



LOWER WYOMING VALLEY OPEN SPACE MASTER PLAN

Sponsored by:
The Earth Conservancy
Luzerne County
Pennsylvania Department of Conservation & Natural Resources

APRIL 1999

The Lower Wyoming Valley Open Space Master Plan was produced with the help of an Open Space Steering Committee, local agencies, and Earth Conservancy staff, as well as interested citizens from the community. Their knowledge, insight, and creative ideas made it possible to create a comprehensive master plan that responds to all types of people throughout Wyoming Valley and Luzerne County.

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Funding for this open space master plan has been provided by Luzerne County, the Department of Conservation and Natural Resources, Bureau of Recreation and Conservation, and the Earth Conservancy. This project was financed in part by a grant from the Keystone Recreation, Park and Conservation fund, under the administration of the Department of Conservation and Natural Resources, Bureau of Recreation and Conservation (DCNR).

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LOWER WYOMING VALLEY OPEN SPACE MASTER PLAN

Chapter 1 **Introduction**

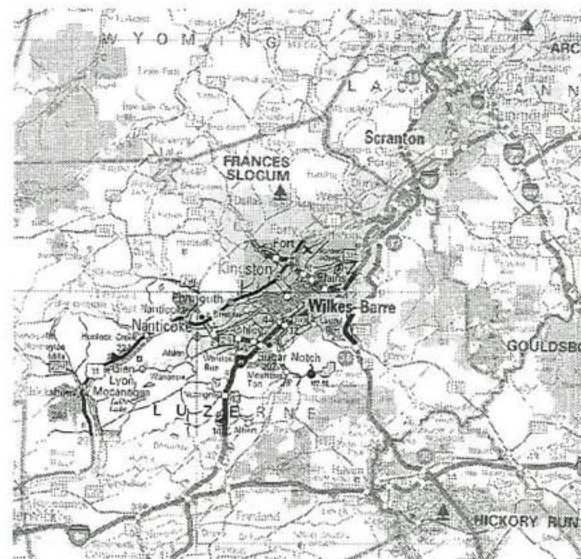
1.1 Project Background

The Earth Conservancy was established in 1992 as a nonprofit corporation to serve as the steward in the reclamation and utilization of degraded land once owned by the Blue Coal Corporation of Ashley. Earth Conservancy has worked in partnership with government, business, and educational institutions to reclaim coal mined land and redevelop the Earth Conservancy properties to improve the economic competitiveness and the quality of life of the Wilkes-Barre and Wyoming Valley area of Northeastern Pennsylvania. With approximately 16,000 acres of land, Earth Conservancy has a unique opportunity to spur economic development and revitalization in the region through innovative development and conservation.

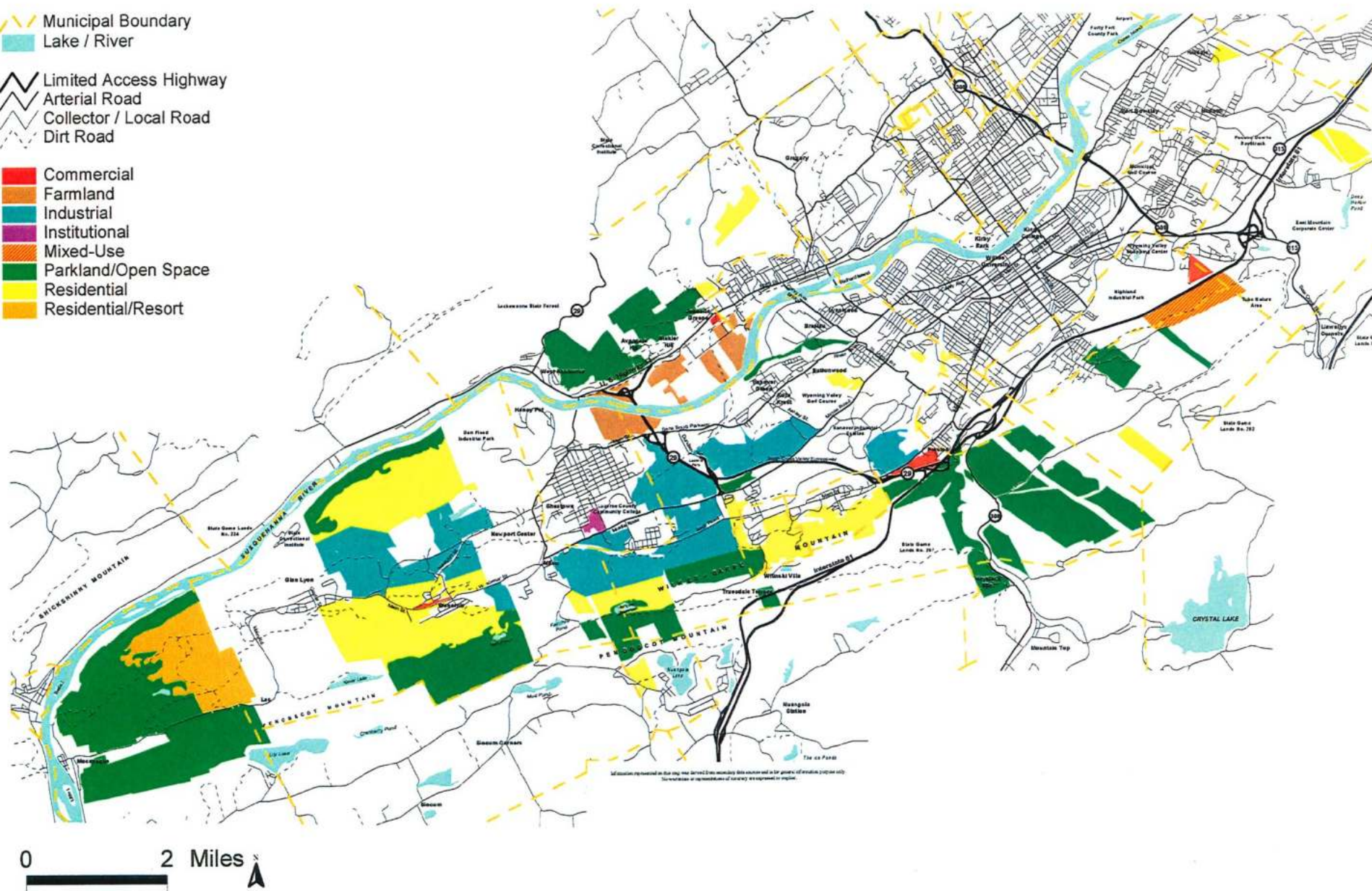


Earth Conservancy property is located in the Wyoming Valley near the Susquehanna River.

In the spring of 1998, Earth Conservancy engaged a team of consultants to prepare the Lower Wyoming Valley Open Space Master Plan based on open space opportunities located on Earth Conservancy property. This plan was preceded by two major planning efforts. The first was a long-term Land Use Plan for Earth Conservancy property prepared by an Earth Conservancy consultant in 1996. The Land Use Plan focused on bringing economic opportunity, quality residential development, and preserved recreation areas to the Wyoming Valley. The plan provided a vision for future growth



-  Municipal Boundary
-  Lake / River
-  Limited Access Highway
-  Arterial Road
-  Collector / Local Road
-  Dirt Road
-  Commercial
-  Farmland
-  Industrial
-  Institutional
-  Mixed-Use
-  Parkland/Open Space
-  Residential
-  Residential/Resort

