffic congestion
- ✓ Connect its residents and neighborhoods to one another, its parks, schools, and cultural and natural resources
- ✓ Conserve natural resources, which provide life sustaining functions and create the character of place for current and future generations of Erie County residents

This chapter presents the recommendations and defines the implementation strategies that must be completed in order to work towards establishing the vision for greenways in Erie County and the Northwest Pennsylvania region.

As a working document, we expect and encourage you to review the recommendations included in this plan from time to time to determine whether any adjustments need to be made to reflect and acknowledge positive changes in greenway planning efforts over the course of time. Before significant changes are adopted, a careful review of the entire document should be conducted to gain a thorough understanding of the process which led to the recommendations outlined in this chapter. Only upon completing this review can prudent decisions be made related to the future of greenways in Erie County.

In their report “Back to Prosperity: A Competitive Agenda for Renewing Pennsylvania”, published in 2003, the Brookings Institution Center on Urban and Metropolitan Policy identified many concerns related to Pennsylvania’s growth, and lack thereof, over the past two decades. In the report, they conclude those concerns, including: population migration; urban sprawl; and the consumption of land, despite a stagnant population, have led to trends that are fiscally and economically damaging to Pennsylvania’s economy. Furthermore, the report goes on to recommend solutions to reversing these trends and rebuild Pennsylvania. Some of the strategies recommended include planning and collaboration at the regional level, conserving our resources, and reinvesting in our main streets and downtowns, in lieu of consuming more land.

By its very nature, greenway planning and implementation can begin to positively address the concerns raised, and implement some of the strategies recommended, in the Brookings Institute’s report. We must realize that greenways are much more than conservation of our natural resources and trails for recreation. As discussed in the Introduction of this plan, greenways provide many benefits that are considered by many to be more significant.

CHAPTER ORGANIZATION

This chapter is organized in a logical format that follows the structure proposed for implementing the recommendations contained herein.

1. Management Structure
2. The Vision for Erie County’s Greenway Corridors
3. Implementation Strategies

MANAGEMENT STRUCTURE

There are many successful management structure models that are available to facilitate the implementation and development of greenways. These include:

- County Parks and / or Greenways and Trails Department
- County Parks and / or Greenways and Trails Advisory Board
- Greenways and Trails Authority
- County Planning Office
- Greenways and Trails Organization
- Regional Multi-County Greenway Coordinator

Each model has its strengths and weaknesses. To facilitate the discussion and decision-making process, the strengths and weaknesses were summarized and presented to the study committee for consideration. That analysis is presented on the following pages.

Analysis of Potential Management Structures

Type of Organization	Strengths	Weaknesses	Examples
<i>County Parks and/or Greenways / Trails Department</i>			
The County Department is responsible for aspects of planning, development, management, and maintenance. Volunteer groups may be used to assist or support the County on specific projects.	• Able to apply for state grants	• Relies mostly on paid staff to accomplish almost all work	Indiana County Parks and Trails
	• The County sets the standards for all aspects of trail management	• Volunteers usually play a limited role	York County Parks
	• Paid staff are usually more reliable and are accountable to the County	• The County funds all aspects of planning, development, management, and maintenance	Westmoreland County
	• The County has control over priorities and how they are accomplished	• Staff may have many responsibilities other than trails and greenways therefore trails may not be the primary focus of the department or staff.	
	• The County manages quality control	• Not able to apply for grants that are only available to non-profit organizations	

Erie County Greenways Plan

Type of Organization	Strengths	Weaknesses	Examples
<i>County Parks and Recreation or Greenways / Trails Board</i>			
A volunteer board appointed by the County Commissioners. The Commissioners determine the purpose and responsibilities of the Board. Some Boards are permitted to hire staff through the County to assist with necessary tasks.	<ul style="list-style-type: none"> Comprised of volunteers who have special interests in parks and recreation or trails and greenways 	<ul style="list-style-type: none"> Rely mostly on volunteers to accomplish all work 	Somerset County Recreation Board manages the Allegheny Passage Trail within the County
	<ul style="list-style-type: none"> Operates in conjunction with the County 	<ul style="list-style-type: none"> Often end up with just a few people doing most of the work 	
	<ul style="list-style-type: none"> Could provide a good balance of workers between volunteers and County paid staff 	<ul style="list-style-type: none"> Limited interest in on-going maintenance and upkeep tasks 	
	<ul style="list-style-type: none"> Able to apply for state grants with the County as the legal applicant 	<ul style="list-style-type: none"> Fundraising often accounts for more of the volunteers time than trail work 	
	<ul style="list-style-type: none"> The County sets the standards for how the Board will operate 	<ul style="list-style-type: none"> Not able to apply for grants only available to non-profit organizations 	

Type of Organization	Strengths	Weaknesses	Examples
<i>Greenways, Trails, Recreation and/or Conservation Authority</i>			
An organization created by the County Commissioners for the expressed purpose of trail and greenway planning, development, maintenance and management.	<ul style="list-style-type: none"> Separate from the political subdivision 	<ul style="list-style-type: none"> Apart from County or municipal funding, an Authority has limited ability for revenue production 	Cambria County Conservation and Recreation Authority
	<ul style="list-style-type: none"> Can operate independently of the governmental unit 	<ul style="list-style-type: none"> Typically do not have volunteer groups associated with them 	Centre Region Park and Recreation Authority
	<ul style="list-style-type: none"> Able to apply for state grants 	<ul style="list-style-type: none"> Not able to apply for grants that are only available to non-profit organizations 	Clearfield County Recreation and Tourism Authority
	<ul style="list-style-type: none"> Can borrow funds for major development projects 	<ul style="list-style-type: none"> Relies mostly on paid staff to accomplish almost all work 	Lewisburg Area Recreation Authority
	<ul style="list-style-type: none"> Set their own standards for quality and accountability 	<ul style="list-style-type: none"> The trail organizations' goals may not always match those of the County 	Tri-Area Recreation Authority
	<ul style="list-style-type: none"> Typically think and plan for the long-term 	<ul style="list-style-type: none"> The Board of Commissioners has little control over the decisions or actions of the Authority 	Montour County Recreation Authority Mountains Recreation and Conservation Authority Cameron County Recreation Authority

Erie County Greenways Plan

Type of Organization	Strengths	Weaknesses	Examples
<i>County Planning Office</i>			
The Office manages the planning and supervision of trails and greenways, coordinating with local municipalities and volunteer organizations for implementation and operation. A full-time Trail and Greenways coordinator may be needed. In the future this may also require some support staff.	<ul style="list-style-type: none"> • Able to apply for state grants 	<ul style="list-style-type: none"> • Requires a County-paid management position in the Planning Office 	Pike County
	<ul style="list-style-type: none"> • The Planning Office sets the standards for all aspects of trail management 	<ul style="list-style-type: none"> • Requires a tremendous amount of coordination by the Planning Office 	Cumberland County
	<ul style="list-style-type: none"> • Paid staff are usually more reliable and are accountable to the County 		
	<ul style="list-style-type: none"> • The County has control over priorities and how they are accomplished 		
	<ul style="list-style-type: none"> • Quality control comes from the Planning Office 		
	<ul style="list-style-type: none"> • Coordination with local municipalities and volunteer organizations spreads the workload and funding among many agencies 		
	<ul style="list-style-type: none"> • Volunteer groups can apply for funding that is only available to non-profits 		
	<ul style="list-style-type: none"> • Assures compliance with the County Trail and Greenway Plan 		
	<ul style="list-style-type: none"> • Assures greater accountability of all those working on projects 		
	<ul style="list-style-type: none"> • Allows all the benefits of both volunteer non-profit organizations and municipalities 		

Erie County Greenways Plan

Type of Organization	Strengths	Weaknesses	Examples
<i>Greenways and Trails Organization</i>			
A non-profit organization usually created for the specific purpose of developing and managing trails and/or greenways. Such organizations are not directly affiliated with a municipal government but serve to support and enhance trail and greenway plans of one or more municipal bodies.	<ul style="list-style-type: none"> • Able to apply for state grants 	<ul style="list-style-type: none"> • Relies solely on volunteers 	Allegheny Trails Association
	<ul style="list-style-type: none"> • Able to apply for grants that are only available to non-profits 	<ul style="list-style-type: none"> • Often ends up with just a few people doing most of the work 	ATA is responsible for planning, development, and maintenance of the trails. Individual municipalities are responsible for development and maintenance of trailheads within their municipalities.
	<ul style="list-style-type: none"> • Volunteers have a special interest in trails and greenways 	<ul style="list-style-type: none"> • Volunteers have a limited interest in on-going maintenance and upkeep tasks 	Wildwater Conservancy, Lawrence County
	<ul style="list-style-type: none"> • Easier recruitment of volunteers for special activities and projects 	<ul style="list-style-type: none"> • Fundraising often accounts for more of the volunteers time that trail work 	Allegheny Land Trust
	<ul style="list-style-type: none"> • Strong interest in trail development 	<ul style="list-style-type: none"> • Some trail groups become singularly focused on just one trail 	Independence Marsh Foundation - Beaver County
	<ul style="list-style-type: none"> • Limits County funding of trails and greenways 	<ul style="list-style-type: none"> • The trail organizations goals may not always match those of the County 	Friends of the Riverfront - City of Pittsburgh
	<ul style="list-style-type: none"> • Able to recruit and utilize volunteer experts for a variety of services such as engineering, design, construction, etc. 	<ul style="list-style-type: none"> • There is limited accountability for volunteers 	

Erie County Greenways Plan

Type of Organization	Strengths	Weaknesses	Examples
<i>Regional / Multi-County Joint Greenway Coordinator</i>			
Two or more Counties and or agencies enter into a Agreement to create and fund a Greenway Coordinator position. The person filling this position will be responsible for implementing the recommendations of the participating Counties' adopted Greenways and Trails Plans.	• Cost to fund position shared with others	• May not be available, or available on a limited basis only when needed	Oil Region Greenways & Open Space Coordinator
	• Able to apply for state grants	• Requires a paid professional position housed in the offices of the responsible entity	Beaver / Lawrence Counties Joint Greenways Coordinator
	• Responsible entity sets the standards for all aspects of trail management	• Requires a tremendous amount of coordination by the responsible entity	Cumberland County
	• Paid staff are usually more reliable and are accountable to the responsible entity		Pike County
	• The responsible entity has control over priorities and how they are accomplished		
	• Quality control comes from the responsible entity		
	• Coordination with local municipalities and volunteer organizations spreads the workload and funding among many agencies		
	• Volunteer groups can apply for funding that is only available to non-profits		
	• Assures compliance with the County Trail and Greenway Plan		
	• Assures greater accountability of all those working on projects		
	• Allows all the benefits of both volunteer non-profit organizations and municipalities		

Consideration must also be given to the fact that the Erie County Greenway Plan recommendations and implementation strategies are part of the larger Northwest Region greenway effort. Therefore, thought must be given to this regional perspective.

Proposed Management Structure

Through the public participation process, consensus was focused on management structure with two components for it to be as successful as possible. Those components include a public component and a private component. This structure will be able to capitalize on the strengths of both types of organizations.

The public component can:

- Educate the public and municipal officials on the benefits of greenways
- Advocate municipalities to improve their land use tools to promote sound land development
- Provide technical assistance to municipalities and other greenway-related agencies
- Ensure consistent conservation and / or development throughout the proposed corridor
- Insure for the general liability of the corridors
- Provide routine maintenance
- Provide law enforcement, when required
- Provide access to government funding

The non-profit component can:

- Provide access to foundation and corporate giving
- Organize and conduct fund-raising events
- Organize volunteers
- Assist with property acquisition
- Leverage volunteers for periodic work days in the corridors
- Organize volunteers to be the eyes and ears of the corridors
- Promote, market, and advocate for the corridors
- Build support for the expansion of the greenway corridors

This model was selected because both the public and the private sector have unique characteristics that provide them with advantages in specific aspects of project service and delivery. A successful partnership arrangement draws on the strengths of both the public and private sector to establish complementary relationships.

The following describes the public and private components that are envisioned for this partnership.

Public Component

We recommend an intergovernmental cooperation agreement by the counties who desire to participate in this intergovernmental arrangement.

In Pennsylvania, Intergovernmental Cooperation Agreements must meet the requirements of Act 177. This Act requires the agreement to be written to comply with the terms of Act 177 and include the following:

- a. The agreement must be enacted by ordinance (Section 2305)
- b. The ordinance must specify (Section 2307):
 1. The conditions of the agreement
 2. The duration of the agreement

3. The purpose and objectives of the agreement, including the powers and scope of authority delegated in the agreement
4. The manner and extent of financing the agreement
5. The organizational structure necessary to implement the agreement
6. The manner in which property, real or personal, shall be acquired, licensed, or disposed of
7. The entity created under this section shall be empowered to enter into contracts for policies of group insurance and employee benefits, including social security, for its employees

Furthermore, we recommend the agreement address issues such as:

- Who will hold property and easements acquired for the trail
- Who is responsible for trail operations, maintenance, and security
- Whether any responsibilities will / can be delegated to outside entities, such as a non-profit organization

These items can be covered in the ordinance document itself, but usually are addressed in the agreement document and incorporated into the ordinance by reference, as an attachment to the ordinance.

An agreement enacted under the provisions of Act 177 is essentially a legal contract among two or more governmental agencies. Separate agreements, or a clearly stated multiple purpose agreement, are needed for two or more different functions. The terms of the agreement are whatever is negotiated among the participants, subject to the general requirements of the law.

The Pennsylvania Department of Conservation and Natural Resources and the Pennsylvania Department of Community and Economic Development have funded circuit rider positions for greenway and trail coordinator positions in several other counties throughout the Commonwealth. If the organization can be further expanded to cover a multi-county effort, both agencies are likely to further support an effort to a greater extent. Currently, Beaver and Lawrence Counties, two western Pennsylvania Counties, have committed through an intergovernmental agreement to share a Greenways and Trails Coordinator. This is the first example of a multi-county position in the Commonwealth.

Private Component

We recommend a 501(c)3 non-profit organization be established or an existing 501(c)3 be utilized to maximize funding opportunities and coordinate volunteer services. Additional responsibilities of this organization should include:

- Promoting greenways
- Providing physical labor for organized trail work days
- Providing “eyes and ears” on the trails and in the greenways
- Fund raising
- Producing maps, brochures, newsletters, and other information to educate users and educate and improve the greenways experience
- Coordinating the promotion of the greenways
- Advocating and building support for expansion of greenways

We recommend the study group formed for this project continue to be an advocate for greenways in the Northwest Region until a formal management structure can be put in place. Assistance may be obtained through the Pennsylvania Department of Conservation and Natural Resources Community Conservation Partnership Program Circuit Rider Program.

DCNR's Circuit Rider Program is designed to provide initial funding for County or regional organizations to hire a professional, full-time staff person. The Circuit Rider's purpose is to initiate new programs and services for counties, municipalities, and organizations that individually do not have the financial resources to hire a professional staff person. Circuit Rider grant applications are accepted at any time. Eligible project costs include only the Circuit Rider's salary and DCNR-approved technical assistance and training expenses as follows:

- First Year: up to one hundred percent (100%) of gross salary
- Second Year: up to seventy-five percent (75%) of gross salary
- Third Year: up to fifty percent (50%) of gross salary
- Fourth Year: up to twenty-five percent (25%) of gross salary
- Training Expenses: up to \$2,000 available for Bureau-approved training expenses over the four years of funding.

Participating parties must provide local funds to cover the Circuit Rider's employee benefits for all four years; the balance of the salary in years two, three, and four; and normal support services, such as office space and furnishings, training and travel expenses, clerical support, equipment, etc. Startup costs will need to be allocated in the first two years of operation to acquire office furniture and equipment.

In order to apply for funding one municipality, or the County, will need to complete and submit a PA DCNR Community Conservation Partnership Program grant application. Additional assistance may be obtained from the National Park Service's Rivers, Trails, and Conservation Assistance Program for the same purpose.

Within the context of the County and the region, there are many organizations at the local, municipal, trail corridor, and county levels. Care must be taken to not duplicate the efforts of those organizations, but rather the proposed management structure must enhance and provide assistance to these existing organizations. Therefore, it was suggested that either a county-wide position or a multi-county management structure might be most appropriate.

While considering this analysis and the various options, the consultant recognized the need for an organization that not only provides the management capacity for a specific entity or resources, but for all greenway initiatives throughout the County. Therefore this organization should be flexible enough to address all of the greenway efforts throughout the County.

Although PA DCNR has encouraged multi-county management structures for many years, one was not established until early 2008. In February 2008, Beaver and Lawrence Counties entered into a five-year agreement to share the services provided by a newly created Joint Greenways Coordinator position. Although in its infancy, this position has already proved to be effective in advancing the implementation of greenways in Beaver and Lawrence Counties. Furthermore, this level of cooperation has provided the Counties with funding opportunities they may not have otherwise experienced. This joint coordinator position has proven to be ideal, as generally there is not a sufficient amount of work in one county or the other to justify the position. However, when the two counties began to discuss the position, they determined there would be a sufficient workload to support a full-time position between them. We believe the Beaver and Lawrence Counties' Joint Greenways Coordinator position management structure warrants consideration for the counties of the Northwest Region.

In the process of developing the recommendations and defining the implementation strategies for each county, we have come to the conclusion that there ideally would be two joint coordinators who would oversee the implementation of greenways in the Northwest Region. These positions are in addition to the

Erie County Greenways Plan

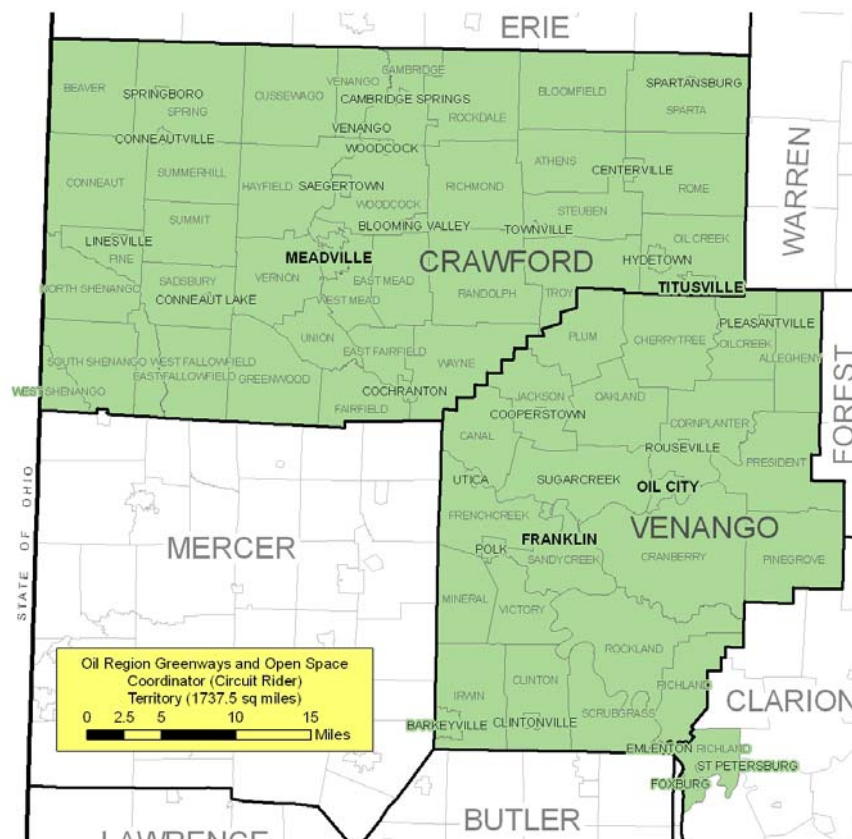
Beaver / Lawrence Counties' Joint Greenway Coordinator described above and the Oil Region Greenways and Open Space Coordinator described below.

Near the completion of this study, a joint coordinator position was created following a peer study and the development of a multi-organization steering committee in the Oil Region National Heritage Area, which is located in the Northwest Region. The study examined the need, recommended the structure, and defined the position. As currently defined, this joint greenways coordinator is responsible for implementing greenway strategies in the Oil Region, which includes all of Venango County, and Oil Creek Township, City of Titusville, and Hydettown Borough in Crawford County.

In addition to the Oil Region, the geographic area for this position also includes greenways and trails that are contiguous with and also extend beyond the Region into Clarion and Crawford Counties, including:

- Clarion County: The Allegheny River Trail from Emlenton through Foxburg to Parker Landing, including the municipalities of Richland Township, Foxburg Borough, and St. Petersburg Borough
- Crawford County: Trails in the City of Titusville, Oil Creek Township, and heading northward, including the municipalities of Centerville, Spartansburg Boroughs, and Rome and Sparta Townships
- Parts of the proposed Erie to Pittsburgh Trail

In the beginning of 2009, the geographic region was expanded to include all of the municipalities in Crawford County.



Erie County Greenways Plan

Erie, Crawford, and Mercer Counties have volunteer trail organizations that have been working for some time to implement greenway corridors in their respective counties, and based on the inventory and analysis, there is a lot of work required to continue and assist these organizations in their efforts. There are also many opportunities in Clarion, Forest, and Warren Counties. However, there are fewer organizations at the corridor level, and their support at the county level isn't quite as strong.

Given the goals and objectives of the Northwest Pennsylvania Planning and Development Commission to serve the counties of the Northwest Region, they are well-suited to house the two additional positions being recommended. Then, the positions can be focused either geographically or based on where implementation priorities direct them.

Given the regional context of this position, additional information pertaining to the implementation of these positions is contained in the Northwest Pennsylvania Greenways Summary document, including:

- Opportunities for Acquiring Funding for the Position
- Sample Greenway Coordinator Skill Set, Expectations, and Position Descriptions
- Sample Administrative Budget

The proposed joint greenway coordinator positions address the public component of the management structure.

To determine the structure for the private, not-for-profit component, opportunities for existing organizations to provide the services that may be required should be evaluated. Existing organizations in Erie County that can be approached for this role have been identified in the following table:

Organization	Address	Phone	Email	Mission
French Creek Valley Conservancy	P.O. Box 434 Meadville, PA 16335	814-337-4321	conserve@mdvl.net	To promote the environmental integrity of the French Creek watershed and its environs, and to advance the protection of natural resources in the watershed to the aesthetic, ecological, recreational, and economic benefit of the citizens of the area.
Lake Erie Region Conservancy	501 East 38th Street Erie, PA 16546	814-824-2407	lerc@mercyhurst.edu	To identify, conserve and protect the Lake Erie region's unique natural, cultural, and historic resources, and to promote sustainable development through research and education.
Western Pennsylvania Conservancy	800 Waterfront Drive Pittsburgh, PA 15222	412-586-2326	info@paconserve.org	Protects, conserves and restores land and water for the diversity of the region's plants, animals and their ecosystems.

Furthermore, a grassroots effort to create a Friends of Erie County's Greenways may prove to be desirable and successful.

The Vision for Erie County’s Greenway Corridors

Chapters One and Two provide a detailed inventory and analysis of the greenway planning process for Erie County. Through this work, a vision for greenways in Erie County was created. This vision is two-fold, as it consists of the natural systems greenways and recreation and transportation greenways.

Natural System Greenways

Our analysis leads us to recommending that specific areas of Erie County’s natural landscape be conserved. There are twenty-four Natural Resource Greenway corridors that we recommend for Erie County as documented on the table located on the following page.

The Natural System Greenway corridors recommended in the following table were prioritized using the ranking criteria developed for this project. The criterion was developed to be utilized in all of the Northwest Region’s eight counties. The criteria and the process used to prioritize the Natural Systems Greenway Corridors are further described in Chapter 2. Regardless of the priority, the conservation of all of the proposed Natural System Greenway Corridors is important and necessary.

Priority	Ranking	Greenway Name	Sensitivity Ranking	Total Acres	Conserved Acres	Percent Conserved
Exceptional	1	Crooked Creek	28.95	7,713	574	7.4%
	2	Raccoon/Turkey Creeks	24.7	7,256	3,000	41.3%
	3	French Creek	24.3	8,434	604	7.2%
	4	Twentymile Creek	24.3	497	0	0.0%
	5	Walnut Creek	23.9	2,837	0	0.0%
	6	Elk Creek	23.5	4,859	0	0.0%
	7	Conneaut Creek	23.3	10,033	2,707	27.0%
	8	Lake Pleasant	22.6	6,947	1,995	28.7%
Significant	9	Sixteenmile Creek	22.57	3,751	0	0.0%
	10	Conneauttee Creek/Edinboro Lake	22.5	4,110	0	0.0%
	11	LeBoeuf Creek	22	7,038	1,640	23.3%
	12	South Branch French Creek	21.3	7,448	0	0.0%
	13	Erie/Presque Isle/Mill Creek	20.7	5,297	1,311	24.7%
	14	Hubbel Run	20.7	4,095	544	13.3%
	15	Sevenmile/Eightmile Creeks	20.2	1,108	0	0.0%
	16	Union City Reservoir	19.5	3,425	386	11.3%
High	17	Sixmile/Fourmile Creeks	19.4	6,793	486	7.2%
	18	Trout Run	19.2	3,820	0	0.0%
	19	Cussewago Creek	18.9	828	0	0.0%
	20	West Branch French Creek	18.9	6,379	0	0.0%
	21	Ashtabula Creek	18.4	2,592	37	1.4%
	22	Falls Run	18	2,825	0	0.0%
	23	Twelvemile Creek	16.5	431	0	0.0%
	24	Brokenstraw Creek	15.2	1,277	0	0.0%
Totals				109,793	13,284	12.1%

Based on the priorities established in Chapter Two, we recommend their implementation as follows:

- Exceptional Priority Corridors: be advanced in the short term, one to three years
 - Crooked Creek Greenway Corridor
 - Raccoon/Turkey Creeks Greenway Corridor
 - French Creek Greenway Corridor
 - Twentymile Creek Greenway Corridor
 - Walnut Creek Greenway Corridor
 - Elk Creek Greenway Corridor
 - Conneaut Creek Greenway Corridor
 - Lake Pleasant Greenway Corridor
- Significant Priority Corridors: be advanced in the mid-term, three to five years
 - Sixteenmile Creek Greenway Corridor
 - Conneauttee Creek/Edinboro Lake Greenway Corridor
 - LeBoeuf Creek Greenway Corridor
 - South Branch French Creek Greenway Corridor
 - Erie/Presque Isle/Mill Creek Greenway Corridor
 - Hubbel Run Greenway Corridor
 - Sevenmile/Eightmile Creeks Greenway Corridor
 - Union City Reservoir Greenway Corridor
- High Priority Corridors: be advanced in the long term, five to ten years
 - Sixmile/Fourmile Creeks Greenway Corridor
 - Trout Run Greenway Corridor
 - Cussewago Creek Greenway Corridor
 - West Branch French Creek Greenway Corridor
 - Ashtabula Creek Greenway Corridor
 - Falls Run Greenway Corridor
 - Twelvemile Creek Greenway Corridor
 - Brokenstraw Creek Greenway Corridor

Each of these proposed Natural Systems Greenway corridors is further described in Chapter Two.

Recreation Greenways Legend

Existing Trail Routes

- Presque Isle Multi-Purpose Trail
- Erie Bayfront to Behrend Trail
- Asbury Woods Greenway Trail
- Seaway Trail- National Scenic Byway
- Corry Junction Greenway Trail

Proposed Trail Routes

- Albion to Conneaut Harbor Trail
- Thornton Junction Trail
- Albion to Girard Trail
- Washington's Trail
- Mill Village to Corry Trail
- East Branch Trail
- Lake Pleasant Connector Trail
- French Portage Trail
- Allegheny & Eastern Rail Corridor
- Freeport Trail

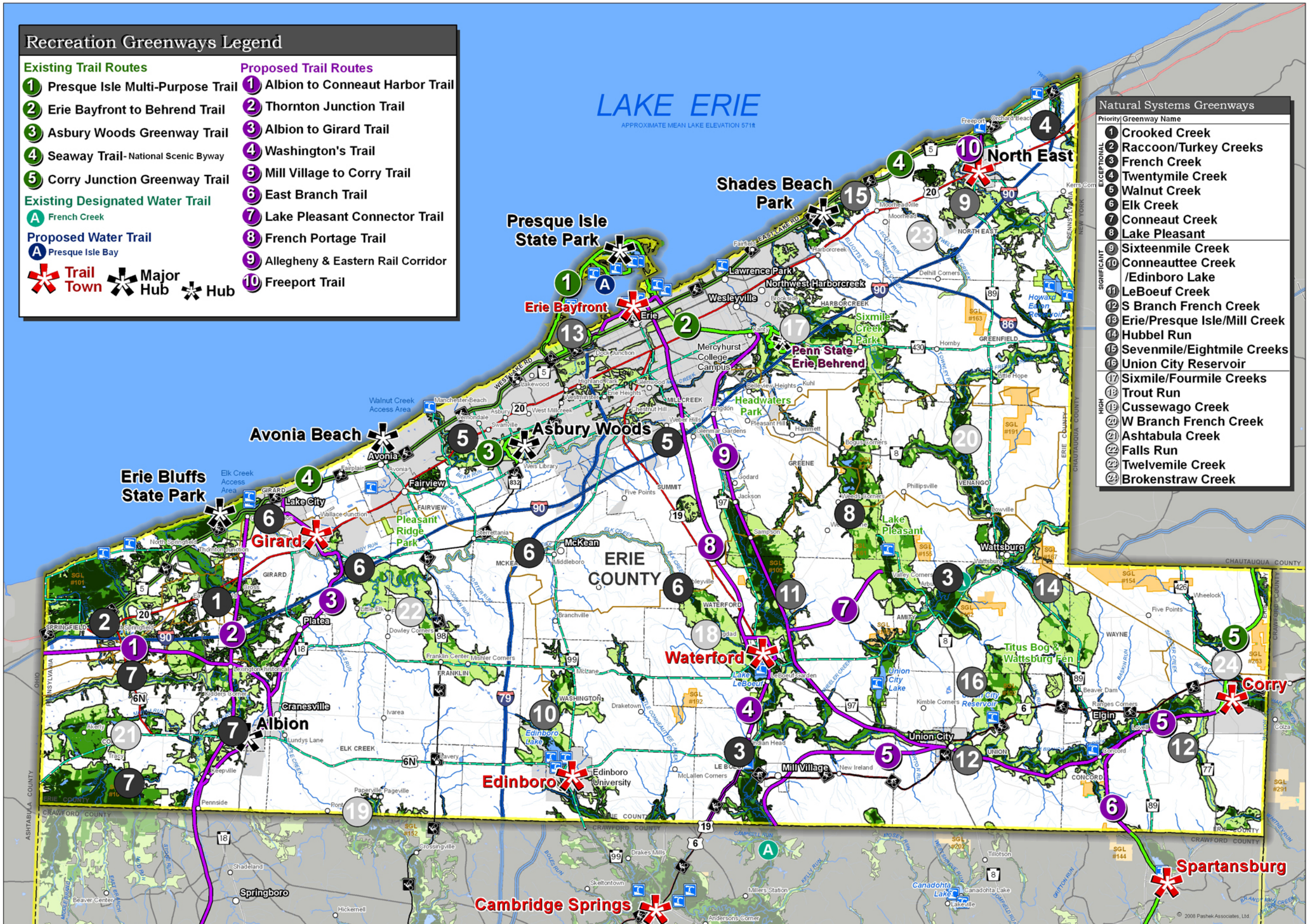
Existing Designated Water Trail

- French Creek

Proposed Water Trail

- Presque Isle Bay

Trail Town
 Major Hub
 Hub



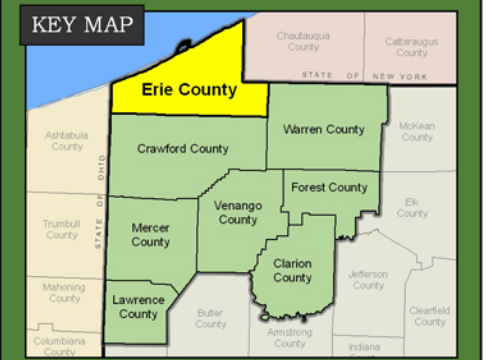
Natural Systems Greenways

Priority	Greenway Name
1	Crooked Creek
2	Raccoon/Turkey Creeks
3	French Creek
4	Twentymile Creek
5	Walnut Creek
6	Elk Creek
7	Conneaut Creek
8	Lake Pleasant
9	Sixteenmile Creek
10	Conneauttee Creek /Edinboro Lake
11	LeBoeuf Creek
12	S Branch French Creek
13	Erie/Presque Isle/Mill Creek
14	Hubbel Run
15	Sevenmile/Eightmile Creeks
16	Union City Reservoir
17	Sixmile/Fourmile Creeks
18	Trout Run
19	Cussewago Creek
20	W Branch French Creek
21	Ashtabula Creek
22	Falls Run
23	Twelvemile Creek
24	Brokenstraw Creek

Northwest Pennsylvania Greenways Plan

for

Clarion County	Lawrence County
Crawford County	Mercer County
Erie County	Venango County
Forest County	Warren County



LEGEND

County Boundary
 Municipal Boundary
 Urban Areas
 Lake
 River
 Interstate
 PA State Route
 US Highway
 PFBC Access Points

DCNR Managed Land

- State Park
- County & Local Parks (Regionally Significant)
- State Game Land
- Other Managed Land

Trails

- Proposed Trail
- Existing Trail
- Snowmobile Trails
- BicyclePA Route
- Proposed Bicycle Route
- Existing Water Trail
- Proposed Water Trail

Natural Systems Greenways

- Exceptional
- Significant
- High

Data Source: ESRI 2005 Data, USGS, PASHEK, PennDOT

Projection: State Plane - NAD 1983, Pennsylvania North, Feet

Scale: 1 inch = 1 mile

North Arrow

Recreation and Transportation Greenways

Existing and potential recreation and transportation greenway corridors were inventoried, as described in Chapter Two, and analyzed in Chapter Three. Through this process, existing recreation and transportation greenways were documented, and recommendations were developed for expanding those offerings.

Land Based Trails

Proposed recreation and transportation greenway corridors in Erie County include:

- 1) Albion to Conneaut Harbor Trail – This proposed trail follows the Bessemer & Lake Erie Railroad corridor linking the Thornton Junction Trail to Albion and to Conneaut, Ohio.

Approximate Length: 15 miles

Associated Municipalities: Conneaut and Springfield Townships as well as Albion and Cranesville Borough

- 2) Thornton Junction Trail – This proposed trail follows the inactive Bessemer & Lake Erie Railroad corridor from the Crawford County line at Pennside to Girard Junction at Erie Bluffs State Park. This trail is part of the western route of the Erie to Pittsburgh Greenway connecting the Seaway Trail and Erie Bluffs State Park to Crawford County and Pymatuning State Park eventually.

Approximate Length: 12.5 miles

Associated Municipalities: Conneaut and Girard Townships

- 3) Albion to Girard Trail – This proposed trail follows an active Bessemer & Lake Erie Railroad corridor from Albion, to Girard and on to Lake Erie Community Park passing through Lake City along the way. The Albion to Girard Trail also connects to the Seaway Trail.

Approximate Length 10 miles

Associated Municipalities: Elk Creek and Girard Townships as well as Cranesville, Platea, Lake City and Girard Boroughs

- 4) Washington Trail – This proposed trail follows the route which commemorates George Washington's first military and diplomatic venture in the fall and winter 1753-1754. Today, the route primarily follows major roads. Within Erie County this trail follows Route 19 from north of Cambridge Springs, Crawford County to Waterford Borough.

Approximate Length 6.8 miles

Associated Municipalities: LeBoeuf and Waterford Townships as well as Waterford Borough

- 5) Mill Village to Corry Trail – This inactive Norfolk Southern Railroad Corridor will connect Mill Village, through Union City, to the City of Corry. This trail could eventually link into the Erie National Wildlife Refuge in Crawford County.

Approximate Length: 19 miles

Associated Municipalities: LeBoeuf, Union, and Concord Townships, along with Mill Village and Union City Boroughs and the City of Corry

- 6) East Branch Trail – This proposed trail connects the City of Corry, via the Mill Village to Corry Junction Greenway Trail, with Clear Lake in Crawford County. Following along an inactive railroad corridor, this trail segment is part of the proposed eastern route of the Erie to Pittsburgh Trail system. The section of this trail within Erie County runs from the Erie County line, northwest of Spartansburg in Crawford County, to the Mill Village to Corry Junction Greenway Trail passing State Game Land No. 144.

Approximate Length: 4 miles

Associated Municipalities: Concord Township and the City of Corry

- 7) Lake Pleasant Connector Trail – This proposed trail connects the Allegheny and Eastern Railroad Corridor to Lake Pleasant following Dublin Road.

Approximate Length 4.5 miles

Associated Municipalities: Waterford Township

- 8) French Portage Trail – This proposed trail follows a former trade route between Fort LeBoeuf, near present day Waterford Borough and Fort Presque Isle. This overland trade route was used to transport goods from Lake Erie to French Creek where they could be canoed down stream to the Allegheny, the Ohio, and the Mississippi Rivers. This trail would connect the City of Erie and Presque Isle State Park to Waterford and on to Crawford County via the Washington Trail.

Approximate Length 17.29 miles

Associated Municipalities: Summit, Waterford and Mill Creek Townships and Waterford Borough as well as the City of Erie

- 9) Allegheny and Eastern Railroad Corridor Trail – This proposed trail follows active Allegheny and Eastern Railroad line from Union City to the Erie Bayfront to Berhend Trail near the Penn State Berhend Campus. This trail links with the Mill Village to Corry trail connecting the towns of Mill Village and Corry to the City of Erie, the Seaway Trail and Presque Isle State Park.

- 10) Freeport Trail – This proposed trail follows Freeport Road, State Route 89 connecting North East Borough with the Seaway Trail, Halli Reid Park, and Freeport Beach.

Approximate Length 1.75 miles

Associated Municipalities: North East Township and North East Borough

Erie County Greenways Plan

Utilizing an average cost range of between \$50 and \$100 per lineal foot for paved ten foot wide shared use path, the following table establishes budgets for the anticipated cost of constructing the trails described above. These costs are based on the following assumptions:

- Construction projects will be publicly bid projects following PA DCNR, PA Department of Labor Industry, and respective County / Municipal Code requirements
- Costs reflect the potential for completing projects with Pennsylvania Department of Transportation funding; from past experience, we know this can increase the project costs by fifteen to twenty percent
- Property acquisition costs have not been incorporated into the projected costs
- Costs are based on 2008 construction figures, future year costs should costs be amortized by 4.5% per year for price escalation
- Costs do not include costs associated with major structures, >100' in length
- Cost projections should be confirmed / revised upon completion of preliminary design
- Costs do not assume in-kind, donated, or volunteer services

Actual construction costs are best projected upon undertaking final design and engineering. Further, implementation costs can be significantly reduced by utilizing in-kind and donated services, grants, foundation awards, and volunteer services. Each of these aspects can further reduce the cost to the implementation partners and reduce their requirement for a cash match. As an example, the Butler Freeport Trail Association, in Butler County, will be constructing 4.5 miles of rail trail on an acquired rail bed. Utilizing the multipliers identified herein, it is estimated the trail will cost between \$1,188,000 and \$1,820,000 to construct. However, through in-kind services being provided by a local municipality to construct the trail, and volunteer services clearing the corridor, they hope to reduce the costs to approximately \$400,000.

The projected costs may seem overwhelming at first. However, to fully understand the financial implications of implementing the projects, one must evaluate scenarios for implementation and funding to completely understand what the project will mean, and cost, to its implementation partners.

Trail	Unbuilt Mileage	Projected Construction Cost using \$50 / LF	Projected Construction Cost using \$100 / LF
Albion to Conneaut Harbor Trail	14.95	\$3,946,800	\$7,893,600
Thornton Junction Trail	15.23	\$4,020,720	\$8,041,440
Albion to Girard Trail	10.15	\$2,679,600	\$5,359,200
East Branch Trail	3.89	\$1,026,960	\$2,053,920
Mill Village to Corry Trail	20	\$5,280,000	\$10,560,000
Freeport Trail	1.75	\$462,000	\$924,000
French Portage Trail	17.29	\$4,564,560	\$9,129,120
Lake Pleasant Connector Trail	4.5	\$1,188,000	\$2,376,000
Allegheny & Eastern Railroad Corridor	20.85	\$5,504,400	\$11,008,800
Washington Trail	6.8	\$1,795,200	\$3,590,400

Personnel and financial resources for the implementation of each trail is not available to meet all of the needs. Therefore, in order to focus and prioritize the resources required to implement the trail segments identified in this plan, we have established the following criteria to prioritize the corridors. This criterion allows us to rank projects based on a common set criteria established to ensure all resources are focused towards those projects, with the greatest potential for public use, public benefit, and implementation.