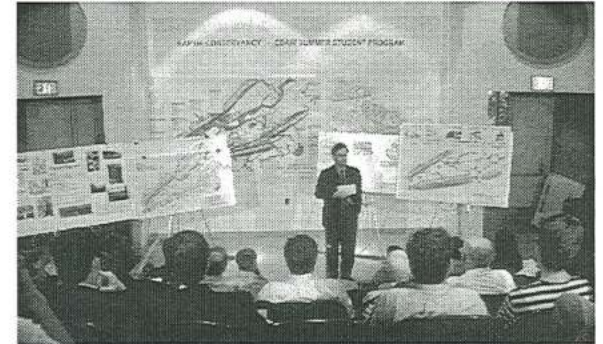


1996 Earth Conservancy Land Use Plan

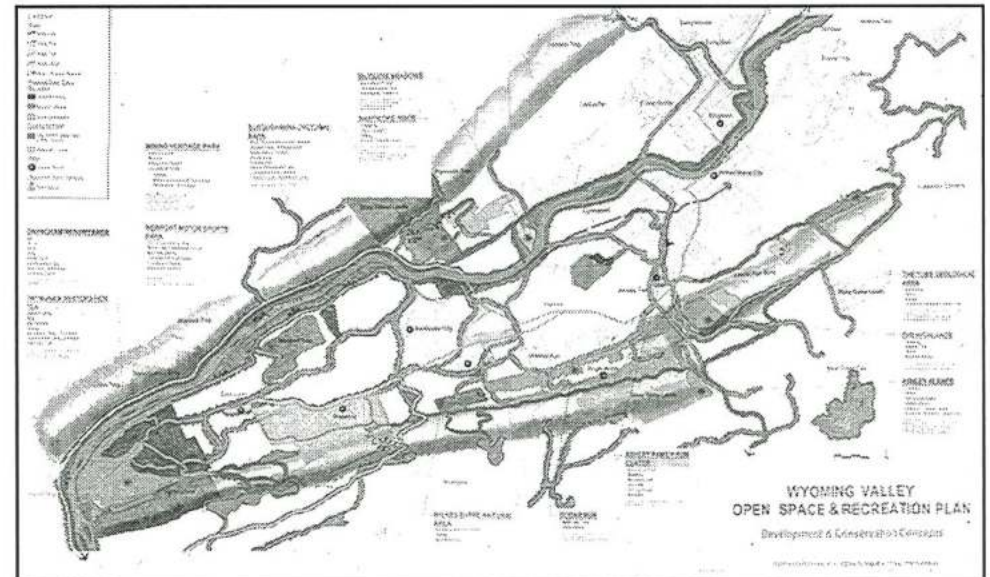
and economic stability, while preserving environmental resources and enhancing community pride. During the planning process, the consultant held a Summer Student Program in Wilkes-Barre in which an abbreviated Open Space Plan for Earth Conservancy property was prepared by the students.

The second major planning effort that precedes the Lower Wyoming Valley Open Space Master Plan is the Delaware & Lehigh Canal National Heritage Corridor Plan which is currently under development. The Delaware & Lehigh (D&L) Canal National Heritage Corridor extends from Luzerne County 150 miles south to Bucks County in Southeastern Pennsylvania along the historic routes of the Susquehanna Railroad, the Lehigh Navigation, and the Delaware Canal. The D&L Plan is organized into three phases: the first focuses on the actual "Passage" of the route, the second centers on eight "Reaches" surrounding the Passage, and the third incorporates key linkages to important trail, greenway, and interpretive facilities beyond the Corridor boundaries. The mission of the corridor is to: "conserve the historic canals and amplify the recreational and educational opportunities based on them; to broadly tell the story of the region by strengthening the infrastructure for interpretation and education; to establish a framework for stewardship which

will preserve significant historic sites, enhance recreation, and conserve the natural and cultural environments; and to provide opportunities for capitalizing on heritage development" (D&L Management Action Plan, page viii). The corridor initiative is working to achieve this vision through a series of conservation and development partnerships among private entities and governments at all levels. As a partner in open space and recreational development, the D&L Commission could support the funding and implementation of many of the Earth Conservancy open space components.



The Summer Student Open Space Plan was presented to the larger Wyoming Valley community.



The Summer Student Open Space Plan proposed protecting the ridges and providing a network of trails.

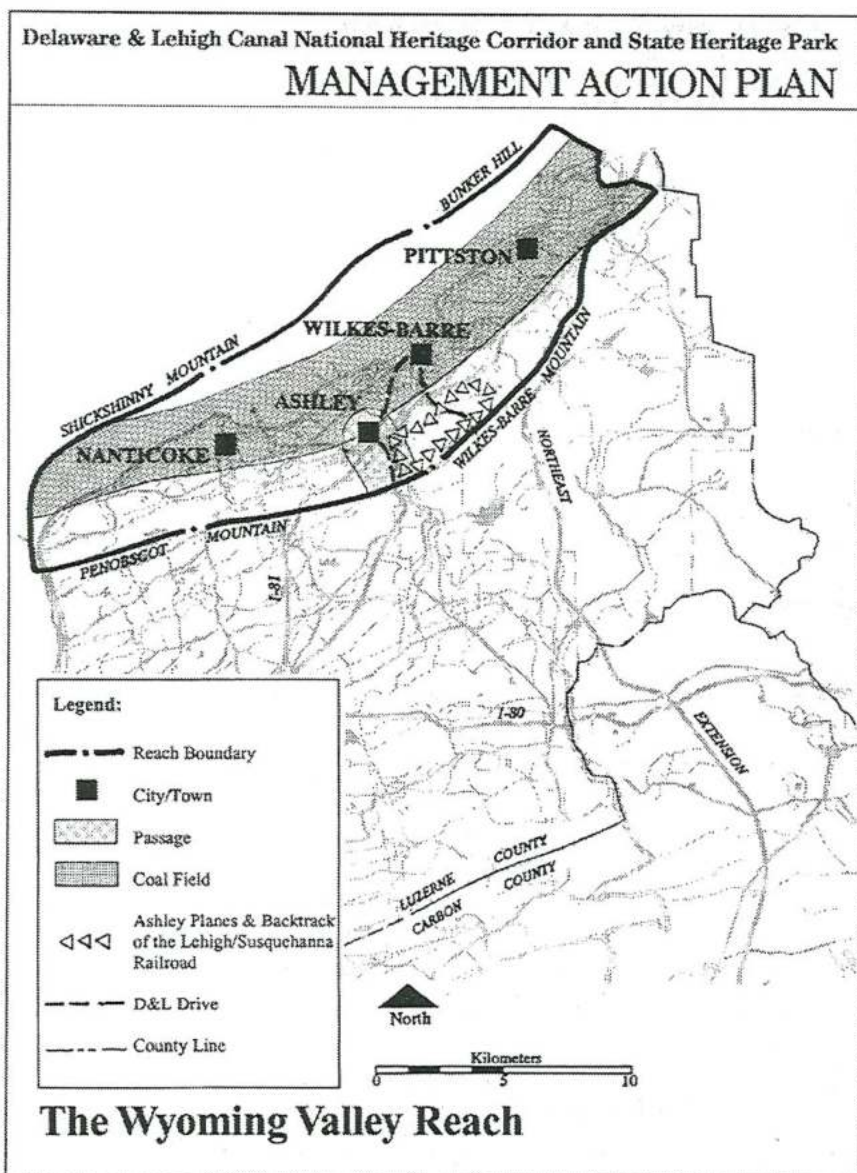


Figure 7.1

This 1996 Earth Conservancy Land Use Plan, the Summer Student Program Open Space Plan, and the Delaware & Lehigh National Heritage Corridor Management Action Plan provide a solid base of information and ideas for this open space planning effort. The Lower Wyoming Valley Open Space Master Plan uses the information derived during these previous planning efforts and expands their basic concepts to create an innovative open space master plan that improves and conserves the Earth Conservancy lands, provides enhanced and sustainable recreational opportunities for future generations, and focuses on economic development.