Trail Prioritization Criteria

1. *Trail Demand:* The degree of public support for the project and anticipated use of the trail, the greater the public support for a project and / or the greater the anticipated use of the trail, the higher the value.
 - a. Degree of public support demonstrated by political support, at public meetings, and through letters of support.
 - b. The projected use of the trail is a measurement of local use based on population in the vicinity of the proposed trail. The greater the projected use, the higher the value.
2. *Land Acquisition:* Trail concepts that require land acquisition to complete receive a higher value because the project would not be feasible if land acquisition is not completed.
 - a. Donations / Low Cost: Significant Value
 - b. Associated with Regional Trail: High Value
 - c. Medium Cost: Medium Value
 - d. High Cost / Not Available: Valuable
3. *Connectivity:* The degree to which the trail connects to existing greenways or destination points or to on-road or pedestrian facilities, the greater the connectivity the higher the value.
 - a. Regional Trail: Significant Value –a part of a regional trail system
recognized by PA DCNR
 - b. Direct Extension: High Value - of existing trail and/or a spur directly into a destination center
 - c. Real Potential: Medium Value - to connect to existing opportunities
 - d. Stand Alone Trail: Valuable
4. *Environmental or Historical Impacts:* Measured by the degree to which the project will have anticipated direct, adverse impacts to protected natural or historical resources, the greater the degree of impact the lower the value.
5. *Benefits to the Public:* The total number of recreation, transportation, education, and other benefits that can be derived by the public from the project, the greater the number of benefits the higher the value.
6. *Funding Opportunity / Partnering:* Considering the factors affecting the project's funding status and the degree to which the project may be allocating funds from a variety of agencies, the greater the funding opportunities the higher the value.
7. *Economic Development Potential:* Trails who connect to proposed trail towns will have the greatest potential to impact the local economy.

Prioritization Levels

- *Exceptional Priority:* most significant priority, focus planning, acquisition, design and construction, and funding resources to implement project.
- *Significant Priority:* second most significant priority, focus planning, acquisition, design and construction resources to provide locals with opportunity to secure funding to implement project.
- *High Priority:* third most significant priority, focus planning, and acquisition resources to plan for future of project.

Trail Corridor	Trail Demand	Land Acquisition	Connectivity	Environmental / Historical Impacts	Benefits to the Public	Funding Opportunities / Partners	Economic Development Potential	Total	Ranking	Priority
East Branch Trail	4	2	4	4	3	2	4	23	1	Exceptional
Corry Trail	4	4	2	4	4	3	2	23	1	
Thorton Junction Trail	4	1	4	3	4	3	2	21	2	
French Portage Trail	4	1	4	2	4	1	3	19	3	
Mill Village to Corry Trail	3	1	3	3	3	2	3	18	4	Significant
Freeport Trail	2	2	2	4	4	1	2	17	5	
Albion to Girard Trail	3	0	4	2	3	0	4	16	6	
Allegheny & Eastern Railroad Corridor	4	0	4	1	3	0	4	16	6	
Washington Trail	3	0	4	1	2	1	3	14	7	High
Albion to Conneaut Harbor Trail	2	1	2	3	2	1	2	13	8	
Lake Pleasant Connector Trail	1	1	1	3	1	1	1	9	9	

Based on this prioritization, we recommend the following:

- Exceptional Priority Corridors: be advanced in the short-term, one to three years
 - East Branch Trail
 - Corry Junction Greenway Trail
 - Thornton Junction Trail
 - French Portage Trail

The Corry Junction Greenway recently received funding to improve the trail surface for the remaining unimproved segment in Pennsylvania, to the New York State line. In addition, the East Branch Trail has also received funding to continue improving unimproved portions of its corridor.

- Significant Priority Corridors: be advanced in the mid-term, three to five years
 - Mill Village to Corry Trail
 - Freeport Trail
 - Albion to Girard Trail
 - Allegheny & Eastern Railroad Corridor
- High Priority Corridors: be advanced in the long-term, five to ten years
 - Washington Trail
 - Ohio to Conneaut Harbor Trail
 - Lake Pleasant Connector Trail

Trail Implementation Steps

Taking a trail from concept through implementation can be a daunting task to a trail. Towards that end, the following is a step-by-step process that helps define the tasks required to advance the implementation of a trail:

1. Identify the potential corridor and any alternate routes.
2. Estimate the demand for the proposed trail. Will it connect local or regional population centers? Will the demographics of the area support the use of the trail?
3. Conduct research at the County Courthouse to gain an understanding of who owns the property.
 - a. If it is currently held by a railroad, contact the railroad to determine if it is likely to be abandoned in the near future – if currently owned by the railroad, then there is the potential to rail bank the corridor. Railbanking must be in accordance with Pennsylvania Act 1990-188, the Rails to Trails Act.
 - b. If the property is owned by various individuals it is likely the corridor has reverted back to private ownership. To confirm this title, research must be completed so a legal opinion to the ownership status can be rendered. If ownership is unclear, one must assume the property has reverted to the adjacent property owners, until proven otherwise.
4. Document the benefits of the proposed trail, including: economic, transportation, recreation, health and wellness, establishing partnerships, and quality of life improvements.
5. Meet with municipal and county officials to discuss your proposal, review the potential alignment, and discuss the benefits the proposed trail can provide to the area.
6. Meet with property owners, and the general public, to solicit input and determine whether property owners support or oppose the proposed trail. For this initial meeting, it is important to listen and identify concerns, issues, and false understanding of what the trail will mean and how it may impact the their property. With this information, you can tailor the concept for the trail to respond to the issues, concerns, and needs of the property owners. Also, by understanding any false pretenses they may have, you can prepare to demonstrate what a trail is / will do, and what a trail isn't / won't do at a second meeting with the property owners. Ask for permission to go onto their property so you can get a better understanding of their concerns. Document this request in writing by having them complete a form at the public meeting.

7. Evaluate the corridor to determine the likelihood of physically establishing a trail on the corridor. Do not go onto the corridor without the permission of the current property owner(s), as you will be trespassing. For portions of the trail you do not have permission to access, utilize aerial photography and other geographic information resources to complete a thorough desktop analysis.
8. Prepare a concept plan for the trail to identify the trail's potential alignment, respond to land owner issues and concerns where possible, and develop an estimate of probable construction costs from this concept plan.
9. Develop management, operations, and security strategies for the continued operation of the trail. Many agencies will be leery of your proposal unless you can demonstrate that there is a long-term commitment and that long-term care can be provided for the proposed trail.
10. Complete a financial analysis to project the capital and operating costs for the proposed trail, and prepare a plan to show how those costs will be covered. Also, project the estimated economic impact of the proposed trail, utilizing data collected from existing trails that are similar in nature to the trail being proposed.
11. Meet with the property owners and the general public a second time to present the proposed concept plan, and review the proposed recommendations for property acquisition; trail alignment; trail development; and trail management, operations, and security. Collect input of proposed recommendations; determine where you have support and where you do not have support for the development of the proposed trail. Determine if logical portions of the trail can be advanced to demonstrate the impacts of the trail and to build support for extensions to the trail.
12. Based on the input received, determine whether there is a feasible demonstration project that can be implemented.
13. Secure rights for public access to the demonstration segment of the proposed trail.
14. Complete final design, prepare construction documents, and obtain required permits for the construction of the proposed demonstration segment.

The old adage that “it is better to ask forgiveness than it is to ask for permission” is a common approach taken by those who do not have experience in advancing trail projects. When this approach is taken to the extreme and trails are developed and / or publicly advertised without the property owners’ involvement and consent, litigation can result, and property owners who otherwise may have been supportive are likely to be alienated.

Ideally, you will want to retain a professional experienced in trail planning and design to assist you throughout the process. The money invested up front will be beneficial throughout the course of implementing the trail. Furthermore, an experienced professional brings experience from other projects, allowing them to avoid pitfalls and recommend successful solutions used on previous projects.

There is nothing more satisfying than having a property owner who was vocally opposed to the proposed trail at the first meeting come to you after the second meeting and thank you for understanding and responding to their concerns. Experience tells us that some property owners are willing to share concerns, be open-minded, and reevaluate their initial decision over the course of the project, while there are others who will not.

Erie County Greenways Plan

Recognizing many of the proposed trail routes in Erie County should begin with the completion of a trail feasibility study for their respective corridor. The following table provides an educated estimate of the costs associated with completing those studies. The budgets proposed here are based on 2008 dollars, and should be increased by 4.5% for each year beyond 2008.

Trail	Unbuilt Mileage	Feasibility Study Cost				Priority
		Title Search	Legal Opinion	Feasibility Study	Total	
East Branch Trail	3.89	<i>not required</i>			\$0	Exceptional
Corry Junction Greenway Trail	6.15	<i>not required</i>			\$0	
Thornton Junction Trail	15.23	\$12,692	\$5,077	\$30,000	\$47,768	
French Portage Trail	17.29	\$14,408	\$5,763	\$60,000	\$80,172	
Mill Village to Corry Trail	20	\$16,667	\$6,667	\$70,000	\$93,333	Significant
Freeport Trail	1.75	<i>on-road / within r.o.w.</i>			\$0	
Albion to Girard Trail	10.15	\$8,458	\$3,383	\$50,000	\$61,842	
Allegheny & Eastern Railroad Corridor	20.85	<i>not required</i>		\$60,000	\$60,000	
Washington Trail	6.8	<i>not required</i>			\$0	High
Albion to Conneaut Harbor Trail	14.95	\$12,458	\$4,983	\$50,000	\$67,442	
Lake Pleasant Connector Trail	4.5	<i>on-road / within r.o.w.</i>			\$0	

These costs may be reduced if there is a well-organized trail constituency group. That group may be able to complete title research and develop the management, operations, and security components of the feasibility study, thereby reducing the overall cost of the plan. Furthermore, the value of their in-kind services can potentially be used to fulfill a portion of the local match requirement, when required by grant funding sources.

This step is of utmost importance. The number one issue facing local trail organizations is that most do not have the capacity to do the work required to determine a particular corridor's viability. Providing these organizations with a completed feasibility study will go a long way towards giving them the information and direction required to move their plan forward. Furthermore, a significant component, both from a cost perspective, and from a needs perspective, is that of completing the legal feasibility portion of the studies. This component includes completing title research and receiving a legal opinion regarding the ownership status of the corridor in question. Without completing this component, the local trail organizations are not able to move forward with their work.

Water Trails

French Creek Water Trail

The French Creek Water Trail was formally promoted by the French Creek Conservancy. Due to the rising expenses associated with maintaining and insuring the trail and a canoe livery, the water trail is no longer marketed in the region, and the canoe livery has not been promoted for approximately ten years. We recommend efforts be taken to re-invest and revive the French Creek Water Trail. This effort may be lead by a public agency, a non-profit private agency, or it may be taken on by the private sector.

We recommend that a local sponsor be identified to work with the PA Fish and Boat Commission to officially recognize French Creek in their water trails program. The County and intersected municipalities should advocate for the trail and work with the private sector to re-establish one or two canoe liveries along the trail. Also, it should be confirmed that all of the access points are under public control, or there is an agreement with the landowner for public access. All of these tasks should be completed before the French Creek Water Trail is again publicly promoted.

Proposed Presque Bay Water Trail

We recommend a local partner be identified to work with the PA DCNR and the Pennsylvania Fish and Boat Commission to establish a water trail around Presque Bay.

Bicycle Routes

Erie County has more established shared use paths, bike routes, and shared roadway designations than most counties in the northwest region. That said, there are opportunities for improvement. We recommend the following:

- PennDOT evaluate the existing designated BicyclePA Routes with representatives of the Erie County cycling community to determine how the existing routes can be improved. Furthermore, PennDOT should be proactive in working with the cycling community and municipalities to determine how to best connect the western side of the City of Erie to Presque Isle State Park. Traffic congestion at Peninsula Drive, and west Sixth Street make bicycling in this area potentially hazardous.
- PennDOT and PA DCNR evaluate ways of improving bicycle safety along Peninsula Drive in the area adjacent to the Tom Ridge Environmental Center. Cyclists heading north into the park often encounter walkers and cyclists traveling in a direction opposite the flow of traffic. This is a particularly dangerous situation, as there is a blind curve heading north, thus preventing cyclists from realizing the potential hazard that lies ahead.
- The Erie County Department of Planning should work with local cyclists to prepare a Bicycle Suitability Map of Erie County. This requires existing bicycling opportunities to be evaluated to determine the respective cycling opportunity's level of comfort for the average bicyclist. Bike Pittsburgh, a non-profit bicycle advocacy group, recently completed this analysis and a corresponding map. The map documents those routes which are considered to be comfortable bicycling routes, those which are cautionary routes, and where existing bicycle lanes and shared use paths are present. In the City of Pittsburgh, this map has become very popular with the bicycling community and with those visiting the City who wish to bicycle in and around the City.

- Erie-Western PA Port Authority continues their efforts to promote and enhance pedestrian and bicycle activities along the Erie Bayfront. In particular, short-term efforts should focus on developing a wayfinding system to direct pedestrians and cyclists through the Erie Bayfront, and to and from attractions that are located off of the existing trails and routes.

Snowmobile Trails

Erie County has a well established network of snowmobile trails thanks to the efforts of the Erie Crawford Snowmobile Alliance. In interviewing representatives of the association we learned these trails primarily are located on private property and that the Association has verbal agreements with the property owners for use of the trails. We recommend the Erie County Department of Planning assist the Association in formalizing written easement agreements for the snowmobile trails. The Pennsylvania Land Trust Association provides an excellent Model Trail Easement and companion commentary document explaining each of the clauses contained in the agreement. These documents can be obtained from http://conserveland.org/model_documents/.

Trail Town Opportunities

It should be the goal of Erie County's recreation and transportation greenways to attract every trail user to these main street districts where they can find the goods and services they need, while spending money in our towns. Therefore, we recommend the Erie County Department of Planning educate and coordinate the planning and development of trail towns with applicable municipalities. Several Erie County municipalities are ideally situated to capitalize on a trail town concept, to maximize the economic benefits that can come with trail development.

In 2005, the Allegheny Trail Alliance published "Trail Towns – Capturing Trail Based Tourism, a Guide for Pennsylvania Communities". The development of this guide was funded by the Regional Trail Alliance and the Pennsylvania Department of Conservation and Natural Resources. The guide provides step-by-step guidance in preparing a blueprint to provide goods and services required by trail users and promoting trail friendly towns.

Trail Towns

- Entice trail users to get off the trail and into your town
- Welcome trail users to your town by making information about the community readily available at the trail
- Make a strong and safe connection between your town and the trail
- Educate local businesses on the economic benefits of meeting the needs of trail tourists
- Recruit new businesses or expand existing ones to fill gaps in the goods or services that trail users need
- Promote the "trail friendly" character of the town
- Work with neighboring communities to promote the entire trail corridor as a tourist designation

Towards that end, the following communities have been identified as potential Trail Towns, based on the criteria established in Chapter 3, because of the proximity to existing or proposed trail corridors.

Potential Trail Towns

- City of Corry
- City of Erie and the Erie Bayfront

- Edinboro Borough
- Girard Borough
- North East Borough
- Waterford Borough

Trail Towns provide goods and services desired by trail users. These goods and services may include bicycle sales and service, casual restaurants, bed and breakfasts, ice cream shops, convenience stores, restrooms, outfitters, museums, art galleries, gift shops, clothing stores, camera stores, postal services, banking services, and guide services, to name a few. It is important that goods and services can be procured in trail-friendly environments, meaning that they encourage, not discourage, clientele that may have just come off the trail. Provide ample opportunities to secure their bicycles in bike-friendly bike racks. Provide a shoe brush outside your doorway to allow them to clean the mud off their shoes before entering your establishment. Provide a restroom with ample space and necessities, such as towels and wash clothes, to allow them to clean-up so they can feel comfortable while at your location. Finally, sell items that trail users need while out on the trail or as mementos of their visit.

Creating a Trail Town involves organizing, educating, promoting, and economic restructuring. It results in the preparation of a Trail Town Master Plan that pulls it all together by providing a gateway moment, creating a sense of place, developing a welcoming atmosphere, establishing the right mix of services, and promoting trail-oriented events.

This process should be lead by the local Chambers of Commerce and /or Merchants Associations, in cooperation with their respective municipalities. The development of Trail Towns will require new partnerships to be developed by stakeholders in each community. Developing a trail town master plan will require monthly meetings of the stakeholders and should involve quarterly meetings of trail town catalysts to prepare a coordinated approach.

As a first step, each community must understand their customers. What do trail users want when they come to town; what do they need; does someone in town have the ability to meet that need? How much money will they spend; what are their dining and shopping preferences; how many trips do they make during the course of the year; etc.?

Next, complete an inventory of the community and its business community to determine if there is the ability to meet the needs of the trail users, or if the community needs to encourage the development of a business to meet an unmet need. With this information, a community can develop a trail town marketing guide, which can be provided to trail users. This guide should accomplish several tasks. First, it should provide the trail user with information regarding the trail, provide maps of the trail segments, and locate those who offer the goods and services that the trail users desire. The guide should focus on the qualities of your community that make it unique. It can provide an overview of the history of the community and a history of features located along and adjacent to the trail corridor. Further, advertising space can be sold in the guide to those who offer goods and services of interest to trail users.

Upon completing the self assessment recommended in the Trail Town guide, a community will be able to identify those businesses that cater to trail users. Then, a wayfinding signage program can be developed to assist trail users in finding the goods and services they need and to allow those in the community to find the trail and trail access opportunities. At this time, the community should also be aware of the goods and services that are desired but not being provided in the community. With this information, community development efforts can focus on attracting and expanding businesses that can fill those voids. For further details in preparing a detailed trail town master plan, refer to “Trail Towns – Capturing

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Trail Based Tourism, a Guide for Pennsylvania Communities,” published by the Allegheny Trail Alliance.

Potential Trail Town Advocates

The following agencies should be approached to determine their interest in implementing and promoting their respective communities as trail towns in Erie County:

Agency	Address	Telephone
VisitErie	208 East Bayfront Parkway Suite 103 Erie, PA 16507	(814) 454-1000
Corry Area Chamber of Commerce	221 N. Center Street Corry, PA 16407	(814) 665-9925
Corry Community Development	Corporation 1524 Enterprise Road Corry, Pennsylvania 16407	(814) 664-3884
Erie Regional Chamber and Growth Partnership	208 E Bayfront Pkwy # 100 Erie, PA 16507	(814) 454-7191
Girard Lake City Chamber of Commerce	522 Main St E Girard, PA 16417	(814) 774-3535
North East Chamber of Commerce	21 S Lake St North East, PA 16428	(814) 725-4262
Edinboro Chamber of Commerce	131 Erie St Edinboro, PA 16412	(814) 734-6561

Land Use Tools

Proposed natural and recreation & transportation greenway corridors will pass through public land, such as state and county parks, state game lands, municipal parks, and other public lands. In these areas, the corridors are generally conserved for the intended use. However, many natural and recreation & transportation greenway corridors will pass through privately-owned land. Many municipalities in Erie County have very basic provisions to promote the conservation of the natural system resources. These provisions typically address those features, such as floodplains and wetlands, which are currently protected by a higher authority.

In addition, some municipalities have steep slope conservation provisions, and for the communities located along the Lake Erie bluffs, those municipalities have adopted bluff setback requirements. These provisions serve as good building blocks that can be further expanded upon in order to conserve the natural systems greenway corridors identified in the vision for Erie County greenways.

Bluff Setback Requirements

Municipality	Residential	Commercial	Industrial
Springfield Township	100	150	200
Girard Township	200	200	200
Lake City Borough	150	150	150
Fairview Township	100	100	100
Millcreek Township	50	75	100
City of Erie	Currently being considered.		
Lawrence Park Township	50	75	100
Harborcreek Township	50	75	100
North East Township	50	75	100

We recommend the Erie County Department of Planning work with local municipalities and their elected officials to educate them on the value of strengthening their ordinances, to be proactive in conserving natural systems greenways corridors, by encouraging the conservation of riparian buffers (streamside setbacks); steep slope margins; interior forest habitat; woodlands; seasonal high water table soils; heritage trees; and habitat of rare, threatened, or endangered species.

The strengthening of these ordinances is highly recommended to protect the health, safety, and welfare of Erie County residents; to reduce flooding and other stormwater management problems currently being experienced by the County's municipalities; and to reduce the costs of providing public services to maintain and operate the County's and municipalities' build infrastructure.