The Wyoming Valley is a landscape replete with history, natural beauty, and dramatic topography. The Lower Wyoming Valley Open Space Master Plan offers an extraordinary opportunity to weave the region's rich history into an open space network centered on recreation and conservation. The plan is envisioned to develop a network of open space and recreational opportunities throughout the Lower Wyoming Valley (those communities between Wilkes-Barre and Mocanaqua), while protecting the natural environment and interpreting the Valley's rich mining heritage. Local residents and visitors can learn and celebrate the history of the area by experiencing its unique natural and historic features through recreation.

Parks, open space, and trail systems play a major role in shaping community identity and quality of life. They are an integral part of the community fabric, serving to strengthen its structure, culture, image, and pride, and create a unique sense of place for residents and visitors. Developing open space and recreational opportunities on Earth Conservancy property for the Wyoming Valley will significantly improve quality of life for local residents. It will enhance the visual quality of the environment, provide leisure and educational activities, and encourage local tourism and economic development. However, open space and recreational oppor-

tunities must be supported by the community to become a physical reality. In order to orient open space resources to the local community, the following goals were established during the planning process:

- Provide **Recreational Opportunities** for residents and visitors.
- Establish a **Trail Network** linking communities and open space throughout the Valley.
- Promote **Economic Development and Tourism**.
- Preserve **Natural Features and Scenic Views**.
- Interpret the Valley's **Mining Heritage** and restore pride in the region's history.
- Promote an understanding of natural systems through **Environmental Education**.
- Protect bio-diversity, sensitive habitats, and clean water through **Sustainable Development**.
- Identify a series of projects that can be initiated by the **Year 2000**.

The Lower Wyoming Valley Open Space Master Plan provides the vision and the strategy to achieve these goals through the creation of the *Lower Wyoming Valley Open Space Network*. This network will address community recreation needs and desires, create an interconnecting system of trails, promote natural and historic re-

1.2 Purpose

sources, and address the natural and physical constraints of the Valley.

In order to create a sustainable open space network within the valley, the Lower Wyoming Valley Open Space Master Plan focuses intensive recreational uses, such as ATV use, in areas with less sensitive natural environments and allows only low-impact uses in more sensitive habitats. The plan also maximizes opportunities to educate users by incorporating environmental education and historic interpretation into the recreational experience. It targets recreational opportunities to all members of the community by providing areas or trails for bicyclists, hikers, walkers, naturalists, cross-country skiers, hunters, campers, sports participants, children, canoers, picnickers, fisherman, and ATV riders. Open space amenities for each of these groups are sited, designed and managed to be compatible with adjacent uses and environments. In addition, recreational improvements are sited to further environmental restoration, reduce construction costs, and improve the environment. Finally, the plan identifies open space projects that can be initiated by the Year 2000 to provide momentum for open space development into the next millenium.

Recreational opportunities, greenways, and open space systems have proven beneficial to

communities by capitalizing on local resources and revitalizing urban and rural areas.

Some benefits of open space in the Wyoming Valley include:

- The open space network **improves quality of life** by providing a **variety of recreational opportunities** to all residents.
- Designated trails **provide connections** throughout the Wyoming Valley and eliminate trespassing.
- Designated conservation land and interpretive areas **protect natural and historic features**.
- Reclamation and re-use of mine scarred areas **improves the environment**.
- Open space will help to **strengthen the local economy** and **create jobs** by attracting tourists.
- Education and interpretation generate **respect for the environment** and restore **pride in local heritage**.

Although this master plan addresses primarily the Lower Wyoming Valley, it complements and enhances open space throughout the Valley by creating a comprehensive network that links to open spaces in the Upper Wyoming Valley and the larger region. The plan acts in conjunction with other open space and recreational plans in Luzerne County to serve the entire population and benefit the whole County.



Small local businesses, such as the one pictured here, may benefit from new open space initiatives.

The Lower Wyoming Valley Open Space Master Plan was developed through an interactive process with Earth Conservancy, the Open Space Plan Steering Committee, municipal representatives, residents, and the community at large.

During the first phase of the process, the planning team collected data to supplement the database developed for the 1996 Land Use Plan. Information from the database was then used to analyze the natural environment, historic resources, and historic mining conditions to prepare opportunities and constraints maps. This database was created from existing secondary available sources. Field investigations were not conducted to confirm information obtained through secondary sources or to identify additional resources. A Geographic Information System (GIS) was used to record all information obtained during the investigative studies. GIS was utilized to calculate the extent and quantity of resources and generate mapping. Although this plan incorporates the majority of database information in its analysis, the focus is on the natural environment. Information on natural resources was derived from the following sources:

- Aerial photographs (5/95), scale: 1"=1,600'
- U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Luzerne County (1981)
- Listing of prime soils and farmland of statewide importance and Agricultural Security Areas mapping
- U.S. Geological Survey 7.5 minute quadrangle maps and digital elevation model
- Recreational maps
- Pennsylvania Department of Environmental Protection Title 25, Chapter 93, Water Quality Standards
- 1995 Approved Waters listing
- Pennsylvania Fish and Boat Commission (PFBC) data files
- Listing of streams having trout reproduction
- U.S. Fish and Wildlife Service National Wetlands Inventory
- Luzerne County's Natural Resource Conservation Service's Listing of Hydric Soils
- U.S. Fish and Wildlife Service
- Pennsylvania Game Commission
- Pennsylvania Department of Conservation and Natural Resources, Bureau of Forestry
- Pennsylvania Natural Diversity Inventory database

1.3 Methodology



Site tours were held with Earth Conservancy staff, open space committee members, and interested citizens to identify open space issues and goals.

The Greater Wilkes-Barre Chamber of Business and Industry and the Greater Wyoming Valley Greenway Coalition are currently working with Luzerne County and the Nature Conservancy to perform a Natural Areas Inventory for Luzerne County. This inventory would identify sensitive ecological areas and endangered and threatened species habitat throughout the County. Once completed, this inventory would help guide conservation in the Valley and limit development in sensitive areas. This two year project is anticipated to begin in March 1999. It is recommended that specific natural resource information from the Natural Areas Inventory be integrated into site planning and design of open space components.

The planning team held a series of interviews with key stakeholders to identify current issues and goals for open space within the Wyoming Valley. After the interviews, a public vision session was conducted to develop a common vision of open space for the community.

Opportunities and Constraints maps were developed to determine the best locations for different types of open space and to refine the vision of open space within the Wyoming Valley. Finally, a recreational needs and demand analysis was conducted for the Wyoming Valley based on demographic trends, statewide

plans, national standards, as well as a focus group session with community leaders and recreation providers within the area.

In the second phase of the master planning process, the team used the overall concepts identified during the vision session to develop an open space master plan for the Wyoming Valley. This plan includes areas planned for open space use in the Earth Conservancy Land Use Plan and those areas planned for development that contain open space areas due to development constraints. The plan includes some properties not owned by the Earth Conservancy that are critical to the creation of a cohesive open space network for the entire valley. The plan also incorporates active and passive recreation areas, historic/cultural interpretation sites, and scenic vistas.

Finally, the team developed an implementation strategy that addresses who would own the open space properties and how the projects would be funded, built, and managed. The plan and the implementation strategy have been incorporated into this report as two separate chapters. Chapter 2 - Plan describes the vision for open space within the Valley and Chapter 3 - Implementation provides options for implementation of proposed open space projects.

1.4 Demand Assessment Summary

An assessment was conducted in order to determine recreation deficiencies, needs, and demand within the Lower Wyoming Valley and those municipalities surrounding or adjacent to Earth Conservancy property. The assessment includes: demographic characteristics of the population in the Lower Wyoming Valley, an inventory of existing facilities in the study area, facility standards as published by the National Recreation and Parks Association, recreation needs and trends, and a summary of needs and demand based on a synthesis of the information presented.