Model Ordinance Recommendations

Pocopson Township, in Chester County, has adopted a Natural Resource Protection Ordinance that was developed to conserve natural system greenway corridors, within the Township, in the context of addressing the goals noted above. The following table provides a summary of their conservation requirements:

Pocopson Township

Resource Element	Pocopson Township
	<i>Maximum Disturbance</i>
Floodplain Conservation District	0%
Very Steep Slopes	10%
Steep Slopes	25%
Steep Slope Margins	25%
Wetlands	0%
Inner Riparian Buffer	0%
Outer Riparian Buffer	15%
Seasonal High Water Table Soils	20%
Heritage Trees	0%
Rare Species Sites	0%
Exceptional Natural Areas	10%
Forest Interior Habitat	10%
Woodlands	5-25%, depending on classification

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In addition, the following models should be consulted as land use tools are being modified:

Title	Source	For Additional Information
Vegetative Best Management Practices - A Manual For Pennsylvania/Lake Erie Bluff Landowners	Sea Grant Pennsylvania	seagrant.psu.edu/publications/erosion.htm
Pennsylvania Standards for Residential Site Development	Penn State University, Pennsylvania Housing Research / Resource Center	www.engr.psu.edu/phrc/Land%20Development%20Standards.htm
Better Development Models for Pennsylvania	The Conservation Fund and Pennsylvania Department of Conservation and Natural Resources	www.pagreenways.org/brc/grants/2005/BetterModels.pdf
Resource Protection Ordinance	Resource Protection Ordinance	Pocopson Township PO Box 1 Pocopson, PA 19366
Model Conservation Ordinance	Pennsylvania Land Trust Association	http://conserveland.org
Model Riparian Forest Buffer Protection Ordinance	Pennsylvania Land Trust Association	http://conserveland.org
Model Stream Corridor Buffer Easement	Pennsylvania Land Trust Association	http://conserveland.org
Model Trail Easement Agreement	Pennsylvania Land Trust Association	http://conserveland.org
Model Fishing Access Agreement	Pennsylvania Land Trust Association	http://conserveland.org
Water Quality Improvement Easement	Pennsylvania Land Trust Association	http://conserveland.org
Stream Corridor Protection Ordinance - Upper Salford Township	Delaware Valley Regional Planning Commission	www.dvrpc.org/planning/community/protectiontools/ordinances.htm
Forestry Management Model Regulations	Penn State University School of Forestry	pus.cas.psu.edu/freepubs/pdfs/uh171.pdf

Furthermore, we recommend the Erie County Department of Planning complete audits of existing municipal zoning and subdivision and land development ordinances of Erie County's municipalities. We also recommend they provide recommendations to each municipality on how their ordinances can be strengthened the conservation of natural system greenway corridors and implementation of recreation and transportation greenways.

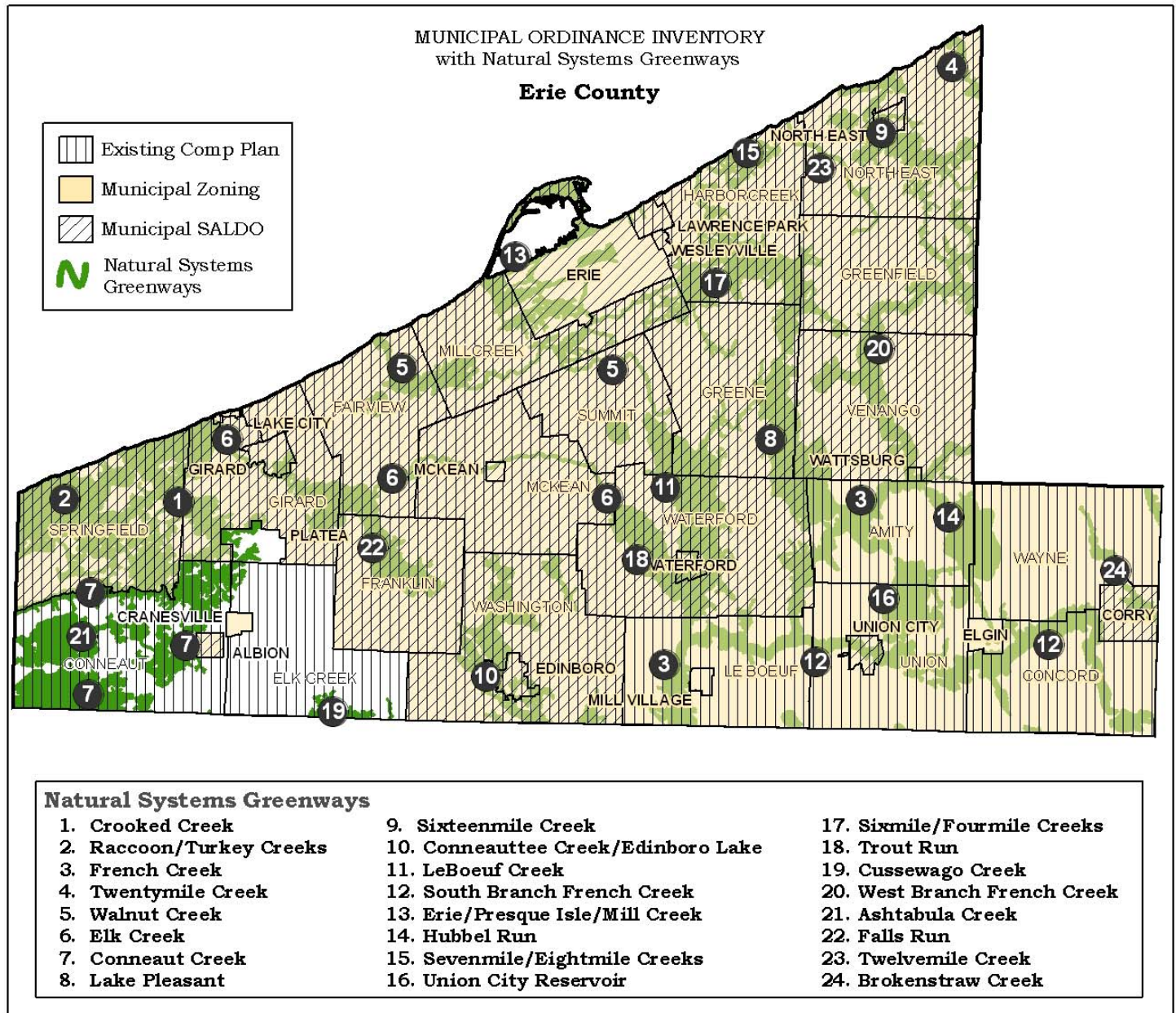
Specifically:

- Steep slope conservation provisions should not only include provisions for those slopes over 25%, but also for those slopes which are between 15% and 25
- Require conservation of streamside buffers consistent with the Pennsylvania Department of Environmental Protection's National Pollutant Discharge Elimination System (NPDES) process. This process recommends that three zones be considered:
 - Zone A: 0 - 25' of center
 - Zone B: 25' - 100' of center
 - Zone C: 100' - 125' of center

We recommend no disturbance be permitted in Zone A, disturbance be limited to 15% in Zone B, and disturbance be limited to 30% in Zone C.

- Conservation of other natural system elements, as included in the Pocopson Ordinance cited earlier.
- Improve pedestrian and bicycling opportunities by requiring sidewalks in all development.
- Requiring interfaces between transit and pedestrian and bicycling facilities, such as secure bike lockers, bike racks, and on-board bike racks on buses.
- Requiring commuter bicycle support facilities in all commercial, industrial, and mixed use development, such as providing shower and locker room facilities, secure bike racks, and bicycle lockers.
- Requiring the establishment of bicycle lanes in residential and commercial subdivisions.

We recommend these audits be conducted based on the priorities established for the natural system greenway corridors. Therefore, those municipalities that are included in the Exceptional Priority natural system greenway corridors should be audited first.



Note: Erie County administers a Subdivision and Land Development Ordinance (SALDO) applicable to those municipalities that do not have a SALDO of their own.

Priorities for Municipal Planning Efforts

Municipal Ordinance Audits to be Conducted in the Short-Term (1 to 3 years)

Utilizing this philosophy, the following municipal ordinances should be reviewed in the short-term, in one-to-three years, as they contain exceptional priority greenway corridors:

Municipality	Comprehensive Plan	Zoning	SALDO	Natural System Greenway Priorities		
Boroughs						
Albion Borough	✓	✓	by County	7		
Girard Borough	✓	✓	✓	6		
Lake City Borough	✓	✓	✓	6		
McKean Borough	-	✓	✓	6		
Platea Borough	-	-	by County	1		
Wattsburg Borough	✓	✓	by County	3		20
Townships						
Amity Township	✓	✓	by County	3	14, 16	
Conneaut Township	✓	-	by County	7		21
Fairview Township	✓	✓	✓	5, 6		
Girard Township	✓	✓	✓	1, 6		
Greene Township	✓	✓	✓	8	11	17
LeBoeuf Township	✓	✓	by County	3	12	18
McKean Township	✓	✓	✓	6		
Millcreek Township	✓	✓	✓	5	13	
North East Township	✓	✓	✓	4	9	23
Springfield Township	✓	✓	✓	1, 2, 7		
Summit Township	✓	✓	✓	5	11	
Venango Township	✓	✓	✓	3, 8		20
Waterford Township	✓	✓	✓	6	11	18

For those municipalities that do not have land subdivision and land development ordinances and that fall under the requirements of the Erie County Subdivision and Land Development Ordinance, we recommend the County Planning Commission consider amending the County SALDO to include provisions for the conservation of natural system greenway corridors. These requirements would be applicable to the following municipalities that rely on the County's SALDO:

- Cranesville Borough
- Elgin Borough
- Mill Village Borough
- Platea Borough
- Wattsburg Borough
- Amity Township
- Concord Township
- Conneaut Township
- Elk Creek Township
- LeBoeuf Township
- Union Township
- Wayne Township

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These communities represent approximately one third of the municipalities in Erie County. Therefore, we recommend this review and adoption of revisions to the Erie County Subdivision and Land Development requirements be completed in the short-term, 1-to-3 years.

Municipal Ordinance Audits to be Conducted in the Mid Term (3 to 5 years)

The following municipal ordinances should be reviewed in the mid-term, in three-to-five years, as they contain significant priority greenway corridors:

Municipality	Comprehensive Plan	Zoning	SALDO	Natural System Greenway Priorities		
Cities				Exceptional	Significant	High
City of Erie	-	✓	✓		13	
Boroughs						
Edinboro Borough	✓	✓	✓		10	
Elgin Borough	-	✓	by County		12	
North East Borough	✓	✓	✓		9	
Union City Borough	✓	✓	✓		12	
Waterford Borough	✓	✓	✓		11	18
Townships						
Concord Township	✓	✓	by County		12	
Harborcreek Township	✓	✓	✓		15	17
Lawrence Park Township	✓	✓	✓		13	
Union Township	✓	✓	by County		12, 16	
Washington Township	✓	✓	✓		10	
Wayne Township	✓	✓	by County		12, 14	24

Municipal Ordinance Audits to be Conducted in the Long Term (5 to 10 years)

The following municipal ordinances should be reviewed in the short-term, in five-to-ten years, as they contain high priority greenway corridors:

Municipality	Comprehensive Plan	Zoning	SALDO	Natural System Greenway Priorities		
Cities				Exceptional	Significant	High
City of Corry	✓	✓	✓			24
Townships						
Elk Creek Township	✓	-	by County			19
Franklin Township	✓	✓	✓			22
Greenfield Township	✓	✓	✓			17, 20

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The following Municipalities do not have natural system greenway components. However, we recommend they be audited in the long-term, 5-to-10 years, as there are other important components such as sidewalk requirements, pedestrian and bicycle facility development, etc., that should be considered as land is developed within these municipalities.

Municipality	Comprehensive Plan	Zoning	SALDO	Natural System Greenway Priorities		
Boroughs						
Cranesville Borough	-	✓	by County			
Mill Village Borough	✓	✓	by County			
Wesleyville Borough	✓	✓	✓			

Upon completing these audits, the municipalities should be furnished with recommendations regarding how their specific ordinances can be improved to advance the greenways network established through this planning process.

Stormwater Management and Water Quality

Proper stormwater management and water quality management are two important issues that impact many facets of daily life in Erie County.

From an analysis of The National Climatic Data Center, we know that the Northwestern Pennsylvania Counties are ranked as follows when it comes to total number of flood events between 1950 and 2000. Crawford and Erie Counties are ranked in the top half of the sixty-seven counties in Pennsylvania, while the remaining counties in the region are ranked in the bottom half.

County	Total No. Flood Events	County Ranking (67 Total)	Annual Avg. Frequency
Crawford	68	12th	1.36
Erie	50	25th	1.00
Venango	42	36th	0.84
Clarion	35	41st	0.70
Mercer	35	43rd	0.70
Warren	30	50th	0.60
Lawrence	25	55th	0.50
Forest	14	64th	0.28

Source: http://pasc.met.psu.edu/PA_Climatologist/extreme/Floods/PEMA_fl

We recommend the Pennsylvania Department of Environmental Protection work with local municipalities in Erie County to educate them on the benefits of stormwater management practices, including the Pennsylvania Stormwater Best Management Practices Manual.

The philosophy of managing stormwater has changed over the years. Initially, stormwater management began with ensuring water was diverted around development. This had negative consequences, as we have learned, that increases in stormwater runoff volumes caused by downstream flooding. The remedy was to introduce requirements to maintain the rate of stormwater runoff from a site to pre-development conditions, despite an increase in impervious area. The consequence of this was that stormwater was being held and released at the pre-development rate, reducing downstream flooding impacts. However,

this also created its own set of problems. First, we have learned that water quality was being negatively impacted as sediment and chemicals were not being filtered from the stormwater. Therefore, our streams which received the stormwater were being polluted, and the water quality was being impaired. Second, we realized that due to an increase in impervious areas, and development of stormwater ponds that released water directly to streams, our water tables were not being adequately recharged. Therefore, current stormwater practices not only take into consideration the management of stormwater runoff rates, but they also take into consideration volume, infiltration, and water quality.

Therefore, a goal of current stormwater management practices is to retain the rates and volumes of stormwater runoff to pre-development levels, infiltrate stormwater into the site when possible, and maintain and / or improve water quality of the receiving stream by filtering chemicals and sediment from the water before it reaches its receiving stream and / or water body.

The purpose of the Pennsylvania Stormwater Best Management Practices (BMP) Manual is to provide guidance, options, and tools that can be used to protect water quality; enhance water availability; and reduce flooding potential through effective stormwater management. The manual presents design standards and planning concepts for use by local authorities, planners, land developers, engineers, contractors, and others involved with planning, designing, reviewing, approving, and constructing land development projects.

The manual describes a stormwater management approach to the land development process that strives to prevent or minimize stormwater problems through comprehensive planning and development techniques, and to mitigate any remaining potential problems by employing structural and non-structural best management practices. Manual users are strongly encouraged to follow the progression of prevention first and mitigation second. Throughout the chapters of the manual, the concept of an integrated stormwater management program, based on a broad understanding of the natural land and water systems, is a key and recurring theme. Such a thorough understanding of the natural systems demands an integrated approach to stormwater management.

The manual provides guidance on managing all aspects of stormwater: rate, volume, quality, and groundwater recharge. Controlling the peak rate of flow during extreme rainfall events is important, but it is not sufficient to protect the quality and integrity of Pennsylvania streams. Reducing the overall volume of runoff during large and small rainfall events, improving water quality, and maintaining groundwater recharge for wells and stream flow are all vital elements of protecting and improving the quality of Pennsylvania's streams and waterways.

We recommend PA DEP, Erie County Department of Planning, and the local municipalities identify opportunities within the natural system greenway corridors, in which demonstration projects can be implemented to illustrate this current philosophy in stormwater best management practices.

We recommend efforts initially be focused on those areas that have known flooding issues; those areas where it is important to ensure the economic viability of existing resources, such as the steelhead fisheries in the County; to maintain existing high quality and exceptional value water resources; and in headwater areas as their conservation will assist in regulating downstream flooding.

Therefore, we recommend stormwater and water quality efforts be focused in the following areas:

- | | | |
|---|--|----------------------------------|
| - | <u>Exceptional Priority Greenway Corridors</u> | <u>Water Resource Components</u> |
| | French Creek Greenway | French Creek |
| | Crooked Creek / Erie Bluffs Greenway | Crooked Creek |
| | Walnut Creek Greenway | Walnut Creek / Thomas Run |
| - | <u>Significant Priority Greenway Corridors</u> | <u>Water Resource Components</u> |
| | Lake Pleasant Greenway | Lake Pleasant Outlet |
| | Erie / Presque Isle / Mill Creek Greenway | Mill Creek |
| - | <u>High Priority Greenway Corridors</u> | <u>Water Resource Components</u> |
| | Elk Creek Greenway | Elk Creek |
| | Brokenstraw Creek Greenway | Brokenstraw Creek / Spring Creek |

Fossil Fuel Extraction and Renewable Energy Sources

Given the recent rise in oil costs, efforts to identify new sources of fossil fuel and renewable energy opportunities have increased.

In the past few years research has determined that it may be financially feasible to extract natural gas from the Marcellus Shale field located in the Appalachian region. The Marcellus Shale, also referred to as the Marcellus Formation, is a Middle Devonian-age black, low density, carbonaceous shale that occurs in the subsurface beneath much of Ohio, West Virginia, Pennsylvania, and New York. Small areas of Maryland, Kentucky, Tennessee, and Virginia are also underlain by the Marcellus Shale.

In early 2008, Terry Englander, a geosciences professor at The Pennsylvania State University, and Gary Lash, a geology professor at The State University of New York at Fredonia, surprised everyone with estimates that the Marcellus Shale might contain more than 500 trillion cubic feet of natural gas. Using some of the same horizontal drilling and hydraulic fracturing methods that had previously been applied in the Barnett Shale of Texas, perhaps ten percent of that gas might be recoverable. That volume of natural gas would be enough to supply the entire United States for about two years and have a wellhead value of about one trillion dollars.

Extracting the natural gas from the Marcellus Shale requires deep vertical and horizontal wells, and associated support facilities. Care must be taken in locating these facilities in a manner which will not negatively impact the natural resources of the Northwestern Pennsylvania Region.

The harnessing of wind energy in Pennsylvania is another rapidly growing industry. Although it is a renewable resource, it is not without controversy. Many are concerned about a commercial wind farm's impact on migratory birds and their visual intrusion into the landscape, while others see it as an opportunity to reduce our dependency on fossil fuels.

With the passage of Pennsylvania's Growing Greener II initiative, \$80 million over four years will be provided to expand the grant program earmarked for wind energy in the state. A public dialogue and input process is paramount in ensuring commercial wind farms are located on sites where the turbines will not have a significant negative impact on wildlife, migratory birds, residential areas, and scenic views.

The Erie County bayfront and bluffs are considered to offer marginal or fair wind harnessing opportunities. Several wind farms have been successfully constructed in Pennsylvania, in other areas with

marginal opportunities. Therefore, we expect these areas will be further studied to determine the feasibility of constructing wind farms in these areas.

Natural gas extraction from the Marcellus Shale and the harnessing of wind energy may be important factors to the region's economy in the future. Therefore, efforts should be taken to ensure they can occur in harmony with the natural system greenways proposed herein.

The GIS data assembled for this project is an important resource that can aid in identifying where natural gas extraction and the harnessing of wind energy can occur in harmony with the natural system resources of the Northwest Region.

Additional Recommendations for the Conservation of Natural Systems Corridors

In recent County Natural Heritage Inventories, recommendations related to the conservation of Natural Heritage Inventory sites are made. Those recommendations can also be adapted and applied to the Natural Systems Greenway corridors proposed herein.

Approaches to protecting Natural Systems corridors are wide-ranging and factors such as land ownership, time constraints, and tools/resources available should be considered when prioritizing protection of these sites. Prioritization works best when incorporated into a long-term, large-scale plan, however, opportunities may arise that do not conform to a plan and the decision on how to manage or protect a natural heritage area may be made on a site-by-site basis. Keep in mind that personnel from the Pennsylvania Natural Heritage Inventory Program or staff from state natural resource agencies are available to discuss more specific options as needed.

1. Consider conservation initiatives for Natural Systems corridors on private land.

Conservation easements protect land while leaving it in private ownership. An easement is a legal agreement between a landowner and a conservation or government agency that permanently limits a property's use in order to protect its conservation values. It can be tailored to the needs of both landowner and conservation organization and will not be extinguished with new ownership. Tax incentives may apply to conservation easements.

Lease and management agreements also allow the landowner to retain ownership and temporarily ensure protection of land. There are no tax incentives for these conservation methods. A lease to a land trust or government agency can protect land temporarily and ensure that its conservation values will be maintained. This can be a first step to help a landowner decide if they want to pursue more permanent protection methods. Management agreements require landowner and land trust to work together to develop a plan for managing resources such as plant or animal habitat, protection of a watershed, forest or agricultural land with the land trust offering technical expertise.

Land acquisition by a conservation organization can be at fair market value or as a bargain sale in which a sale is negotiated for a purchase price below fair market value with tax benefits that reduce or eliminate the disparity. Identify areas that may be excellent locations for new county or township parks. Sites that can serve more than one purpose such as wildlife habitat, flood and sediment control, water supply, recreation, and environmental education would be particularly ideal. Private lands adjacent to public lands should be examined for acquisition when a NHA is present on either property and there is a need of additional land to complete protection of the associated natural features.

Fee simple acquisition is when a buyer purchases land outright and has maximum control over the use and management of the property and its resources. This conservation initiative is appropriate when the property's resources are highly sensitive and protection cannot be guaranteed using other conservation approaches.