Although this demand assessment and the overall scope of this plan focus on recreation opportunities in the Lower Wyoming Valley, significant recreation opportunities exist in the Upper Wyoming Valley and regionally. These facilities include the Sports Complex at Forty Fort, Rocky Glen, Campbell's Ledge, golf courses, state gamelands, and local parks.

The recreation needs and trends in the Lower Wyoming Valley were identified by the Pennsylvania Department of Conservation and Natural Resources in Pennsylvania's Recreation Plan. Local public input was gathered through interviews with key community officials, a public vision session for the project, and a focus

group session which included representatives from recreation user groups. The full text of the Needs and Demand Assessment is located in the appendix of this document; a summary of this assessment follows.

Facilities Inventory

The facilities inventory included in the Demand Assessment was compiled primarily with information from a statewide recreation inventory included in Pennsylvania's Recreation Plan and information gathered from municipalities within the study area. While the information remains incomplete, it provides a good overall view of available resources in the study area. The following are total acreages for facility types within the study area:

- Neighborhood Parks - 118 Acres
- Community Parks - 133 Acres
- Regional Parks - 1,006 Acres
- Public School Recreation Areas - 187 Acres
- State Game Lands - 5,567 Acres

In addition to total acreage data, information on the overall number of specific types of facilities is also included in the inventory. Within the study area, there are 104 total outdoor fields; consisting of 30 baseball fields, 30 softball

fields, 15 soccer fields, and 29 multipurpose fields. Other athletic facilities include: 74 tennis courts, 30 basketball courts, 7 swimming pools, 15 gyms, and 50 playgrounds.

Facility Standards

The National Recreation and Parks Association (NRPA) publishes facility standards for recreation. These standards are *general averages* that provide an approximate need for recreation facilities in a population. These standards do not take into account differing local needs. It is for this reason that NRPA standards are only one component of the overall Demand Assessment compiled for this plan.

When comparing existing facilities in the study area to national standards, significant deficiencies were shown in the area of community park facilities (those parks defined as generally containing 10 to 50 acres, serving a 15-mile service area, and accommodating organized sports and those defined as large, intensively used facilities with an orientation towards active recreation).

Expressed Needs and Trends

Public expression of recreation needs and trends in the Wyoming Valley was determined from the following sources:

- Pennsylvania's Recreation Plan
- Project Interviews
- Project Visioning Session
- Project Focus Group Session

Pennsylvania's Recreation Plan

Pennsylvania's Recreation Plan examines recreation trends for each of the ten planning regions in Pennsylvania. The study area for this project is located within Region Three, which consists of seven counties in Northeastern Pennsylvania. Recreation information for Region Three was determined from a public opinion survey conducted by the state in 1990. Although this information is for a planning area larger than the study area, the information allows for a general overview of trends which can be related back to the study area. Highlights of these trends are:

- Recreation activities with the highest participation rates are picnicking, swimming, jogging, and hiking.

- The highest funding priority should be given to the protection of natural resources and wilderness areas; the second highest funding priority should be given to the maintenance of existing facilities
- Playgrounds, bike paths, outdoor theaters, swimming pools, and community recreation centers are the top facilities which survey respondents felt should be provided or expanded.

Other key conclusions which apply to the study area include the need to utilize old railroad beds for bicycling and hiking trails and promote shared recreation facilities, such as public school sites.

Project Interviews

Project Interviews of key stakeholders in open space were conducted during the spring of 1998 in order to gather input related to the preparation of the Open Space Master Plan. Repeatedly, a need was expressed for trail systems within the entire Wyoming Valley and for ballfields in the southern end of the valley.

Project Vision Session

A vision session was conducted on May 18, 1998, in order to gather information and input related to the preparation of the Open Space Master Plan. Need and desire were expressed for the following recreational resources: hiking trails, walking trails, conservation lands, mountain bike trails, and active ballfields.

Project Focus Group

A focus group session was conducted on June 30, 1998, in order to gather information on recreation needs and trends in the Wyoming Valley.

Some of the most popular recreational activities identified were ATV riding, outdoor field sports (baseball, softball, football, soccer, etc.), hunting, hiking, and walking. The response to the question "What are the top three facilities which should be developed on Earth Conservancy property?" was as follows: 1) Trails of all types (hiking, biking, walking, ATV), 2) organized sports/ballfield areas, and 3) outdoor education facilities.

Summary

In order to summarize recreation facility needs and demand expressed from the above-listed sections, an evaluation matrix (page 1-14) was developed. The matrix represents a general assessment based on information presented by each of the sources.

Demand Assessment Matrix

	NRPA Standards	DCNR Statewide Plan	Interviews	Vision Session	Focus Group
Neighborhood Parks	⊙				
Community Parks	●				
Regional Parks	○				
Public School Recreation Areas		⊙			
State Game Lands		●			
Baseball Fields	○	⊙		⊙	●
Softball Fields	○	⊙	⊙	⊙	●
Soccer Fields	⊙	⊙		⊙	●
All Outdoor Fields		⊙	⊙	⊙	●
Tennis Courts	○	○			⊙
Basketball Courts	○	⊙			⊙
Swimming Pools	○	●			⊙
Playground Equipment	○	●			⊙
Gyms	○	⊙		⊙	●
Picnic Facilities		●			⊙
Trails (Hiking or Biking)		●	●	●	●
Environ./Cultural/Historic Facilities		●	⊙	●	●
Off-Road Motor Vehicle Facilities		⊙	●	●	●
Golf		⊙	●	⊙	●
Conservation Lands		●	●	●	●
Campgrounds				●	⊙

- - High Need or Demand
- ⊙ - Significant Need or Demand
- - Low Need or Demand
- [BLANK] - Need or Demand Not Expressed

The Wyoming Valley is rich with history, natural resources, ethnic diversity, and scenic beauty. The Lower Wyoming Valley Open Space Master Plan taps this unique combination of resources to create a vision for the Lower Wyoming Valley Open Space Network. In order for this plan to achieve a physical reality, community leaders must come forward and embrace the area's diverse opportunities and overcome the property's potential constraints.

Tourism Opportunities and Constraints

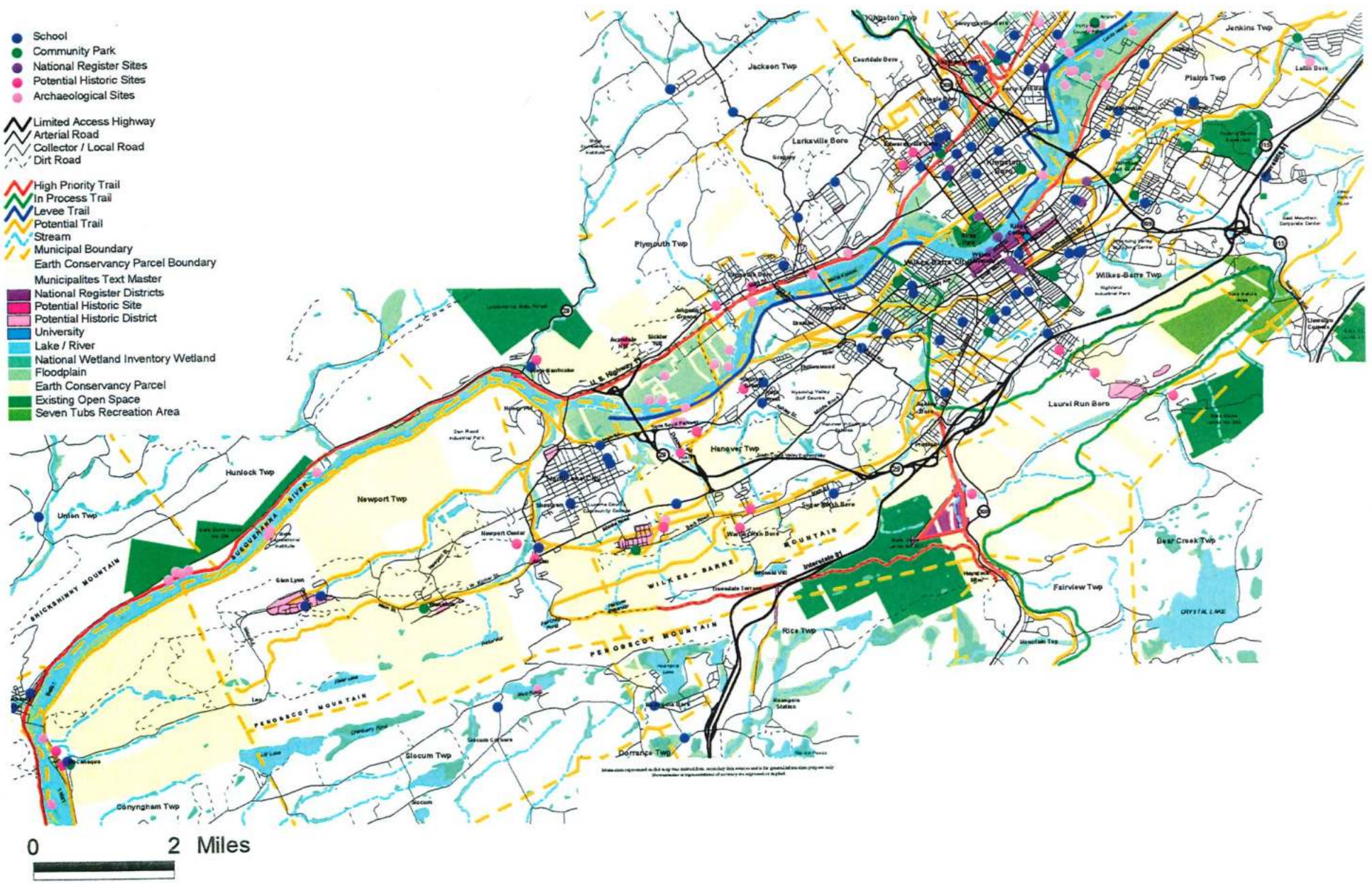
Northeastern Pennsylvania enjoys an array of natural and cultural resources that lend themselves well to recreational activities and tourism. Many of these resources are only beginning to be identified for tourism development. In Lackawanna and Luzerne Counties, the Montage Ski Resort and its new baseball stadium, located just north of Luzerne County, as well as the Steamtown National Historic Site in Scranton have significantly increased recreational and cultural tourist attractions within an hour drive of the Wyoming Valley. The history of the coal industry is also explored at the Lackawanna Coal Mine Tour and the Anthracite Heritage Museum in Scranton, Eckley Miner's Village National Historic District, and the Wyoming Valley Historical and Geological Society Museum.

Tourism is expected to increase in the Wilkes-Barre area with the implementation of a number of new projects, including the Northeastern Pennsylvania Civic Arena and Convention Center and the D&L Canal National Heritage Corridor. The recent selection of the Upper Susquehanna-Lackawanna Watershed as an American Heritage River is also anticipated to attract tourism interest and investment in the area. This designation will enable local governments and organizations to qualify for a variety of Federal grants to implement environmental and community projects within the watershed. Projects currently in the planning stage for the Susquehanna River include the Wyoming Valley Inflatable Dam Project and the Wyoming Valley Levee Raising Project. The Levee Raising Project is projected to raise the levees from 3 to 5 feet and to reduce the potential for catastrophic floods in the Wyoming Valley. The Inflatable Dam Project would backfill these levees to create a seasonal recreational lake ranging between 4 to 5 miles long and covering between 400 to 600 acres. The lake would provide boating, fishing, sight-seeing, picnicking, and other passive recreational opportunities. The technical feasibility report for the dam is scheduled to be complete in March 2000. These regional attractions may bring tourists to the area who could lengthen their visits and

1.5 Opportunities and Constraints



The City of Wilkes-Barre is an attractive city surrounded by a wealth of natural resources.



Wyoming Valley Open Space Opportunities

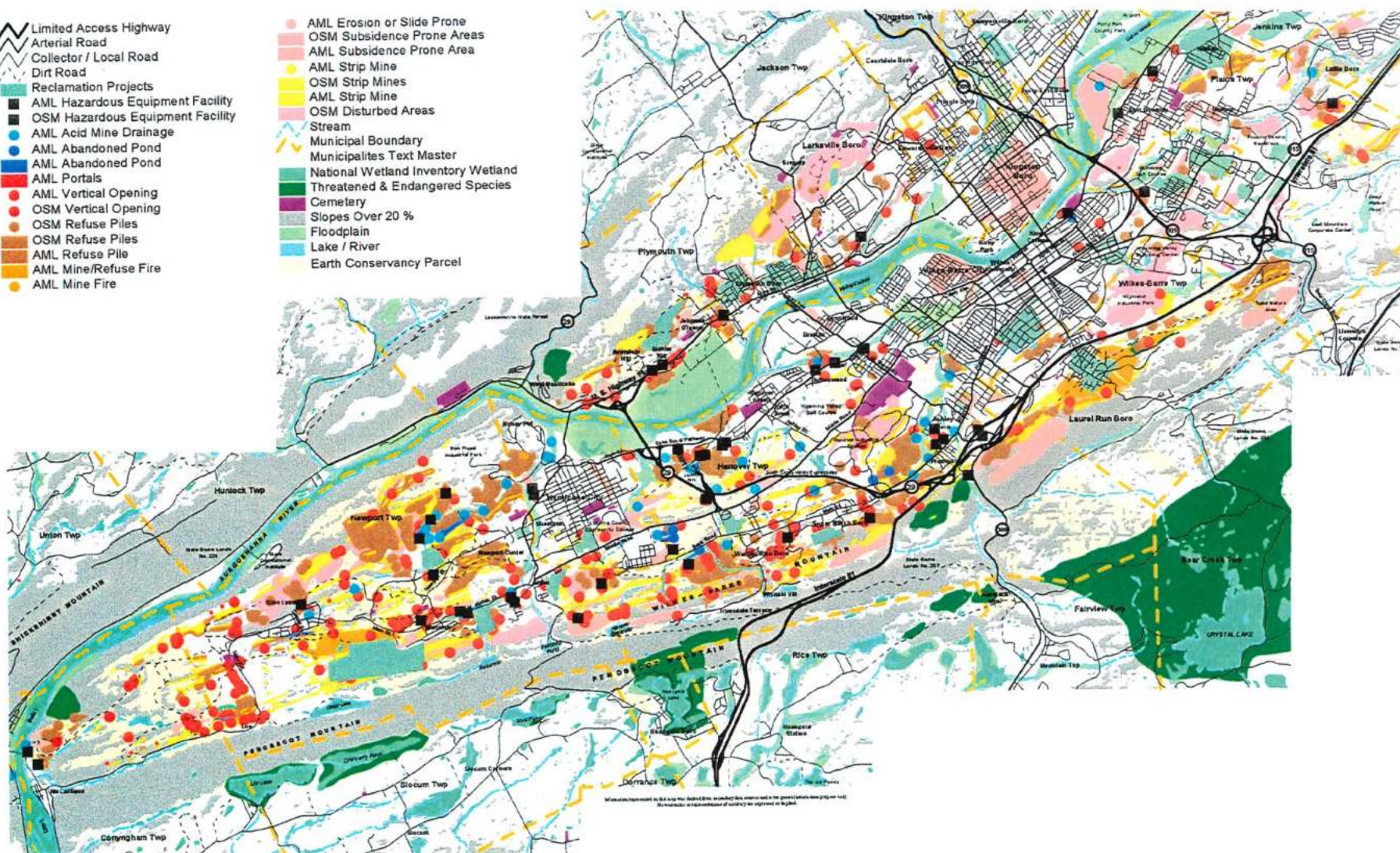
take advantage of open space opportunities within the Wyoming Valley.