Unrestricted donations of land are welcomed by land trusts. The donation of land entitles the donor to a charitable deduction for the full market value, as well as a release from the responsibility of managing the land. If the land is donated because of its conservation value, the land will be permanently protected. A donation of land that is not of high biological significance may be sold, with or without restrictions, to a conservation buyer and the funds used to further the land trust's conservation mission.

Local zoning ordinances are one of the best-known regulatory tools available to municipalities. Examples of zoning ordinances a municipality can adopt include: overlay districts where the boundary is tied to a specific resource or interest such as riverfront protection and floodplains, and zoning to protect stream corridors and other drainage areas using buffer zones.

2. *Prepare management plans that address species of special concern and natural communities.*
Many of the already-protected portions of the Natural Systems corridors are in need of additional management recommendations to ensure the continued existence of the associated natural elements. Incorporate site-specific recommendations into existing management plans or prepare new plans. Recommendations may include: removal of exotic plant species; leaving the area alone to mature and recover from previous disturbance; creating natural areas within existing parks; limiting land-use practices such as mineral extraction, residential or industrial development, and agriculture; and implementing sustainable forestry practices. For example, some species simply require continued availability of a natural community while others may need specific management practices such as canopy thinning, mowing, or burning to maintain their habitat requirements.

Existing parks and conservation lands provide important habitat for plants and animals at both the county level and on a regional scale. For example, these lands may serve as nesting or wintering areas for birds or as stopover areas during migration. Management plans for these areas should emphasize a reduction in activities that fragment habitat. Adjoining landowners should be educated about the importance of their land as it relates to habitat value, especially for species of special concern, and agreements should be worked out to minimize activities that may threaten native flora and fauna.

3. *Protect bodies of water.*
Protection of creeks, rivers, wetlands and reservoirs is vital for ensuring the health of human communities and natural ecosystems, especially those that protect biodiversity, supply drinking water, and are attractive recreational resources. Many rare species, unique natural communities, and locally significant habitats occur in wetlands and water bodies and are directly dependent on natural hydrological patterns and water quality for their continued existence. Ecosystem processes also provide clean water supplies for human communities and do so at significant cost savings in comparison to water treatment facilities. Hence, protection of high quality watersheds is the only way to ensure the viability of natural habitats and water quality. Scrutinize development proposals for their impact on entire watersheds, not just the immediate project area. Cooperative efforts in land use planning among municipal, county, state, and federal agencies, developers, and residents can lessen the impact of development on watersheds.

4. *Provide for buffers around Natural Heritage Areas.*

Development plans should provide for natural buffers between disturbances and NHAs. Disturbances may include construction of new roads and utility corridors, non-sustainable timber harvesting, and fragmentation of large pieces of land. Storm runoff from these activities results in the transport of nutrients and sediments into aquatic ecosystems. County and township officials can encourage landowners to maintain vegetated buffers within riparian zones. Vegetated buffers (preferably of PA-native plant species) help reduce erosion and sedimentation and shade/cool the water. This benefits aquatic animal life, provides habitat for other wildlife species, and creates a diversity of habitats along the creek or stream. Staff at the Pennsylvania Natural Heritage Program (PNHP) or natural resources agencies can provide further guidance regarding buffer considerations appropriate for various kinds of natural resources within NHAs, e.g., barren community, wetland, water body, or forest.

Watersheds or sub-watersheds where natural communities and species of special concern occur should be viewed as areas of sensitivity, although all portions of the watershed may not be zones of potential impact. As an example, conserving natural areas around municipal water supply watersheds provides an additional protective buffer around the water supply, habitat for wildlife, and may also provide low-impact recreation opportunities.

5. *Reduce fragmentation of the landscape surrounding natural heritage areas.*

Encourage development in sites that have already seen past disturbances. The reclamation of previously disturbed areas, or brownfields development, for commercial and industrial projects presents one way to encourage economic growth while allowing ecologically sensitive areas to remain undisturbed. For example, reclaimed surface mines can be used for wind and other development when feasible. Cluster development can be used to allow the same amount of development on much less land and leave much of the remaining land intact for wildlife and native plants. By compressing development into already disturbed areas with existing infrastructure (villages, roads, existing ROW's), large pieces of the landscape can be maintained intact. If possible, networks or corridors of woodlands or greenspace should be preserved linking sensitive natural areas to each other.

Care should be taken to ensure that protected natural areas do not become "islands" surrounded by development. In these situations, the site is effectively isolated and its value for wildlife is reduced. Careful planning can maintain natural environments and plants and animals associated with them. A balance between growth and the conservation of natural and scenic resources can be achieved by guiding development away from the most environmentally sensitive areas.

6. *Encourage the formation of grassroots organizations.*

County and municipal governments can do much of the work necessary to plan for the protection and management of natural areas identified in this report. However, grassroots organizations are needed to assist with obtaining funding, identifying landowners who wish to protect their land, and providing information about easements, land acquisition, and management and stewardship of protected sites. Increasingly, local watershed organizations and land trusts are taking proactive steps to accomplish conservation at the local level. When activities threaten to impact ecological features, the responsible agency should be contacted. If no agency exists, private groups such as conservancies, land trusts and watershed associations should be sought for ecological consultation and specific protection recommendations.

7. *Manage for invasive species.*

Invasive species threaten native diversity by dominating habitat used by native species and disrupting the integrity of the ecosystems they occupy. Management for invasive depends upon the extent of establishment of the species. Small infestations may be easily controlled or eliminated but more well established populations might present difficult management challenges. Below is a list sources for invasive species information.

- The *Mid-Atlantic Exotic Plant Pest Council* (MA-EPPC) is a non-profit (501c3) organization dedicated to addressing the problem of invasive exotic plants and their threat to the Mid-Atlantic region's economy, environment, and human health. The MA-EPPC provides leadership; represents the Mid-Atlantic region at national meetings and conferences; monitors and disseminates research on impacts and controls; facilitates information development and exchange; and coordinates on-the-ground removal and training. A membership brochure is available as a PDF file at <http://www.ma-eppc.org>.
- Several excellent Web sites exist to provide information about invasive exotic species. The following sources provide individual species profiles for the most troublesome invaders, with information such as the species' country of origin, ecological impact, geographic distribution, as well as an evaluation of possible control techniques.
 - The Nature Conservancy's Weeds on the Web at <http://tncweeds.ucdavis.edu/>
 - The Virginia Natural Heritage Program's invasive plant page at <http://www.dcr.state.va.us/dnh/invinfo.htm>
 - The Missouri Department of Conservation's Missouri Vegetation Management Manual at <http://www.conservation.state.mo.us/nathis/exotic/vegman/>
 - U.S. Department of the Interior, National Park Service invasive species monitoring resources at <http://science.nature.nps.gov/im/monitor/invasives.htm>
- The following site is a national invasive species information clearinghouse listing numerous other resources on a variety of related topics: <http://www.invasivespecies.gov/>

8. *Incorporate County Natural Heritage Inventory information into planning efforts.*

Through internal planning, decision-making related to land-use development, and participation in regional planning initiatives, counties and municipalities could profoundly shape the land and landscapes of Pennsylvania. Municipal subdivision and land development ordinances should be updated to incorporate findings presented within this Natural Heritage Inventory.

Partners in Implementation

The implementation of Natural Systems Greenways will rely on a proactive approach from the public and private sectors. From the public side, the proposed regional greenways coordinator and the Erie County Department of Planning must provide Erie County's municipalities with guidance and expertise to guide them in implementing those strategies recommended for the municipal level. Furthermore, they will also need to provide similar guidance and expertise to local conservancies, land trust, and trail organizations. Other important public partners in this endeavor will include:

- Local Municipalities
- Erie County Convention and Visitors Bureau

- Erie County Department of Health
- Erie County Conservation District
- Erie County Agricultural Preservation Board
- Erie-Western Pennsylvania Port Authority
- Bayfront Eastside Task Force
- Erie Redevelopment Authority
- Pennsylvania Department of Conservation and Natural Resources, Presque Isle State Park
- Pennsylvania Department of Conservation and Natural Resources Bureau of Forestry
- Pennsylvania Department of Conservation and Natural Resources Bureau of State Parks
- Pennsylvania Fish and Boat Commission
- Pennsylvania Game Commission
- Pennsylvania Department of Transportation

The private sector involvement must come from many avenues such as education, health care, main streets, economic development, and non-profit sectors and should include:

- PA Sea Grant
- VisitErie
- Lake Erie Region Conservancy
- Presque Isle Audubon Society
- Western Pennsylvania Conservancy
- Trout Unlimited
- Northwest Pennsylvania Trails Association
- Lake Country Bike
- Presque Isle Cycling Club
- Erie Runners Club
- Presque Isle Partnership
- Penn State Behrend
- Mercyhurst College
- Edinboro University of Pennsylvania
- Gannon University
- Asbury Woods
- Erie Outing Club
- Lake Erie-Allegheny Earth Force
- Erie Downtown Partnership
- Corry Area Chamber of Commerce
- Corry Community Development
- Erie Regional Chamber and Growth Partnership
- Girard Lake City Chamber of Commerce
- North East Chamber of Commerce
- Edinboro Chamber of Commerce
- Pennsylvania Advocates for Nutrition and Activity
- Hamot Medical Center
- St. Vincent Health System
- Corry Memorial Hospital
- Erie Shriners Hospital
- Millcreek Community Hospital
- Union City Memorial Hospital

Strategies to Implement the Erie County Greenway Network

This portion of Chapter One offers step-by-step recommendations outlining the process of implementing the proposed Erie County Greenways Network, as defined through this study process.

The first step involves formally adopting the vision for Greenways in Erie County. The implementation strategies are outlined in the following tables. These tables document the sequence of events required to carry the Greenways Plan from the Vision described earlier in this plan, to the implementation of natural system and recreation & transportation greenway corridors.

Implementation strategies are organized into the following categories: “Adopting a Vision for Greenways in Erie County” and “Advancing Greenways at the Local Level”.

Each implementation strategy includes a brief description of the task, identifies possible responsible parties, sets a priority for completing the task, provides an estimate of cost associated with completing the task, and provides planners with the opportunity to track the process of implementing the plan.

The following priorities have been defined through the planning process:

Short Term Priorities (S): should be accomplished within one-to-three years after official adoption of the Greenways Plan. These strategies will lay the foundation for successful implementation of the Greenways Plan recommendations.

Mid Term Priorities (M): should be undertaken in years three-to-five.

Long Term Priorities (L): are expected to be completed in years five-to-ten.

Many of the strategies have little or no cost beyond the administrative costs incurred by the responsible parties. Other strategies may require substantial funding. When costs are provided, the estimates are in 2008 dollars. These costs were established based on our experience with other projects or initiatives. For each year beyond 2008, the costs should be multiplied by a factor of 4.5% to account for inflation. Detailed feasibility studies and other pre-design and / or implementation work will refine these costs.

We recommend Erie County and the responsible parties identified herein review these tables on an annual basis, at a minimum, to determine which tasks have been accomplished; which should be undertaken next; and where adjustments need to be made. We recommend that the status column of the tables be used to record the beginning and completion dates for each task as it is implemented. This will allow Erie County and other responsible parties to track their progress towards the implementation of each strategy.

Following these tables, we discuss various Implementation Resources that are available to assist in the implementation of the recommendations contained herein.

Erie County Greenways Plan

Adopting the Vision for Greenways in Erie County

Task	Responsible Parties	Priority	Cost	Potential Funding Sources	Status	
					Begin	Completed
Adopting the Vision for Greenways in Erie County						
Officially adopt the Erie County Greenways Plan as an amendment to the Erie County Comprehensive Plan.	Erie County Department of Planning (ECDP)	S	Admin. Time	n/a		
Conduct Peer to Peer study to determine willingness of Erie, Crawford, Mercer, Warren, Forest, and Clarion Counties establishing Regional Joint Greenways Coordinator positions.	Northwest Pennsylvania Commission, participating counties	S	\$20,000	PA DCNR PA DCED Participating Counties		
If regional joint greenway coordinator positions are deemed feasible:						
Develop position description.	Northwest Pennsylvania Commission, participating counties	S	Admin. Time	n/a		
Draft intergovernmental cooperation agreement.	Northwest Pennsylvania Commission, participating counties	S	Admin. Time	n/a		
Execute Intergovernmental Agreement.	Northwest Pennsylvania Commission, participating counties	S	Admin. Time	n/a		
Secure funding for position for minimum five years.	Northwest Pennsylvania Commission, participating counties	S	\$250,000	PA DCNR PA DCED Foundations Participating Counties		
Advertise position.	Northwest Pennsylvania Commission, participating counties	S	\$200	Counties		
Hire regional coordinator.	Northwest Pennsylvania Commission, participating counties	S	\$40,000 annually	PA DCNR PA DCED Foundations Participating Counties		

Erie County Greenways Plan

Adopting the Vision for Greenways in Erie County (continued)

Task	Responsible Parties	Priority	Cost	Potential Funding Sources	Status	
					Begin	Completed
Marketing / Education / Promotion						
Spread the Word - Promote the vision adopted for Erie County Greenways through regional and local television, newspaper, radio, and internet news agencies.	Stakeholders, partner organizations	S	Volunteer / In-Kind	n/a		
Develop detailed public marketing, education and promotion campaign to inform county residents and elected officials about the benefits of greenways implementation and promote the many attractions of the greenway network.	Visit Erie, Erie County Planning Commission, Erie County Conservation District, Lake Erie Region Conservancy (LERC), Erie County Agricultural Preservation Board, Western Pennsylvania Conservancy, PA DCNR, PA DEP, and Asbury Woods Nature Center	S	\$40,000	PA DCNR PA DEP PA DCED Foundations		
Explore opportunities to partner with Erie County Health community to advance greenways implementation.	ECDP, Hamot Hospital, local physician organizations	S	Admin. Time	Pennsylvania Advocates for Nutrition and Activity		

Erie County Greenways Plan

Advancing Natural System Greenways at the Local Level (continued)

Task	Responsible Parties	Priority	Cost	Potential Funding	Status	
					Begin	Completed
Coordinate County Greenway Planning Efforts with Surrounding States						
Meet with adjacent planning agencies to discuss and coordinate common greenway planning efforts.	Erie County Department of Planning (ECDP)	S	Admin. Time	n/a		
Explore opportunities to partner on joint implementation projects.	ECDP	S	Admin. Time	n/a		
Educate Municipal Officials and Residents						
Identify potential pilot municipalities.	Joint Greenway Coordinator, ECDP, Erie County Conservation District (ECCD), Municipal Officials and Planning Commissions	On-Going	Admin. Time	n/a		
Meet with elected officials to educate them on the benefits of greenway planning and implementation.	PA DEP, Joint Greenway Coordinator, ECDP, ECCD, Municipal Officials and Planning Commissions	On-Going	Admin. Time	In-Kind Services		
Hold a public meeting to educate the residents of the municipality on the benefits of greenway planning and implementation.	PA DEP, Joint Greenway Coordinator, ECDP, ECCD, Municipal Officials and Planning Commissions	On-Going	Admin. Time	In-Kind Services		
Meet with potential pilot municipalities to discuss the goals of the greenways plan and the means of advancing greenways through local planning efforts.	ECDP, ECCD, Municipal Officials and Planning Commissions	On-Going	Admin. Time	In-Kind Services		

Erie County Greenways Plan

Advancing Natural System Greenways at the Local Level (continued)

Task	Responsible Parties	Priority	Cost	Potential Funding	Status	
					Begin	Completed
Identify Opportunities for Additional Comprehensive Planning, Greenway Planning, Zoning Implementation, and / or Subdivision and Land Development Ordinance Implementation at the Municipal Level						
Educate potential municipalities on the benefits of planning, and implementation of land use tools.	DCED, ECDP	On-Going	Admin. Time	In-Kind Services		
Assist municipalities, when requested, in completing greenway planning efforts at municipal / multi-municipal level.	ECDP	On-Going	\$30-60K per plan	PA DCNR PA DEP		
Assist municipalities, when requested, with comprehensive planning, and, zoning and subdivision and land development efforts.	ECDP	On-Going	\$40-60K Comp Plan \$20K Zoning \$10K SALDO per municipality	DCED		
Create package of incentives, including provision of matching funds, grant writing and other technical assistance to encourage municipalities to implement greenway recommendations at the municipal level.	Joint Greenway Coordinator, ECDP	S	\$20,000 annually	DCED		
Utilize GIS Data Assembled for Greenways Planning Effort as a Pro-Active Tool to Guide Land Development in Erie County						
Educate municipal officials on what resources are available to them early in the planning process.	Joint Greenway Coordinator, ECDP	S	Admin. Time	In-Kind Services		
Institute process at the municipal level where municipality / potential developer requests query of GIS data to identify natural system greenway corridors, and their resources, on a particular site before planning / design effort for development begins.	Joint Greenway Coordinator, ECDP	S	Admin. Time	In-Kind Services		

Erie County Greenways Plan

Advancing Natural System Greenways at the Local Level (continued)

Task	Responsible Parties	Priority	Cost	Potential Funding	Status	
					Begin	Completed
Conduct Zoning and Subdivision and Land Development Audits of Existing Ordinances						
Identify potential pilot municipalities.	PA DEP, Joint Greenway Coordinator, Erie County Department of Planning (ECDP), Erie County Conservation District (ECCD), Municipal Officials and Planning Commissions	On-Going	Admin. Time	n/a		
Meet with potential pilot municipalities to discuss the goals of the greenways plan and the means of advancing greenways through local planning efforts.	PA DEP, Joint Greenway Coordinator, ECDP, ECCD, Municipal Officials and Planning Commissions	On-Going	Admin. Time	n/a		
Request pilot municipalities to adopt the Erie County Greenway Plan as the guiding document for greenway efforts in their municipality.	Joint Greenway Coordinator, ECDP, ECCD, Municipal Officials and Planning Commissions	On-Going	Admin. Time	n/a		
Complete audit of current municipal zoning and subdivision and land development ordinances, and provide municipality with options for achieving the strategies documented in the Erie County Greenway Plan.	Joint Greenway Coordinator, ECDP	On-Going	Admin. Time	n/a		
Complete audits of current municipal zoning and subdivision and land development ordinances for Albion, Lake City, Mill Village, and Wattsburg Boroughs.	Joint Greenway Coordinator, ECDP	S	Admin. Time	n/a		
Complete audits of current municipal zoning and subdivision and land development ordinances for Amity, Conneaut, Fairview, Girard, Leboeuf, Millcreek, Springfield, and Venango Townships.	Joint Greenway Coordinator, ECDP	S	Admin. Time	n/a		
Complete audits of current municipal zoning and subdivision and land development ordinances for Cities of Erie and Corry, Edinboro, Elgin, and North East Boroughs .	Joint Greenway Coordinator, ECDP	M		n/a		

Advancing Natural System Greenways at the Local Level (continued)

Task	Responsible Parties	Priority	Cost	Potential Funding	Status	
					Begin	Completed
Conduct Zoning and Subdivision and Land Development Audits of Existing Ordinances						
Complete audits of current municipal zoning and subdivision and land development ordinances for Concord, Greene, Harborcreek, North East, Summit, Union, Wasington, and Wayne Townships.	Joint Greenway Coordinator, ECDP	M		n/a		
Complete audits of current municipal zoning and subdivision and land development ordinances for Girard Borough, Elk Creek, Franklin, Greenfield, and McKean Townships.	Joint Greenway Coordinator, ECDP	L		n/a		
Complete audits of current municipal zoning and subdivision and land development ordinances for Craneville, McKean, Platea, and Wesleyville Boroughs, and Lawrence Park Township.	Joint Greenway Coordinator, ECDP	L		n/a		
As requested, provide municipalities with technical assistance to update their zoning and subdivision and land development ordinances to achieve vision for greenways in Erie County.	Joint Greenway Coordinator, ECDP	On-Going	\$5,000 per municipality	PA DEP Coastal Zone Management Foundations, local municipalities		

Erie County Greenways Plan

Advancing Natural System Greenways at the Local Level (continued)

Task	Responsible Parties	Priority	Cost	Potential Funding	Status	
					Begin	Completed
Implement Land Use Tools at the County Level to Assist in Achieving the Vision for Greenways in Erie County						
Update County Land Development and Subdivision Ordinance to strengthen conservation of natural system greenway components.	ECDP	S	In-Kind Services	n/a		
Update the County Land Development and Subdivision Ordinance review process to include the submission of a site analysis which documents the locations of those natural resources, which are to be conserved, on the site.	ECDP	S	In-Kind Services	n/a		
Update the County Land Development and Subdivision Ordinance review process to categorize those sites with such features as major subdivisions, which require a more thorough review.	ECDP	S	In-Kind Services	n/a		
Identify and Secure Funding for Demonstration Projects to Advance the Proposed Natural System Greenway Corridors						
Identify key players that will help carry out pilot projects, explore possibility of public / private partnerships with possible public and private partners.	Northwest Commission, Joint Greenway Coordinator (JGC) and / or ECDP	On-Going	In-Kind Services	n/a		
Identify pilot projects in the exceptional priority greenway corridors which will achieve the goals of: Conserving natural system greenway resources through acquisition of easements and property. Improving water quality. Improving access to water features. Reducing flooding Improving stormwater management. Reducing nonpoint source pollution & improving water quality. Establishing stream side buffers.	Northwest Commission, Joint Greenway Coordinator (JGC) and / or ECDP, Pennsylvania Department of Environmental Protection, County Conservation District, local municipalities	S	\$300,000	PA DCNR PA DEP PA DCED PennDOT PA Fish & Boat Commission Coastal Management Zone		