Despite these existing and planned attractions, the region faces some challenges in capitalizing on the tourism market. Currently, there are not enough major attractions to draw tourists to the area for longer than one day (although the Steamtown National Historic Site may reverse that trend). Second, the bus and tour group market is waning and there is a limited competitiveness in the meeting/convention market until the new convention center is complete. Third, there are not enough small inns, bed and breakfasts, retail stores, or restaurants in the southern portion of the Wyoming Valley to support tourists who might stay. Finally, there is a lingering perception that the area is simply a depressed mining area with no resources or amenities. Many of these constraints could be addressed through a comprehensive regional tourism marketing plan in conjunction with the development of tourism services.

Economic Opportunities and Constraints

The most significant opportunities and constraints for open space and recreation development are linked to the economy of the area. Many of the region's communities have not been renovated or redeveloped in decades. The housing stock is generally old and deteriorated and there are relatively few high quality stores or restaurants. The local population is aging and many of the young wage earners and graduates are leaving the area. The Wyoming Valley is an opportunity for revitalization. An influx of people, capital, and jobs generated through tourism could help spur the redevelopment of communities and improve the economy of the region. The low cost-of-living and wages in the area help make new open space development affordable in the short-term.

- ~ Limited Access Highway
- ~ Arterial Road
- ~ Collector / Local Road
- ~ Dirt Road
- ~ Reclamation Projects
- AML Hazardous Equipment Facility
- OSM Hazardous Equipment Facility
- AML Acid Mine Drainage
- AML Abandoned Pond
- AML Abandoned Pond
- AML Portals
- AML Vertical Opening
- OSM Vertical Opening
- OSM Refuse Piles
- OSM Refuse Piles
- AML Refuse Pile
- AML Mine/Refuse Fire
- AML Mine Fire
- AML Erosion or Slide Prone
- OSM Subsidence Prone Areas
- AML Subsidence Prone Area
- AML Strip Mine
- OSM Strip Mines
- AML Strip Mine
- OSM Disturbed Areas
- ~ Stream
- ~ Municipal Boundary
- ~ Municipalities Text Master
- ~ National Wetland Inventory Wetland
- ~ Threatened & Endangered Species
- ~ Cemetery
- ~ Slopes Over 20 %
- ~ Floodplain
- ~ Lake / River
- ~ Earth Conservancy Parcel



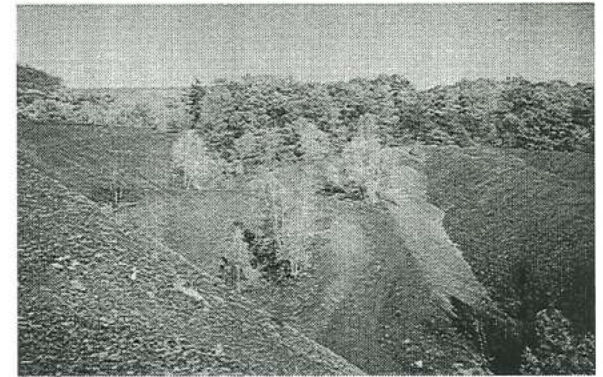
Wyoming Valley Open Space Constraints

Mining Heritage Opportunities and Constraints

The mining heritage of the Wyoming Valley has left a visible layer across the landscape. Culm banks, breakers, railroad beds, abandoned equipment, pits, and strip mines are only the most obvious of this legacy. There are also vertical openings and portals, subsidence areas, acid mine drainage, and mine fires throughout the valley. Earth Conservancy property contains all of these remnants. Many of these are conditions that can be reclaimed and redeveloped: culm banks and equipment can be removed and pits and strip mines can be filled. Some of these can be slowly mitigated: vertical openings and portals can be closed one by one as they are found and acid mine drainage can be reduced through wetland filtration systems and through protected culverts. However, some conditions, such as subsidence areas and mine fires, are permanent and must be avoided. Areas that can be reclaimed are considered opportunities for open space development. These areas can be targeted for reclamation and cleaned up in the relative short-term as they are slated for redevelopment.

Despite the obvious constraints associated with the mining heritage of the valley, many people view this heritage as one of the valley's great-

est assets. Structures, such as the Huber Breaker, provide opportunities to educate both visitors and residents about mining within the area through interpretation. Old railroad beds leading to the mines and rail bridges across the Susquehanna River provide an opportunity for a network of rail-trails throughout the valley. The historic mining towns scattered throughout the area also provide an opportunity for interpretation of the mining heritage and the many ethnic and religious cultures which came into contact with it. Many of these communities have maintained their original street patterns and clustered form. These boroughs and villages, including Sugar Notch, Warrior Run, the Hanover section of Nanticoke, Wanamie, Glen Lyon, Lee, and Mocanaqua, appear as isolated communities amidst undeveloped land and have been identified as potentially historic areas for the National Register. Finally, the Ashley Planes, located partially on Earth Conservancy property, is listed as a National Register historic property and provides a unique opportunity to interpret the innovative rail line and planes system that allowed anthracite coal to be hauled over the Penobscot Mountain from 1843 to 1948. The D&L Commission has identified the Ashley Planes, the Backtrack Trail, and the Huber Breaker as critical pieces to the D&L Canal National Heritage Corridor.



Culm banks, located throughout the Wyoming Valley, must be reclaimed before open space development can occur.



Mining reclamation areas, such as this one at Ashley Planes, are considered opportunities for development.

Cultural Opportunities and Constraints

In addition to the historic sites and relics associated with the mining heritage of the area, the Wyoming Valley contains a number of archaeological sites and a strong Native American heritage that predates the mining era. Although archaeological sites constrain potential development, they should be seen as opportunities to interpret and understand the significance of the valley throughout history.

Other cultural opportunities in the valley include cultural institutions, such as Wilkes University and King's College, and the many churches and temples located throughout the area. Dating back as early as 1824, these structures reflect a high diversity of style that could be interpreted for either their unique architecture or for their role within the ethnic cultures that built them.

The final cultural opportunity and constraint is the many cemeteries located in the Wyoming Valley. These large cemeteries are located adjacent to most of the small mining towns, creating a quiet and somewhat haunting impression of the difficult and risky life of a miner. These cemeteries should remain as quiet places of solitude and contemplation, free of development and distracting activity. They should be interpreted as part of the mining and small town heritage characterizing the valley.



The rural character of the Wyoming Valley is one of its greatest assets for open space development.



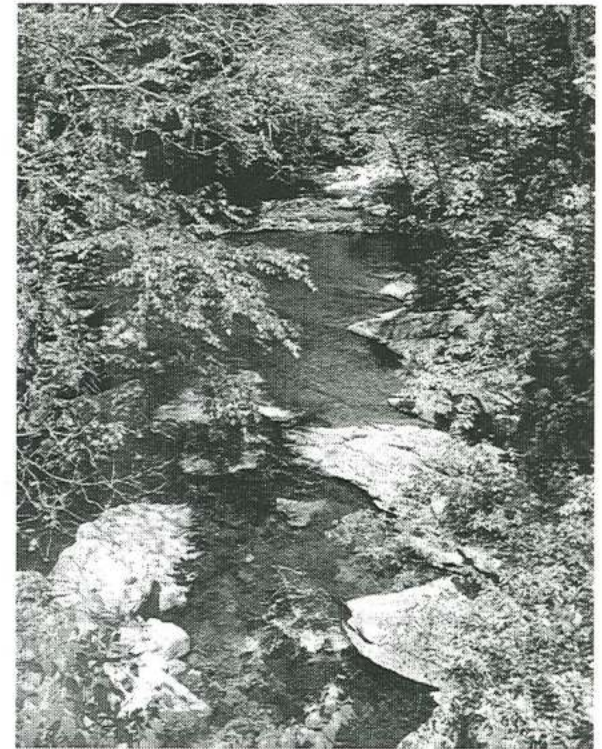
Illegal dumping is a serious problem throughout potential open space areas.

Natural Opportunities and Constraints

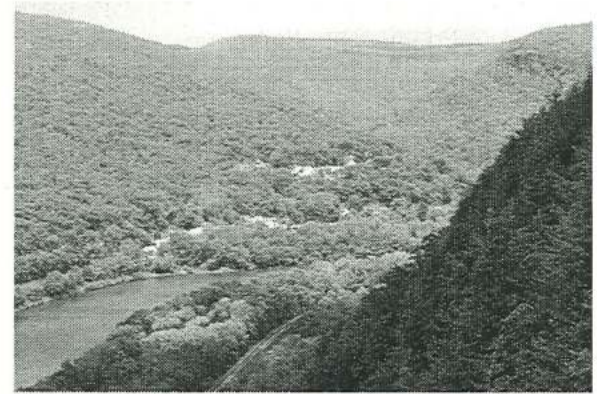
The natural beauty and dramatic topography of the Wyoming Valley is, perhaps, its greatest resource. The Susquehanna River carves around the valley accentuating the valley's long mountain ridges. The scenic views from the rock escarpments of Penobscot Mountain, Wilkes-Barre Mountain, and the Escarpment Ridge across river and valley are mesmerizing and awe-inspiring. The large tracts of contiguous undeveloped open space and the varied natural habitats provide a unique insight to the subtle changes and gradations of natural landscapes. These ridges should be preserved to protect the scenic views of the valley and their valuable habitats. As conservation land, they provide opportunities for an extensive hiking and mountain biking trail system with limited recreational facilities. Some of these trail corridors have been fragmented by the construction of highways. Trail crossings of highway corridors requires special design solutions to ensure the safety of both pedestrians and motorists.

Constraints for development within the natural environment include wetlands, the 100-year floodplain, threatened and endangered species habitat, lakes and streams, and steep slopes.

These conditions limit built facilities and some motorized use, but they do not constrain potential trail development. Another significant constraint for open space development is the severe dumping and littering throughout open space parcels in the valley. After years of illegal dumping due to poor garbage collection and uninformed or inconsiderate residents, dumped trash, appliances, and abandoned vehicles are one of the greatest issues in the development of open space. These eyesores mollify beautiful environments and discourage both visitors and residents from using an area for recreation. They will require clean-up before any open space facility can be opened to the public.



The Wyoming Valley has many beautiful streams, such as this one through Ashley Planes.



LOWER WYOMING VALLEY OPEN SPACE MASTER PLAN

Chapter 2
Open Space Master Plan

2.1 Overview

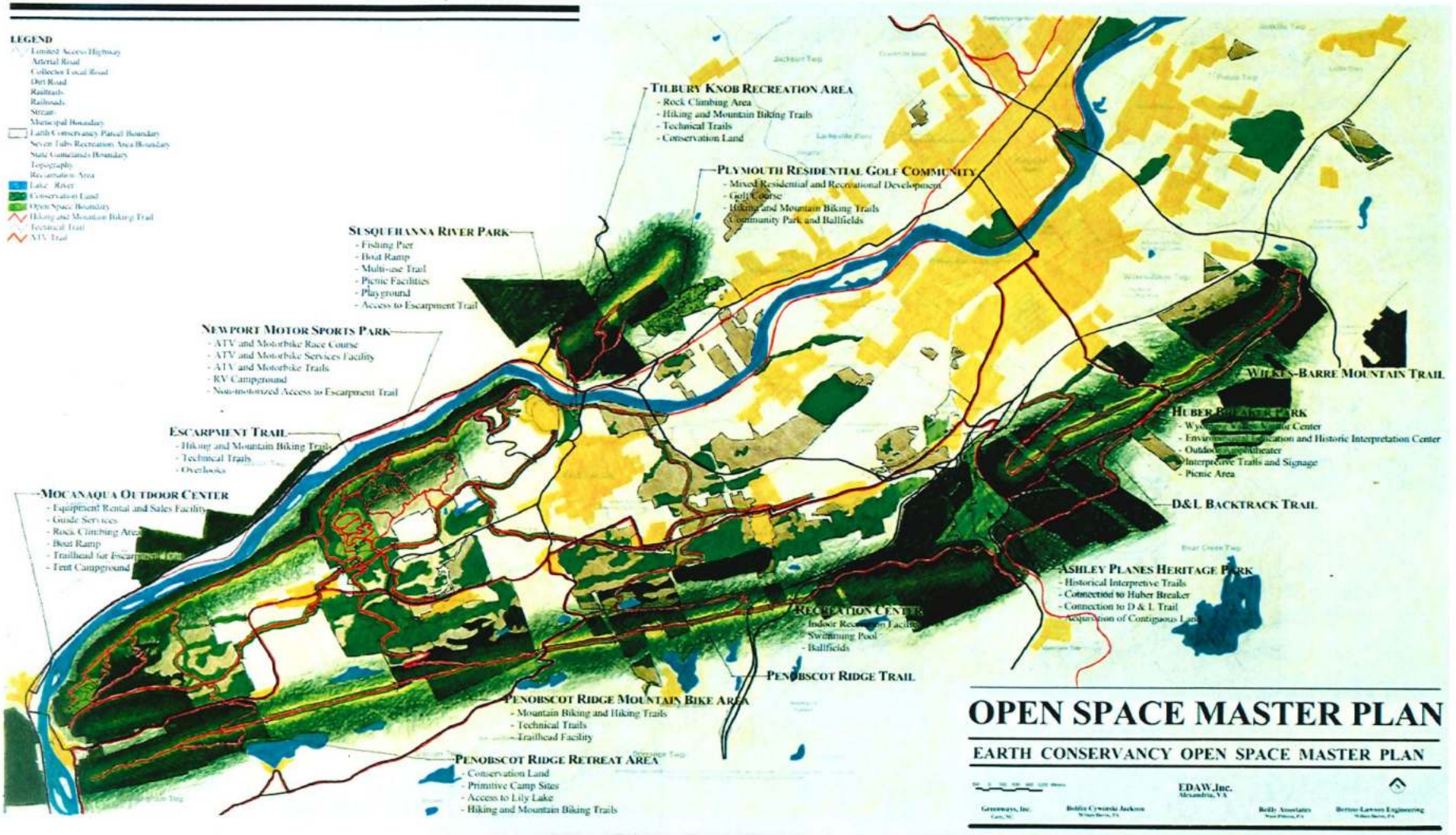
The Lower Wyoming Valley Open Space Master Plan incorporates three types of open space: trails, conservation lands, and parklands. These plan components work in concert to provide Wyoming Valley communities a comprehensive open space system.

This chapter is divided into the following three sections:

- 1) **Trails Network.** The trails network links the conservation lands, parklands and population centers throughout the Valley and provides separate trails for motorized and non-motorized trail users.
- 2) **Conservation Lands.** Conservation lands protect sensitive ecological habitats and provide areas for low impact uses, such as hiking, camping, or hunting, as well as set aside lands which are difficult to develop due to mine scars, steep slopes, or other constraints.
- 3) **Proposed Parklands.** Proposed parklands are programmed areas planned for more intensive recreational uses.

Within each of the three open space types, specific open space opportunities are separated into short-term and long-term projects, based on their potential for implementation in the near future. Projects that are identified for the short-term are divided into initial development programs and long-term development programs. This will enable the projects to be implemented quickly and then expanded with time. In all cases, the specified program *requires some action to be taken*. This action may be as simple as the official designation of an area as protected land or as comprehensive as the construction of new buildings, roadways, and utility corridors. Implementation options are described in detail in Chapter 3 of this document.