Advancing Natural System Greenways at the Local Level (continued)

Task	Responsible Parties	Priority	Cost	Potential Funding	Status	
					Begin	Completed
Identify and Secure Funding for Demonstration Projects to Advance the Proposed Natural System Greenway Corridors						
Identify pilot projects in the significant priority greenway corridors which will achieve the goals of: Conserving natural system greenway resources through acquisition of easements and property. Improving water quality. Improving access to water features. Reducing flooding Improving stormwater management. Reducing nonpoint source pollution & improving water quality. Establishing stream side buffers.	Northwest Commission, Joint Greenway Coordinator (JGC) and / or ECDP, Pennsylvania Department of Environmental Protection, County Conservation District, local municipalities	M	\$600,000	PA DCNR PA DEP PA DCED PennDOT PA Fish & Boat Commission Coastal Management Zone		
Identify pilot projects in the high priority greenway corridors which will achieve the goals of: Conserving natural system greenway resources through acquisition of easements and property. Improving water quality. Improving access to water features. Reducing flooding Improving stormwater management. Reducing nonpoint source pollution & improving water quality. Establishing stream side buffers.	Northwest Commission, Joint Greenway Coordinator (JGC) and / or ECDP, Pennsylvania Department of Environmental Protection, County Conservation District, local municipalities	L	\$300,000	PA DCNR PA DEP PA DCED PennDOT PA Fish & Boat Commission		
Explore opportunities to enhance ecotoursim opportunities in Erie County	Joint Greenway Coordinator, Northwest Commission, ECDP	S	In-Kind Services	n/a		

Erie County Greenways Plan

Advancing Natural System Greenways at the Local Level (continued)

Task	Responsible Parties	Priority	Cost	Potential Funding	Status	
					Begin	Completed
Establish Natural Systems Greenway Network						
Secure grants and matching funds Negotiate with land owners to conserve natural infrastructure resources Secure easements and property from land owners Enact municipal land use tools that conserve specific resources and create incentives for conservation of natural system greenway corridors Develop a signing system to promote and indicate locations of natural systems greenways	Municipal Officials, Planning Commissions, PA DCNR, Lake Erie Region Conervancy (LERC), Western Pennsylvania Conservancy, Conservation Clubs, with guidance from Joint Greenway Coordinator and ECDP	On-Going	Varies greatly, site / project specific	PA DEP PA DCNR PA DCED PA Fish & Boat Commission Coastal Management Zone Foundations		
Ensuring Success Marketing / Promotion						
Implement marketing strategies formed in the early stages of greenways planning, with emphasis on economic development potential	Joint Greenway Coordinator, Northwest Commission, ECDP	S	\$10,000 annually	Visit Erie		
Announce successes, actively solicit support and coverage from local television, newspaper, radio, and internet news agencies.	Joint Greenway Coordinator, Northwest Commission, ECDP	on-going	In-Kind Services	n/a		

Erie County Greenways Plan

Advancing Recreation and Transportation Greenways at the Local Level

Task	Responsible Parties	Priority	Cost	Potential Funding	Status	
					Begin	Completed
Coordination with Local Trail Organizations / Municipalities and Other Stakeholders						
Meet with local trail organizations to review recommendations for recreation greenways that resulted from county greenway planning process.	Joint Greenway Coordinator, ECDP	S	Admin. Time	n/a		
Review process for planning and developing recreation greenways with trail organizations.	Joint Greenway Coordinator, ECDP	S	Admin. Time	n/a		
Shared Use Trail Implementation Strategies						
Complete Feasibility Study for Thorton Junction, and the French Portage Trails.	Northwest Pennsylvania Commission, Joint Greenway Coordinator, ECDP, Trail Associations	S	\$130,000	DCNR DCED PennDOT		
Complete Feasibility Study for Mill Village to Corry Trail, Freeport Trail, Trail, Albion to Girard Trail, and the Allegheny and Eastern Railroad corridor.	Northwest Pennsylvania Commission, Joint Greenway Coordinator, ECDP, Trail Associations	M	\$215,175	DCNR DCED PennDOT		
Complete Feasibility Study for Washington Trail, Albion to Conneaut Harbor Trail, and Lake Pleasant Connector Trail.	Northwest Pennsylvania Commission, Joint Greenway Coordinator, ECDP, Trail Associations	L	105,000	DCNR DCED PennDOT		
Complete bicycle suitability mapping, and market brochure for Erie County.	Northwest Pennsylvania Commission, ECDP, Visit Erie, and local cycling clubs.	S	\$25,000 or no cost with ECDP and Volunteers	DCNR DCED PennDOT		

Erie County Greenways Plan

Advancing Recreation and Transportation Greenways at the Local Level (continued)

Task	Responsible Parties	Priority	Cost	Potential Funding	Status	
					Begin	Completed
Pedestrian and Bicycle Implementation Strategies						
Encourage the City of Erie to conduct and adopt a pedestrian and bicycle feasibility study.	Joint Greenway Coordinator, Northwest Commission, ECDP	S	\$50,000	PennDOT DCNR DCED Health Providers		
Implement recommendations of the Erie Western PA Port Authority Master Plan with respect to pedestrian, bicycle, and non-motorized boating improvements.	Erie-Western PA Port Authority	M	Unknown	PA Fish & Boat Commission PA DCED Coastal Management Zone		
Complete wayfinding study to prepare recommendations for implementing a wayfinding system for pedestrian and bicycle activities throughout Erie County.	Joint Greenway Coordinator, Northwest Commission, ECDP, PennDOT	S	\$50,000	PennDOT, PA DCNR		
Implement pedestrian and bicycle wayfinding recommendations throughout Erie County.	Joint Greenway Coordinator, Northwest Commission, ECDP, PennDOT	M, L	Unknown	PennDOT, DCED		
Water Trail Implementation Strategies						
Work with local communities to revitalize and reestablish the French Creek Water Trail, interpret history of the French Portage Trail following the trade route from Erie to the Ohio Basin.	Joint Greenway Coordinator, Northwest Commission, ECDP	S	PA Fish & Boat In-Kind Services	PA Fish & Boat Commission PA DCNR		
Complete feasibility studies for a non-motorized Presque Isle Bay Water Trail and non-motorized Lake Erie Shoreline Water Trail.	Joint Greenway Coordinator, Northwest Commission, ECDP Erie-Western PA Port Authority	S	\$35,000	PA Fish & Boat Commission PA DCNR		

Erie County Greenways Plan

Advancing Recreation and Transportation Greenways at the Local Level (continued)

Task	Responsible Parties	Priority	Cost	Potential Funding	Status	
					Begin	Completed
Ensuring Success Marketing / Promotion						
Implement marketing strategies formed in the early stages of greenways planning, with emphasis on economic development potential.	Joint Greenway Coordinator, Northwest Commission, ECDP	S	\$10,000 annually	Visit Erie		
Work with the business community and health providers to encourage bike to work programs and bike to school programs.	Joint Greenway Coordinator, Northwest Commission, ECDP	M		Pennsylvania Advocates for Nutrition and Activity (PANA), Health Care Providers		
Celebrate successes, actively solicit support and coverage from local television, newspaper, radio, and internet news agencies.	Joint Greenway Coordinator, Northwest Commission, ECDP	on-going	In-Kind Services	n/a		

Demonstration Project Opportunities

Quick successes are important to show residents of the County that implementation of greenway projects in Erie County can provide many benefits, as documented in the Introduction to this plan, and that further implementation of the recommendations is warranted.

Opportunities were identified in each of the greenway feature categories to allow the County and partner organizations to advance greenways at all levels. Demonstration project opportunities were selected in Erie County based on the following criteria:

1. Was prioritized as a critical or exceptional priority at the regional level
2. Has a local partner / advocate
3. Can be realistically achieved
4. Provides opportunity for economic development (recreation and transportation greenway corridors)

For conservation corridors, the criteria was developed to conserve those areas of the County that have the most significant natural infrastructure components that we desire to maintain because they provide essential functions.

Utilizing these sets of criteria, the Steering Committee recommended the following demonstration project opportunities in Erie County:

Land Based Trails

- ✓ Corry Junction Greenway Trail is located along the spine of the proposed, and regionally significant, Erie to Pittsburgh Greenway. With the corridor being held by the Northwest Pennsylvania Trails Association, a trail access point already developed north of the City of Corry, and funding in place to improve the trail from the trail access point to the New York State line, the implementation of this trail is well under way.

It is recommended that assistance be provided to the Northwest Pennsylvania Trails Association to assist in managing the final design, engineering and construction of the proposed trail improvements.

Further, it is recommended that a feasibility study be completed to determine how the trail can be extended south, into the City of Corry, so trail users can reach town and obtain the goods and services they desire. This feasibility study could be incorporated into a trail town master plan for the City as described in the following trail town demonstration project recommends.

Last, there currently is a gap in the trail corridor between the present terminus of the trail, just north of the City, and the beginning of the East Branch Trail. The “Erie County Greenway and Trails Plan”, completed in 2000, considered a rail with trail as the rail line was being operated by the Northwest Pennsylvania Rail Authority, and subsequently the Western New York and Pennsylvania Railroad (WNY&P). At that time discussions with the WNY&P railroad were such that the railroad was not willing to entertain the possibility of a rail with trail along this corridor due to liability concerns. Given the prominence of this corridor as it is associated with the Erie to Pittsburgh Greenway, it is recommended that a feasibility study be completed to determine an alternate alignment until such time the desired alignment may be achieved.

- ✓ The East Branch Trail is the spine of the proposed, and regionally significant, Erie to Pittsburgh Greenway. With portions of the East Branch Trail completed, and with public access being secured to the majority of the corridor, focus must be placed on further developing and improving the unimproved portions of the corridor. Further, with the recommendation of City of Corry also being a Trail Town Demonstration project, these opportunities provide the potential for expanded economic development activities along this corridor.

The Clear Lake Authority is the organization which has taken the lead in acquiring right-of-ways and easements, and in the development of the trail. Approximately two miles of the trail has been developed and funding has been secured by the authority, through PennDOT and the Pennsylvania Department of Conservation and Natural Resources, to continue trail development.

The Clear Lake Authority is in need of assistance in managing the final design, engineering and construction of the trail segment for which it has received funding.

- ✓ The Thornton Junction Trail was identified as a potential rail trail in the “Erie County Rail Trail Feasibility Study”. Until recently, the status of a portion of this corridor was in questioned, and a filing for Interim Trail Use with the Surface Transportation Board, under the Federal Rails to Trails Act, was being challenged. On August 6, 2008, the Surface Transportation Board issued a Decision and Notice of Interim Trail Use for a 5.73 mile segment of the former Bessemer and Lake Erie Railroad corridor, conveyed to the Northwest Pennsylvania Trails Association (NWPTA) by the Material Recovery of Erie, Inc., ruling in favor of NWPTA. Therefore, we recommend a feasibility study be conducted of not only the 5.73 mile portion of the corridor, but the entire corridor, as it continues through Erie County.

The purpose of this study should be to evaluate the feasibility of developing a demonstration project along the 5.73 mile corridor held by the Northwest Pennsylvania Trails Association, and to determine the feasibility of extending the corridor to the south.

The projected cost to complete this feasibility study is estimated to be approximately \$50,000.

Water Trails

- ✓ French Creek Water Trail: Given the establishment of the currently inactive French Creek Water Trail, by the French Creek Project, it is recommended the French Creek Water Trail be given priority status meaning: a local sponsor be identified and work with the PA Fish and Boat Commission to officially recognize French Creek in their water trails program; the County and municipalities along the trail should advocate for the trail and work with the private sector to re-establish one or two canoe liveries along the trail; confirming that all of the access points are under public control, or there is an agreement with the landowner for public access. All of these tasks should be completed before the French Creek Water Trail is again publicly promoted.

The anticipated costs associated with developing this water trail include:

- Acquisition of access points: \$0
- Sign access points and access point improvements: \$50,000
- Development of water trail brochure \$15,000

We recommend local partner organizations work with the Pennsylvania Fish and Boat Commission to begin the process of conducting feasibility studies and to begin planning for these water trails.

In her thesis completed in 2002, “Case Studies of Water Trail Impacts on Rural Communities”, Lindsay Johnson, MCRP provides the following recommendation for developing a successful water trail.

Communities interested in water trail development should be aware of impacts on local culture, the environment and businesses. Negative impacts can be mitigated if the community is supportive of water trail development and there is dedicated management. The following recommendations should help project leaders plan, organize, and create facilities for water trails while minimizing impacts on rural communities.

Planning and Organizational Needs

1. A shared vision for a water trail is a goal that community members believe in and are willing to work towards. Dedicated local support for a goal-oriented project will sustain local water trail benefits. A dedicated group of volunteers is key to water trail success. A water trail must be advocated and maintained locally for the community to reap economic and social benefits.
2. Address landowner and citizen concerns through outreach to the community early in the project. A designated contact person should respond quickly and accurately to suggestions, concerns and other comments. A pre-opening/pre-construction trail paddle will allow community members to see the proposed water trail for themselves.
3. Solidify funding, planning and overall water trail management with clear leadership and goals. These factors should be considered before marketing a water trail.
4. Investigate local goals, norms, and land use patterns that are inconsistent with the water trail vision or threaten the integrity of a paddling experience. Tourism development in rural areas will have social implications including increased land values.
5. Explore partnership opportunities and apply for grants and offers of assistance. Local officials, government agencies, businesses and the community should commit to water trail project goals. Successful water trails are the result of a cooperative effort between an active citizen group, a responsive public agency, and a supportive community all of whom share a vision for the trail. Partner with lodging, eating and drinking, retail sales, and recreational services businesses.
6. Host events to advertise the trail, build support and draw new volunteers. Noteworthy events such as water trail grand openings and annual paddling festivals provide excellent opportunity to make contact with the community, present accurate information, and generate positive media attention.

Infrastructure Needs

7. Identify and secure rights to access put in and take out locations. Designate and clearly sign legal access points and public land at reasonable intervals to minimize landowner concerns.
8. Promote ‘leave no trace’ ethics or provide adequately maintained facilities to mitigate for environmental impacts from improperly disposed human waste, large groups, and littering.

9. Improve access to parking at river put-ins. Information and access are two big issues to improve trail system usage.
10. Manage a river experience, the quality of the natural environment and uncrowded river conditions are important to paddlers.
11. Explore the history of the waterway and interpret these stories to paddlers in creative ways. Trail users often have an interest in the history and environment of the community, and can help to support museums, nature centers and other cultural assets. The interpretation of history and linkages with the past is a marketable concept.
12. Offer a variety of accessible activities. Paddlers are often interested in easy access to downtown, restaurants, campgrounds and bed and breakfasts, other outdoor recreation experiences, and learning about local history and culture. Successful paddle destinations offer diverse activities with a wide variety of opportunities.

Additional guidance on water trail development can be found in the Chesapeake Bay Gateways Network, “Water Trails Toolbox”, www.baygateways.net/watertrailtools.cfm.

Trail Towns

Marketing, promoting, and developing a trail town business mentality can assist main street communities in promoting economic development activities, and expanding the economy of those communities. A trail town is a main street community that can provide the goods and services that are desired by land based and water based trail users. To function as a trail town, the following goods and services must be provided:

- Main Street Business District
- Food
- Lodging
- Fuel

It is also beneficial, but not essential, in a trail town can also provide:

- Entertainment
- Recreation
- Historic Site(s)
- Other Attraction(s)

Of the trail towns being proposed for Erie County, we recommend focus be placed on developing and implementing a trail town philosophy in the following communities:

- City of Corry
- Erie Bayfront

It is recommended that a sponsor, or sponsors, be identified to lead an effort(s) to actively begin establishing the trail town philosophy, implementing a Trail Town program, and establishing the City of Corry and the Erie Bayfront as Trail Towns along the regionally significant Erie to Pittsburgh Greenway corridor.

It is recommended that a total of \$75,000 be budgeted to conduct trail town master planning process for the City of Corry and the Erie Bayfront.

“Trail Towns: Capturing Trail Based Tourism – A Guide for Pennsylvania Communities”, prepared by the Allegheny Trail Alliance, provides step-by-step guidance in organizing a community to create a trail town.

Natural Systems Greenway Corridors

The following Erie County Natural System Greenway Corridors have been identified at the regional level as priority corridors:

- ✓ French Creek Greenway: Situated in south eastern Erie County, this greenway corridor follows French Creek encompassing State Game Land No.’s 167, 162, & 190, Union City Lake, and the French Creek BDA.

French Creek BDA contains 49 natural communities of global and/or state significance, plus numerous species of plant and animal species of special concern.

In addition to the unique natural features mentioned above, French Creek Greenway also contains part of Lake Pleasant outlet, which is a High Quality Cold Water Fishery that drains into French Creek.

Approximate Size: The total length of the French Creek Greenway corridor is approximately 21 miles. The width varies from just under 1,500 feet near the New York Stateline, to over a mile and a half near the mouth of Lake Pleasant Outlet.

The total acreage of this greenway is estimated to be just over 8,400 acres, of which 7.2% is protected within State Game Land No.’s 167, 162, and 190. Nearly 6% of this greenway is designated as developed or urban land.

Associated Municipalities: Venango, Amity, Waterford, and LeBoeuf Townships, as well as Mill Village and Wattsburg Boroughs. This greenway also has the potential to connect to Crawford County and to Chautauqua County in the State of New York.

- ✓ Walnut Creek Greenway : This BDA contains Asbury Woods Nature Center, as well as two BDA’s and their Supporting Natural Landscape. Walnut Creek is also a Pennsylvania Fish and Boat Commission Trout Stocked Fishery. Walnut Creek is also a steelhead fishery.

Walnut Creek Mouth BDA has been designated because the mouth of Walnut Creek provides habitat to several plant species of special concern.

Walnut Creek Valley BDA contains a forest community and a calcareous seep community of special concern that provides habitat for several plant species of special concern.

Approximate Size: The total acreage of this greenway is estimated to be nearly 2,900 acres. Approximately 2.5% of this greenway is designated as developed or urban land.

Associated Municipalities: Fairview, Millcreek, and Summit Townships.

- ✓ **Conneaut Creek Greenway:** Located in western Erie County, this greenway corridor is found adjacent to Conneaut Creek and the West Branch of Conneaut Creek and also contains State Game Land No. 101, as well as three BDA's.

Upper Conneaut Creek BDA is habitat for a plant species of special concern.

Stoker Road Swamp Forest BDA contains a swamp forest habitat that supports a plant species of special concern.

Conneaut Creek Floodplain BDA encompasses floodplain wetlands which provide habitat for two plant species of special concern.

Approximate Size: The total acreage of this greenway is estimated to be just over 10,000 acres, of which 27% is protected within State Game Land No.101, as well as within some privately managed lands. Approximately 2.5% of this greenway is designated as developed or urban land.

Associated Municipalities: Conneaut and Springfield Townships, as well as Albion Borough. This greenway also has the potential to connect to Crawford County and to Ashtabula County in the State of Ohio.

Opportunities to implement enhancement and restoration projects along these corridors can be completed by:

- Conducting education and outreach, to municipal officials and the County's residents, on the benefits of natural systems greenways
- Conserving natural system greenway resources through acquisition of conservation easements
- Improving water quality
- Improving access to water features
- Reducing flooding
- Improving stormwater management
- Reducing nonpoint source pollution & improving water quality
- Establishing stream side buffers
- Sustainable timber practices and conservation easements on timber holdings
- Enhancing existing Zoning and Subdivision and Land Development Tools by strengthening them for the conservation of natural greenways corridors

It is recommended an annual pool of funding be allocated in Erie County for implementation of strategies to address the above at a level of approximately \$80,000 per year. Funding, to supplement local investments, for this effort may be available from the Pennsylvania Department of Environmental Protection and the Pennsylvania Department of Conservation and Natural Resources.

Implementation Resources

Many tools are available to assist in the conservation of natural resources. Those tools are identified here, and, a brief description of each tool is provided. Being listed herein does not imply that the tool(s) be implemented. Rather, they are listed to provide a comprehensive list of tools that can be considered to assist in implementing the recommendations contained in this study.

Acquisition Tools

These mechanisms generally provide permanent protection of land and are preferred when establishing greenways.

Fee Simple Purchase

- **Description:** Direct purchase of land, at a price agreeable to the landowner, is done by a governmental or public agency or non-profit land trust organization. Land acquisition can be made at every level of government.
- **Benefits:** Acquiring fee simple title provides more permanent protection than other methods such as zoning or subdivision requirements. Acquisition by non-profit groups partnering with communities imposes little or no cost and little administrative burden on local governments.
- **Implementation:** DCNR and DEP's Growing Greener Program has sources of funding to help communities and non-profit groups implement acquisition of land for inclusion in greenways.

Option / First Right of Refusal

- **Description:** A municipality enters into an agreement with a landowner that, should the landowner decide to sell, gives the government entity the right to bid on the land before anyone else.
- **Benefits:** This technique gives the municipality time to assemble funds needed to purchase the property or to reach an agreement with the landowner through other means.
- **Implementation:** The option is negotiated and memorialized in a legal agreement. If the property is sold, the municipality may, but is not obligated to, submit a bid to the landowner.

Conservation Easements

- **Description:** A landowner voluntarily agrees to sell the right to develop his land in certain ways by granting an easement to another entity such as a land trust. The landowner retains title to the land and continues to pay taxes on it. The easement may or may not allow the grantee access to the land for certain purposes.
- **Benefits:** Establishment of conservation easements provides long-term protection, but is less costly than fee simple acquisition because the buyer receives less than full title to the land. Where the easement is held by a non-profit group, cost and burden on local government are minimized. Moreover, the landowners pay reduced real estate taxes, subject to terms of the conservation easement.

- **Implementation:** Generally, the buyer pays the landowner the difference between the value of the land that can be fully developed and the value of the land without development potential. The easement is recorded with the property deed and remains if the land is sold.

Through both state-wide and local chapter efforts, Audubon Pennsylvania (AP) promotes conservation through a variety of education programs. Among these programs are workshops aimed at promoting the establishment of conservation easements. One such seminar was held at Jennings Environmental Center, near Moraine State Park, in late April 2007. Another workshop is planned at the same location in the near future.

Although AP does not hold conservation easements, it promotes establishment of easements through other qualified land trust organizations (local examples are described later in this section). AP's efforts are important to Erie County because three Important Bird Areas (IBAs) are located partially within the County's borders. IBAs contain areas of essential and sometimes vulnerable bird habitat. They include the Presque Isle IBA, Roderick Wildlife Preserve IBA, and the Presque Isle Bay Martin Roost IBA. These are further described in Chapter Two.

The protection of these areas is of great interest to AP, and conservation efforts in these areas may attract the support of the organization in the form of landowner education. More information is available through the AP website, <http://pa.audubon.org>, or through the local chapter: the Presque Isle Audubon Society, Tom Ridge Environmental Center, 301 Peninsula Drive, Suite 8, Erie, PA 16505, www.presqueisle.org/audubon/.

Agricultural Conservation Easements

- **Description:** A subset of conservation easements described above, these easements protect farms from development. Landowners voluntarily sell the rights to develop the farm to a government entity or land trust. The agency or organization usually pays them the difference between the value of the land for agricultural use and the value of the land for its "highest and best" use, which is generally residential or commercial development.
- **Benefits:** Conservation easements preserve land for agricultural use. They provide a financial benefit to farmers while conserving farmland that often provides wildlife habitat. Also, owners of land subject to conservation easements pay reduced real estate taxes.
- **Implementation:** County Agricultural Land Preservation Boards have primary responsibility for developing application procedures. They also establish priority for easement purchases based on a numerical ranking system. The ranking system is modeled on Pennsylvania Dept. of Agriculture (PDA) regulations that require consideration of soil quality, conservation practices, development pressure, and proximity to other preserved farmland and open space.

Forest Land Conservation Easements

- **Description:** These easements are a market-driven tool used to preserve working forests, in the same way agricultural conservation easements protect working farmland.
- **Benefits:** Easements can be used to protect forests for present and future economic benefit, simultaneously preserving wildlife habitat, protecting watersheds, providing outdoor recreation opportunities, and promoting soil conservation. In addition, benefits to landowners include

reduced property taxes. These easements are of great importance to the Commonwealth of Pennsylvania, as timber is one of the top sectors of the state's economy.

- **Implementation:** Some non-profit groups such as conservancies and land trusts provide financial support for purchasing easements from landowners. They also accept tax-deductible donations of easements.

The U.S. Forest Service's Forest Legacy Plan (FLP) aids in the identification and protection of environmentally-important forest lands threatened by conversion to non-forest uses. The FLP provides funding to state governments to help purchase easements on private forest land. Eligible forest lands must be located in a designated Forest Legacy Area and must meet other specific eligibility requirements. The DCNR Bureau of Forestry, in cooperation with the State Forest Stewardship Committee (SFSC), is responsible for implementation of this program in Pennsylvania. For more information, visit www.dcnr.state.pa.us/forestry.

Transfer / Purchase of Development Rights

- **Description:** Transfer of Development Rights (TDR) is a tool that allows conservation and development to co-exist within a municipality or group of municipalities with joint zoning. TDR permits landowners in conservation target areas to transfer some or all of the development rights to their land (sending areas) to areas where growth is desired at higher densities than zoning allows (receiving areas). The landowner keeps title to the land and the right to sue it, but gives up the right to develop it for other purposes. The buyer of development rights uses them to develop another parcel at greater density than would otherwise be permitted. With TDR, transfer of rights occurs at the time of development.
- **Purchase of Development Rights (PDR)** operates in a similar manner. However, with PDR, an entity buys the rights to develop land from the landowner. The landowner retains title and use of the land, and receives tax benefits. A municipality can pass a bond issue to buy the rights and "bank" them. A developer may then purchase the development rights from the municipality when ready to develop an area with high density. The municipal bond financing is paid off over time by the purchase of development rights as development occurs.
- **Benefits:** The value of each development right is controlled by the open market, not the municipality. TDR is an equitable option for preserving open space and agricultural land, compensating the owner of the preserved land, while guiding the growth of development by allowing increased density where existing infrastructure can support it.
- **PDR** provides an immediate return to the landowner, as he/she is compensated for the reduction in development potential of their land. At the same time, PDR supports the development district concept. PDR also streamlines the development process, since private sales and negotiations for development rights are eliminated. It allows a municipality to guide growth to places where it is desired.
- **Implementation:** In Pennsylvania, TDR can only be used to transfer development rights within a single municipality or among municipalities with a joint zoning ordinance. It is up to each municipality implementing TDR to set up a mechanism to accomplish the transfer.

Regulatory Tools

Regulatory techniques can also be used to establish greenways. However, because they can always be amended or even abolished by local officials, they cannot be relied on for permanent protection of land. Nevertheless, they should not be overlooked when discussing long-term strategies for assembling a greenway network.

Open Space Zoning

- **Description:** This preserves a large amount of land for conservation uses while still allowing full-density development. In contrast to cluster zoning, where the emphasis is more often placed on providing active recreation areas, open space zoning is more suited for protecting farmland, forests, historic sites, or scenic views. Subdivisions are required to dedicate a significant portion of their unconstrained land to permanent open space uses. The open space is typically owned and managed (according to an approved management plan) by a homeowners' association. Other possible owners include land trusts or the municipality.
- **Benefits:** While a regulatory tool, open space zoning provides a means of permanent protection of undeveloped land while allowing full-density development. Ideally, the open space in each new subdivision will be planned to abut one another, forming an interconnected system of conservation land.
- **Implementation:** This technique is implemented through a municipal zoning ordinance. The number of dwellings permitted is based on the net acreage of buildable land and the allowable density in the property's zoning district. Easements are then placed in the open space to ensure that it will not be further subdivided or developed.

Growing Greener: Conservation by Design

Growing Greener: Conservation by Design is a collaborative program between the Natural Lands Trust, a non-profit conservancy located in Media, PA; the Pennsylvania Department of Conservation and Natural Resources; the Governor's Center for Local Government Services; Pennsylvania Department of Community and Economic Development; and an advisory committee comprised of officials from state, local, and non-profit agencies and the private sector. The Governor's 1999 state-wide funding initiative shares the same *Growing Greener* name, but is a separate program funding natural resource protection and land preservation efforts across the Commonwealth.

In order to implement conservation subdivision design, zoning and subdivision ordinances are revised to focus not only on the development related issues (such as lot dimensions, street geometry, stormwater management, etc.) but to place equal emphasis on conserving a variety of environmental, cultural, historic, and scenic features. It is precisely those features that typically give a community its special character and are often destroyed by conventional development practices.

When local land use regulations require developers to design around special natural and cultural features, developers can become the municipality's greatest conservationists, at no cost to the community. To achieve this, several revisions must usually be made to the subdivision and zoning ordinances.

Subdivision ordinances must contain, at a minimum:

- Procedures that strongly encourage dialogue between the applicant and the municipality before detailed plans are engineered.

- Standards for configuration and location of conservation lands.
- A requirement for a context sensitive map, showing all natural and man-made features surrounding the site.
- A requirement that a detailed site inventory for existing features upon which to base decisions regarding the are to be protected.
- Required site visit by planning commission members accompanied by the developer, with the site inventory in hand.
- A four step design process in which conservation areas are determined first, before houses, streets, and lot lines are established.

Revise zoning ordinances to create a menu of options for developers to choose from, relating density to the provision of open space. The options offer density increases when greater open space is proposed and reduced density when less open space is proposed. In addition, the zoning ordinance needs to be made flexible to accommodate development in patterns that preserve natural resources.

Zoning ordinances must contain, at a minimum:

- The ability for the applicant to obtain full density, through a “by-right” (versus conditional use) approval process, but only when the conservation option is selected.
- A requirement that protected lands in conservation subdivisions are comprised of at least 50% of the buildable ground, whenever the underlying density is one unit per acre or lower.
- Strong disincentives to discourage “conventional” development, usually reducing the density by half.
- Restrictive covenants that ensure the conservation lands are perpetually restricted from further development.
- Open space location design standards.

Successful communities employ a wide array of conservation planning techniques simultaneously over an extended period of time. Complementary tools, which a community should consider adding to its “toolbox” of techniques, include the purchase of development rights; donations of sales to conservancies; the transfer of development rights; and “land owner compacts” involving density shifts between contiguous parcels. Other techniques can be effective, but their potential for influencing the big picture is limited. The *Growing Greener: Conservation by Design* approach offers the greatest potential because it:

- Does not require public expenditure,
- Does not depend on land owner charity,
- Does not involve complicated regulations for shifting rights to other parcels.
- Does not depend on the cooperation of two or more adjoining landowners to make it work.

Additional informational material describing *Growing Greener: Conservation by Design* concepts is available from the Natural Lands Trust, Hildacy Farm, 1031 Palmers Mill Road, Media, PA 19063, 610-353-5587, www.natlands.org.

Overlay Zoning Districts

- Description: An overlay zoning district applies additional regulations to an underlying zoning district or districts. The restrictions of the overlay district supplement and supersede (where there is a conflict) the provisions of the underlying district. Overlay districts have been used to conserve floodplains and other sensitive natural features.

- **Benefits:** Overlay zoning allows regulations to be tailored to specific conditions. Administration is similar to any other zoning district.
- **Implementation:** Provisions of a zoning district must apply uniformly to each class of uses or structures within the district. However, Section 605 (2) of the Municipal Planning Code authorizes additional classifications, potentially through overlay zoning, for "regulating, restricting, or prohibiting uses and structures at, along, or near....
 - (ii) Natural and artificial bodies of water
 - (iii) Places of relatively steep slope or grade, or areas of hazardous geological or topographic features
 - (vi) Places having unique historical, architectural, or patriotic interest or value
 - (vii) Floodplain areas, sanitary landfills, and other places having a special character or use affecting and affected by their surroundings"

Buffer Zones

- **Description:** Municipalities enact regulations requiring buffers of a prescribed width between incompatible uses, such as residential and commercial areas or adjacent to sensitive resources such as, streams or drinking water supplies. This tool allows the municipality to limit or prohibit development within the buffer area.
- **Benefits:** Buffers can be used to protect large, linear corridors of valuable resources like stream and river banks, which are often included in greenways. They allow municipalities to protect areas of sensitive land without having to shoulder the expense of acquisition.
- **Implementation:** Requirements for buffers are enacted as part of a zoning ordinance or subdivision and land development ordinance. Buffer restrictions should be wide enough to protect the resource or shelter the less intensive use. However, care must be taken not to create buffers that are so wide that they will disproportionately reduce the value of land in the municipality. An amazingly successful example of a buffer zone is Falling Spring Greenway in Guilford Township, Franklin County. Successful implementation of a buffer zone around the Falling Spring Branch, a popular fishery, coupled with several stream restoration projects, saved a threatened natural resource. This ordinance, as well as an illustrated article detailing its success, is available in the appendices of this report.

Agricultural Protection Zoning

- **Description:** This zoning designates areas where farming is the primary land use and discourages other land uses in those areas.
- **Benefits:** Agricultural Protection Zoning stabilizes the agricultural land base by keeping large tracts of land relatively free of non-farm development. This reduces the likelihood of conflicts between farmers and non-farming neighbors. Maintaining unbroken masses of farmland ensures continued support for local agricultural service businesses. This option is of special importance in Erie County, where several municipalities throughout the county contain large swaths of agricultural land.
- **Implementation:** Agricultural Protection Zoning is economically viable when coupled with tools, such as Transfer of Development Rights or Purchase of Development Rights.

Mandatory Dedication Ordinance

- **Description:** Township officials require developers to dedicate a portion of the undeveloped land on a development parcel for open space preservation purposes. The amount of open space dedication is often reflective of the type, amount, and intensity of development to occur on the site.

Fees in-lieu-of dedication are required of the owner or developer as a substitute for dedication of land. Fees are usually calculated in dollars per lot, and referred to as "in-lieu fees." The municipality then uses these funds to purchase new park or conservation land.

- **Benefits:** Mandatory dedication ensures that open space will be preserved as a municipality develops. With careful planning by municipal officials, these areas of open space can be aligned to create greenway corridors. However, many municipalities prefer payment of in-lieu fees because they allow the municipality to combine funds from several developments and purchase large tracts of recreation or conservation land.

It is important to note that mandatory dedication ordinances can include specific clauses requiring the dedication of land that includes environmentally-sensitive features such as wetlands, floodplains, etc. Ordinances can also require negotiation with municipal officials so that other lands desired by the municipality can be identified for dedication.

- **Implementation:** Provisions requiring mandatory dedication or in-lieu fees can be added to municipal zoning ordinances by amendment. The Municipal Planning Code requires that "the land to be dedicated, or the fees to be paid, shall bear a reasonable relationship to the use of the park or recreational facilities [developed on that land] by future inhabitants of the development." The municipality is also required to expend any fees collected within three years of payment by the owner / developer.

The Official Map

- **Description:** A municipality creates an "official map" that designates public or private land that has been identified as a current or future public need. This can be land for roads or other infrastructure, as well as open space for conservation, transportation, or recreation. Making this map available to the public, notifies landowners and developers about land that the municipality is planning to use for public purposes.
- **Benefits:** The Official Map is a very powerful tool for municipalities planning for conservation, transportation, and recreation. It gives municipalities time to assemble funds to purchase identified lands through First Right of Refusal (described earlier in this section). Of importance in Erie County, is the fact that a municipality is not required to enact ordinances to create and adopt an Official Map.
- **Implementation:** The Official Map does NOT result in taking of land, but simply gives the municipality right of first refusal to purchase the land or obtain an easement. The municipality has one year to make an offer to the landowner should the property be made available for sale. After one year, the landowner can sell the property to any other interested buyer.

Municipalities wanting to establish should only do so after they have identified lands needed for conservation, transportation, or recreation through a comprehensive planning process. Such lands must be identified on a parcel-by-parcel basis, with greater detail than is given in this greenways

plan. If lands are to be reserved in an official map, the municipality should have a reasonable prospect of obtaining the funds necessary to purchase the property of interest.

The Official Map is a tool of great importance in Erie County because a municipality can implement an official map with or without a zoning ordinance.

Other Recommendations

The action plan also includes several other conservation and recreation-based recommendations essential to maintaining the quality of life that defines Erie County. The following mechanisms are methods of land conservation or resource protection that do not involve acquisition of land or enactment of ordinances by a municipality, but are no less effective.

Agricultural Security Areas

- Description: A landowner or group of landowners, whose parcels together comprise at least 250 acres, may apply to their local government for designation as an Agricultural Security Area.

Many Agricultural Security Areas (ASAs) already exist within Erie County's borders.

Although ASAs do not offer conservation-based protection, they help ensure continuation of agricultural practices, which are a large part of the quality of life in Erie County. This plan recommends that the county continue to accept applications for agricultural security areas, and couple that effort with a strong conservation-based education program showing farmers in ASAs the benefits of best agricultural best management practices and natural resource conservation.

Agricultural Tax Incentives

- Description: Differential assessment laws direct local governments to assess agricultural land at its value for agriculture, rather than its full market value, which is usually higher. Differential assessment laws are enacted at the state level, but implemented locally.
- Benefits: The programs allow farmers to continue operating an agricultural operation in the face of development, thus helping ensure the economic viability of agriculture. These tax laws align agricultural property taxes with what it actually costs local governments to provide services to the land.
- Implementation: Landowners must apply to the County Assessment Office.

Clean and Green Program

- Description: Pennsylvania ACT 319 (also known as Clean and Green) provides real estate tax benefit to owners of agricultural or forest land by taxing that land on the basis of its "use value" rather than its true market value. This act provides preferential assessment to any individuals who agree to maintain their land solely devoted to one of the three following uses:
 - Agricultural Use: Land used for producing an agricultural commodity or devoted to (and qualifying for) payments or other compensation under a soil conservation program under an agreement with a Federal agency.

- Agricultural Reserve: A non-commercial open space used for outdoor recreation or enjoyment of scenic or natural beauty, offering public use without fee or charge. Agricultural reserve land is the only use under the Clean and Green program that requires landowners to permit nondiscriminatory public access. This use is generally requested by landowners that wish to maintain their land in a natural state; free of farming, timbering, or any other activities.
- Forest Reserve: A 10+ acre parcel of land stocked by forest trees that are capable of producing timber or other wood products. Forest reserve lands include any farmstead land on the same property parcel as the timber trees.
- Benefits: Clean and Green reduces property taxes for owners of farm, timber, or conservation land.
- Implementation: Landowners applying for the Clean and Green Program must have 10 or more acres of active agricultural or forest land unless they gross at least \$2,000 annual income from the land.

Partnership with a Land Trust Organization

- Description: The regular acquisition of property rights (using several of the conservation tools mentioned previously in this section) for conservation defines an organization as a land trust. Land trusts are non-profit organizations focused on working cooperatively with landowners and organizing land acquisition projects that benefit both landowner and community. Nearly 100 land trusts operate in Pennsylvania.

Land trusts can be private charitable organizations, or in some cases governmental agencies, that vary greatly in size and conservation priorities. They may be staffed entirely by volunteers concentrating efforts in a small area or municipality, or may be large regional entities staffed by many professionals (i.e. the Western Pennsylvania Conservancy). Among the various possible focuses of land trusts are:

- Operating public recreation areas or nature preserves;
- Owning no property, but hold conservation easements for the protection of natural resources;
- Acquiring land that is to be turned over to governments for public parks or other recreation, such as State Game Lands;
- Focusing on protection of water resources such as lakes, rivers, and streams;
- Preserving scenic views, wildlife habitat, or open space for public recreation;
- Promoting the preservation of productive farmland, forested areas, or hunting grounds; or
- Promoting smart land-use planning, environmental education, or trail development for transportation.
- Benefits: Conservation of open space in Pennsylvania is essential not only to the environment, but to the State's economy. Agriculture, timber production, eco-tourism, hunting, fishing, wildlife observation, and other outdoor recreation are all dependent on preservation and management of Pennsylvania's natural resources, upon which the State's economic success depends.

Because they are devoted to working directly with landowners, land trusts can dispel any fears about government "taking" of land. Their efforts can comply with community conservation interests while spelling out benefits to the landowner, thus creating a "win-win" situation.

In addition, land trusts may have considerably more success than municipalities in attracting funding for acquisition projects. They sometimes qualify for Federal, State, and local government funds available for conservation projects. Pennsylvania DCNR supports land trust acquisitions with Keystone Fund and Environmental Stewardship Fund (Growing Greener) grants, which support 50% of the costs of priority acquisitions. Land acquisition projects were a main focus of the Growing Greener grant funding in 2006. Of further interest, the Pennsylvania Land Trust Association (PALTA) also offers a similar program with a newly-increased maximum \$6,000 reimbursement grant for conservation easements on natural areas and also for trail easements. (see www.conserveland.org/ceap).

- **Implementation:** To meet Erie County's conservation needs, County officials should consider expanding the mission or interests of an existing land trust.

Many of Pennsylvania's land conservation organizations are members of the Pennsylvania Land Trust Association (PALTA), whose mission is to increase the quality and pace of land conservation state-wide by strengthening conservation efforts, improving related government policy, and raising public awareness while building positive relationships between land conservation organizations and other partners. The Western Pennsylvania Conservancy (WPC) is a current member of PALTA, and at the time of this report, the Wild Waterways Conservancy (WWC) was in the progress of gaining land trust accreditation through PALTA. Information on these and other land trusts is available at www.conserveland.org.

Continue to Promote Agricultural Best Management Practices

Pashek Associates recommends that the County Conservation District continue its work with farmers to promote and implement best management practices, thus protecting water quality in the County's streams. Agricultural runoff may cause siltation and may alter nutrient content of streams, adversely effecting aquatic ecosystems. Best management practices, such as stabilized cattle stream crossings, streambank fencing to limit livestock access to streams, and planting vegetative stream buffers may help to prevent excessive runoff from agricultural fields.

The Erie County Conservation District currently offers landowner education on agricultural best management practices, and has helped landowners implement such practices throughout the County. In addition, the WPC provides outreach and implementation services for best management practices via the Pennsylvania Conservation Reserve Enhancement Program (CREP). CREP rewards agricultural producers and landowners for agreeing to install conservation practices on their land. More information is available at www.creppa.org and through the Erie County Conservation District (phone: 814-825-6403).

Caution must also be taken to preserve farm-related infrastructure such as farm supply stores, etc. A regional example of preservation without proper planning is Montgomery County, Maryland. Agricultural preservation areas were concentrated in one area of the county only, while other areas were left open to development. Once land was developed in other portions of the county, farm-related infrastructure, like supply businesses, moved out of the county towards larger customer bases. The farms that remained protected in the county then experienced financial hardship due to lack of nearby support businesses like supply stores, machinery dealers, etc.

Pennsylvania Game Commission Cooperative Programs

Hunting is a part of life in Erie County, as is agriculture. Both of these facts are apparent during any drive through the County's countryside, and in the County's abundance of State Game Lands. It is

recommended that the County encourage its landowners in rural areas to make land available for public hunting, via the *Cooperative Farm-Game Program* and *Cooperative Safety Zone Program*, administered by the Pennsylvania Game Commission (PAGC).

These programs benefits both sportsmen and farmers. They provide more accessible hunting grounds, support the implementation of sound land use practices associated with game species habitat, and foster a mutual respect between hunters and landowners. Landowners may also receive the following:

- increased law enforcement patrol during regular hunting seasons;
- food and cover seedlings attractive to game species;
- special preference in the commission's pheasant stocking program;
- informational and warning signage for property borders and for safety zones, which are located within 150 yards of occupied dwellings or other buildings;
- free advice on soil conservation and other farm-related land use practices; and
- cutting of tree roots and limbs from crop field borders to increase sunlight on crops and provide cover for small game species and other wildlife.

Cooperating property owners enrolled in the Safety Zone Program execute an agreement with the PAGC that may be terminated at any time with 60-days advanced written notice. Landowners in the Farm-Game Program execute an agreement giving the commission hunting rights to the property for a minimum of 5 years. As of 2003, over 21,000 such agreements were in place, spanning 59 Pennsylvania Counties and keeping almost 2.5 *million* acres open to public hunting. Further information is available from PAGC field officers, any of the 6 regional PAGC offices, through the Bureau of Land Management at the PAGC Harrisburg headquarters, or through the PAGC website: www.pgc.state.pa.us.

Land Trust Organizations

There are several land trust and conservation organizations whose geographical area includes Erie County. A query of the Pennsylvania Land Trust Association's database identifies the Conneaut Lake French Creek Valley Conservancy, the Lake Erie Conservancy, and the Western Pennsylvania Conservancy. Another established organization in the Region that may qualify as a land trust in Erie County is the Pennsylvania Environmental Council.

Erie County continues conversations with each organization identified herein to determine their level of interest and commitment to providing their capabilities to Erie County at the local level. If the discussions lead to a determination that the natural system greenway corridors recommended herein are outside of the respective agency's missions, then it is recommended efforts be re-focused on determining what agency may be available to take the lead, whether it be governmental or from the private sector.

Organization	Mission
Conneaut Lake / French Creek Valley Conservancy P.O. Box 34 Meadville, PA 16335 814-337-4321 conserve@mdvl.net www.frenchcreekconservancy.allegheny.edu	To promote the environmental integrity of the French Creek watershed and its environs, and to advance the protection of natural resources in the watershed to the aesthetic, ecological, recreational, and economic benefit of the citizens of the area.
Lake Erie Region Conservancy 501 East 38th Street Erie, PA 16546 814-824-2407 lerc@mercyhurst.edu	To identify, conserve and protect the Lake Erie region's unique natural, cultural, and historic resources, and to promote sustainable development through research and education.
Western Pennsylvania Conservancy 800 Waterfront Drive Pittsburgh, PA 15222 412-586-2326 info@paconserve.org www.wpconline.org	Protects, conserves and restores land and water for the diversity of the region's plants, animals and their ecosystems. Through science-based strategies, collaboration, leadership and recognition of the relationship between humankind and nature, WPC achieves tangible conservation outcomes for present and future generations.

Potential Funding Sources

Development of a greenways network can be costly and requires a long-term strategy to access a variety of federal, state, and private sector funding opportunities. Funding programs designed to conserve natural resources, develop recreational trails, and create transportation improvements are all potential sources of grants for implementation of the recommendations contained herein. Most require some form of local match, and sometimes one grant opportunity can be utilized as the 'local match' for another grant opportunity.

The following tables list many current funding sources that are available to assist in funding greenway efforts in the Northwest Region. Because these programs are constantly changing, these tables are a starting point. When seeking grant programs, applicants should check web sites of the funding organizations for an updated listing of grant programs and eligibility requirements.

Moreover, any funding strategy should leverage local resources as well. Private and non-profit foundations in the communities and region are important sources of funding that should not be overlooked when assembling funding strategies. In addition, efforts should be made to create public-private partnerships and to seek in-kind contributions from local businesses in the communities and the region.

State Public Agency Grant and Funding Opportunities

Program	Agency	Purpose	Website
Community Conservation Partnership Program	Department of Conservation and Natural Resources	greenways, trails, & parks, acquisition, planning, development, circuit rider	http://www.dcnr.state.pa.us/brc/grants/general02.aspx
Boating Facilities Grants	Pennsylvania Fish & Boat Commission	boating facilities	www.fish.state.pa.us/promo/grants/boat_fac/00boatfac.htm
Certified Local Government Grants	Pennsylvania Historic and Muesum Commission	cultural surveys / interpretation	www.artsnet.org/phmc/pdf/clg_app.pdf
Community Development Block Grant	Pennsylvania Department of Community Development	infrastructure / community facilities	www.newpa.com/programDetail.aspx?id=71
Community Revitalization Program	Pennsylvania Department of Community Development	quality of life	www.newpa.com/programDetail.aspx?id=72
Environmental Education Grants	Pennsylvania Department of Environmental Protection	Environmental Education	www.depweb.state.pa.us/enved/cwp/
Growing Greener Grants	Pennsylvania Department of Environmental Protection	conservation of resources	www.depweb.state.pa.us/growinggreener
Keystone Historic Preservation Grants	Pennsylvania Historic and Muesum Commission	preservation / restoration	www.artsnet.org/phmc/pdf/kph_app.pdf
Land Recycling Grants Program	Pennsylvania Department of Environmental Protection	remediation	www.depweb.state.pa.us/dep/site/detail.aspx?id=71
Land Use Planning & Technical Assistance Grants	Pennsylvania Department of Community Development	community planning	www.depweb.state.pa.us/dep/site/detail.aspx?id=72
Main Street Program	Pennsylvania Department of Community Development	economic growth / community	www.depweb.state.pa.us/dep/site/detail.aspx?id=79
Non-Point Source Management Section 319	Pennsylvania Department of Environmental Protection	watershed restoration	www.dep.state.pa.us/dep/deputate/
Pennsylvania Infrastructure Bank	Pennsylvania Department of Transportation	transportation projects	www.dot.state.pa.us/bureaus/PIB.nsf/homepagePIB?OpenForm
TE Hometown Streets & Safe Routes to Schools	Pennsylvania Department of Transportation	bike / ped improvements	http://www.dot.state.pa.us/pennndot/Bureaus/CPDM/Prod/Saferoute.nsf
Urban & Community Forestry Grants	Pennsylvania Department of Conservation & Natural Resources	planting of trees	www.dcnr.state.pa.us/forestry/pucfc/
Treevitalize	Pennsylvania Department of Conservation & Natural Resources	planting of trees	www.treevitalize.net
Pennsylvania Redevelopment Assistance Capital Improvements	Pennsylvania Department of Community Development	see program guidelines	www.budget.state.pa.us/budget/lib/budget/racp/appmat/applicationhandbook.pdf
Single Application Grants	Pennsylvania Department of Community Development	see program guidelines	https://www.esa.dced.state.pa.us/ESAW/
Coldwater Heritage Conservation Grant	Pennsylvania Trout Unlimited, PA DCNR, PA Fish & Boat Commission	conservation of coldwater streams	www.coldwaterheritage.org

Federal Public Agency Grant and Funding Opportunities

Program	Agency	Purpose	Website
Acres for America	National Fish & Wildlife Foundation	acquisition of property	www.nfwf.org/programs.cfm
Brownfields Redevelopment Initiative	General Services Administration	includes trails	http://bri/gda/gov/brownfields/home
Community Development Block Grant	U.S. Department of Housing	can include greenways	www.hud.gov/offices/cpd/communitydevelopment/programs/index.cfm
Congestion Mitigation & Air Quality Program	Federal Highway & Transportation Adminstration	includes trails	www.fwha.dot.gov/environment/cmaqpgs/index.htm
Economic Development Grants for Public Works	Economic Development Administration	trail development	www.cfda.gov/public/viewprog/asp?progid=167
Environmental Education Grants Program	U.S. Environmental Protection Agency	Environmental Education Projects	www.epa.gov/enviroed/grants.html
Federal Public Lands Highway Discretionary Grants	Federal Highway Adminstration	includes trails	www.fwha.dot.gov/tea21/factsheets/fedland.htm
General Matching Funds	National Fish & Wildlife Foundation	fish & wildlife conservation	www.nfwf.org/programs.cfm
Healthy People 2010 Community Grants Program	Federal Department of Health & Human Services	health and wellness	www.health.gov/healthypeople/impleneetation/
Keystone Initiative Grants	National Fish & Wildlife Foundation	habitat enhancement	www.nfwf.org/am/templateccfm?Section=Grants
Land & Water Conservation Fund Grants	National Park Service	trails and greenways	www.nps.gov/nrcr/programs/lwcf/
National Scenic Byway Program	Federal Highway Adminstration	bicycle and pedestrian facilities	www.byways.org/grants/index.html
North America Wetland Conservation Grants	U.S. Department of the Interior	wetland conservation	www.fws.gov/birdhabitat/grants/nawca/index.shtm
Recreational Trails Program	Federal Highway Adminstration	trails	www.fhwa.dot.gov/environment/rectrails/index.htm
Rivers, Trails, & Conservation Assistance Program	National Park Service	conservation of resources	www.nrcr.nps.gov/programs/rtca/ContactUs/cu_apply.html
Safe Schools / Healthy Students Initiative	Office of Juvenile Justice, Department of Education	promote heathly childhood development	www.ojjdp.ncjrs.org/grants/safeschool/content.html
Safe, Accountable, Flexible, Efficent, Transportation Act	Federal Highway Adminstration	bicycle & pedestrian improvements	www.fhwa.dot.gov/safetealu/index.htm
Save America's Treasures Historic Preservation Fund	National Park Service & Arts	preservation / conservation	www.saveamericastreasures.org/funding.htm
Sustainable Development Challenge Grants	U.S. Environmental Protection Agency	sustainable community projects	www.epa.gov/ecocommunity/sdcg/
Transportation & Community & System Pilot Program	Federal Highway Adminstration	planning & implementation of trails	www.fwha.dot.gov/tcsp/
Transportation Enhancements	Federal Highway Adminstration	trails & bike / ped facilities	www.enhancements.org/

Federal Public Agency Grant and Funding Opportunities

Program	Agency	Purpose	Website
Urban Park and Recovery Program	National Park Service	parks	www.ncrc.nps.gov/uparr/
Value Added Producers Grants	USDA Rural Development	market value added ag products	www.rurdev.usda.gov/GA/vadg.htm
Water Quality Research Grants	U.S. Department of Agriculture	water quality impairment	www.epa.gov/smarthgrowth/topics/water_quality_funding.htm
Wetlands Reserve Program	Natural Resource Conservation Service	restore & protect wetlands	www.nrcs.usda.gov/programs/WRP/
Wildlife Habitat Incentives Program	Natural Resource Conservation Service	develop & improve wildlife habitat	www.nrcs.usda.gov/programs/whip/

State Foundation Grant and Funding Opportunities

Program	Purpose	Website
Alcoa Foundation	economic development & quality of life	www.alcoa.com/global/en/community/foundation/overview.asp/
Asland Oil Foundation		www.ashland.com/commitments/contributions.asp/
Bayer Foundation		www.bayer.com/en/bayer-foundations.aspx/
Bozzone Family Foundation	quality of life	311 Hillcrest Drive, New Kensington, PA 15068-2318
Bridge Builders Foundation		www.bridgebuildersfoundation.org/aboutus/index.htm/
Deluxe Corporation		www.deluxe.com/dlxab/deluxe-foundation.jsp/
Dominion Foundation	economic development & environment	www.dom.com/about/community/foundation/index.jsp/
Ganassi Foundation		100 RIDC PLZ, Pittsburgh, PA 15238
Giant Eagle Foundation		101 Kappa Drive, Pittsburgh, PA 15238
H.J. Heinz Foundation		www.heinz.com/foundation.aspx/
Heinz Endowments	Environment	www.heinz.org/
Highmark Foundation		www.highmark.com/hmk2/community/hmfoundation/index.shtml/
Hillman Foundation	quality of life	www.hillmanfdn.org/
Hunt Foundation	focus on good of the region	www.rahuntfdn.org/
Juliet Lea Hillman Simonds Foundation		330 Grant Street, Suite 200, Pittsburgh, PA 15219
Katherine Mabis McKenna Foundation	environment	P.O. Box 186, Latrobe, PA 15650
Massey Charitable Trust		1370 Washington Pike, Suite 306, Bridgeville, PA 15017-2839
McCune Foundation	community development	www.mccune.org/
Millstein Charitable Foundation		P.O. Box K, Youngwood, PA 15697

State Foundation Grant and Funding Opportunities

Program	Purpose	Website
Milton G. Hulme Charitable Trust		1146 Old Freeport Road, Pittsburgh, PA 15238
Mine Safety Appliances Company Charitable Trust		www.msanorthamerica.com/communityrelations.html/
National City Bank Foundation		www.nationalcity.com/about-us/community/community-relations/pages/charitable-giving.asp
Pennsylvania Snowmobile Association Mini-grant Program	motorized trails	www.pasnow.org/PSSA%20Trail%20Grant%20Package.prn.pdf
Pew Charitable Trusts	environment & community development	www.pewtrusts.org/
Pittsburgh Foundation		www.pittsburghfoundation.org/
PNC Bank Foundation		https://www.pnc.com/webapp/unsec/ProductsAndService.do?siteArea=/PNC/Home/About+PNC/Our+Organization/Community+Involvement/PNC+Foundation/PNC+Foundation+Grant+Program
PPG Industries Foundation		http://corporateportal.ppg.com/PPG/PPGIndustriesFoundation/
Richard King Mellon Foundation	environment	http://foundationcenter.org/grantmaker/rkmellon/
Rockwell International Corporation Trust Fund		www.rockwellautomation.com/about_us/neighbor/giving.html/
Snee-Reinhardt Charitable Foundation	education & environment	www.snee-reinhardt.org/
Stackpole Hall Foundation		44 St. Marys Street, St. Mary's, PA 15857
The Bank of New York Mellon		One Mellon Center, Room 1830, Pittsburgh, PA 15258
United States Steel Foundation		www.uss.com/corp/ussfoundation/
W. Dale Brougher Foundation	conservation, ecology, history, & arts	1200 Country Club Road, York, PA 17403
Washington Federal Charitable Trust		www.washfed.com/charity.htm/
Westinghouse Foundation	quality of life	www.westinghouse.com/charitablegiving/giving.htm/

National Foundation Grant and Funding Opportunities

Program	Purpose	Website
American Conservation Association	conservation, river protection & wildlife	1200 New York Avenue, N.W., Suite 400, Washington, D.C. 20005
American Express Philanthropic Program	historic & natural assets	http://home3.americanexpress.com/corp/csr.asp/
AmeriCorp's National Civilian Community Conservation Corps	community improvements / trail building	www.americorps.org/about/programs/nccc.asp/
Andrew W. Mellon Foundation	conservation	www.mellon.org/
Art & Community Landscapes	community landscapes	www.nefa.org/grantprog/acl/acl_grant_app.html/
Bankamerica Foundation	conservation,, parks, fisheries, education	www.bankofamerica.com/foundation/
Bikes Belong Grant Program	bike improvements	www.bikesbelong.org/grants/
Caterpillar Foundation	history & environment	www.cat.com/cda/layout?m=39201&x=7
Chrysler Corporation Foundation	health & community affairs	www.thechryslerfoundation.com/
Coca-Cola Foundation	community development	www.thecoca-colacompany.com/citizenship/foundation_coke.html/
Compton Foundation	conservation	www.comptonfoundation.org/
Davis and Lucille Packard Foundation		www.packard.org/
Exxon Mobil Foundation	environment & education	http://hoe.exxonmobil.com/Corporate/community.aspx
Fish America Foundation	fish & water resources enhancement	www.asafishing.org/content/conservation/fishamerica/
Ford Motor Company Foundation	community development	www.ford.com/our-values/ford-fund-community-service/
Gannett Foundation		www.gannettfoundation.org/
General Mills Corporation	history & environment	www.generalmills.com.corporate.committment/foundation.aspx/
General Motors Foundation		www.gm.com/corporate/responsibility/community/
Harry C. Trexler Trust		33 South Seventh Street, Room 205, Allentown, PA 18101
J.C.Penny		www.jcpenny.net/company/commrel/index.htm/
John D. and Catherine MacArthur Foundation		www.macfound.org/
John S. and James L. Knight Foundation		www.knightfoundation.org/

National Foundation Grant and Funding Opportunities

Program	Purpose	Website
Kodak American Greenways Awards Program	greenways	www.grants.conservationfund.org/tcf/public/viewAwards.action/
Kresge Foundation	challenge grants	www.kresge.org/
L.L. Bean, Inc.		www.llbean.com/customerservice/aboutLLBean/charitable_giving.html/
National Fish and Wildlife Foundation		www.nfwf.org/
New-Land Foundation	environment	114 Avenue of the Americas, 46th Floor, New York, New York, 10036
Norcross Wildlife Foundation	land & habitat conservation	www.norcrossws.org/
Oracle Corporate Giving Program	can include greenways	www.oracle.com/corporate/giving/community/index.html?giving.html
Pepsico Foundation		www.pepsico.com/PEP_citizenship/Contributions/GrantGuidelines/index.cfm/
Polaris 'T.R.A.I.L.S.' Grant Program	motorized trails	www.pi54.com/ATV/PDFs/TRAILSGrantAppForm.pdf
Private Foundation	National	www.tourismcaresfortomorrow.org/
Proctor Gamble Foundation		www.pg.com/company/our_committment/community/jhtml/
Recreational Equipment Company		www.rei.com/reigives/
Robert Woods Johnson Foundation	health & physical activity	www.rwjf.org/
Rockefeller Family Fund	environment	www.rffund.org/
Sony Corporation of America Foundation		www.sony.com/SCA/philanthropy/guidelines.shtml/
Surdna Foundation		www.surdna.org/
Texaco Foundation	environment	www.chveron.com/globalissues/economiccommunitydevelopment/
The Global Relief Heritage Forest Program	tree seedlings on public lands	www.americanforests.org/global_refief/grants/
The Nathan Cummings Foundation	conservation	www.nathancummings.org/
Turner Foundation	wateshed protection	www.turnerfoundation.org/
W.K. Kellogg Foundation	community development	www.wkkf.org/
Wallace Reader's Digest Funds	education	www.wallacefoundation.org/

National Foundation Grant and Funding Opportunities

Program	Purpose	Website
Walmart Foundation		www.walmartstores.com/community/
William Penn Foundation	environment	www.wpennfdn.org/
Yamaha OHV G.R.A.N.T. Initiative	motorized trails	www.yamaha-motor.com/outdoor/OHV_Grants/OHVGRANTS %20Guidlines_Application.pdf