- LEGEND**
- Limited Access Highway
 - Arterial Road
 - Collector Local Road
 - Dirt Road
 - Railroads
 - Stream
 - Municipal Boundary
 - Earth Conservancy Parcel Boundary
 - Seven Tubs Recreation Area Boundary
 - State Game Lands Boundary
 - Topography
 - Recreation Area
 - Lake / River
 - Conservation Land
 - Open Space Boundary
 - Hiking and Mountain Biking Trail
 - Technical Trail
 - ATV Trail



Illustrative Plan

Trails Network

The first component of the Lower Wyoming Valley Open Space Master Plan is a network of trails extending from Moconagua to Wilkes-Barre. Trail locations are illustrated on the accompanying Trails Network plan. The planning and delineation of trails throughout the Wyoming Valley incorporates the following objectives:

- Provide trails **throughout the Wyoming Valley**.
- Connect with **existing and planned trails**.
- Provide links to **population centers and open spaces**.
- Accommodate **different types** of trail users, including motorized and non-motorized users.
- Establish organized **trailhead facilities**.
- Use **existing trails**, such as old railroad beds, wherever possible.
- Provide access to significant **overlooks**.
- Establish a **scenic drive**.

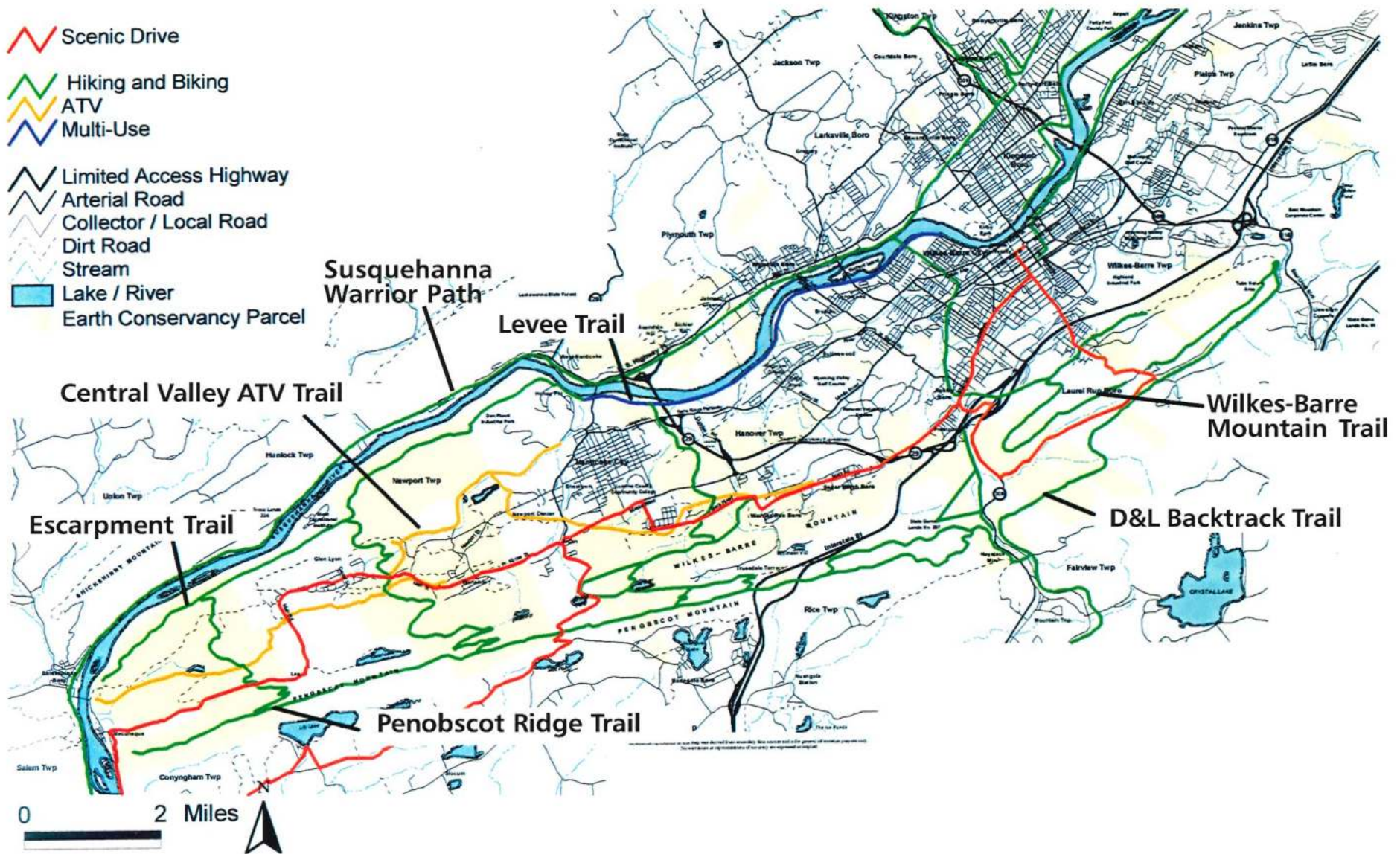
The concept of a Valley-wide trail network requires that many of the proposed trails extend beyond the boundaries of Earth Conservancy property. These trail corridors are envisioned to be protected and open to the public through acquisition of land, easements or use agreements. Potential owners of trails include:

Luzerne County, local municipalities, non-profit trail organizations such as the Anthracite Scenic Trails Association, and individual land owners who have granted trail easements. These ownership alternatives are described in Section 3.3 - Open Space Management.

As part of this trail network, three trail types are identified: hiking and mountain biking trails, ATV trails, and technical trails. Also identified is a scenic drive, or "automobile trail" on existing scenic roads within the Valley.

2.2 Trails Network

-  Scenic Drive
-  Hiking and Biking
-  ATV
-  Multi-Use
-  Limited Access Highway
-  Arterial Road
-  Collector / Local Road
-  Dirt Road
-  Stream
-  Lake / River
-  Earth Conservancy Parcel



Trails Network

Hiking and Mountain Biking Trails

Hiking and mountain biking trails range from paved multi-use trails in urban or suburban areas to dirt pathways or wood boardwalks in natural or sensitive environments. Hiking and biking are generally compatible on the same trail, although some trail areas are intended more for the use of either one or the other. Hiking and mountain biking trails are intended solely for non-motorized use.

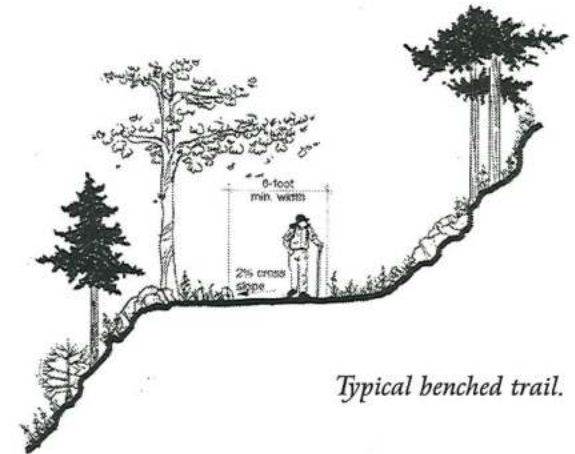
Many hiking and biking trails either exist within or are planned for the Wyoming Valley, including the Susquehanna Warrior Trail, the Delaware & Lehigh Heritage Trail, the Wilkes-Barre Levee Trail, the Anthracite Scenic Trail, and others. This plan attempts to complement these trails by connecting with them. Many of the trails illustrated here would be located on abandoned rail beds and other existing trails on Earth Conservancy property.

All-Terrain Vehicle (ATV) Trails

ATV riding is a popular recreational activity in the Wyoming Valley; many informal ATV trails currently exist. Due to the high demand for this recreational activity and the unregulated use of existing trails in the Wyoming Valley, ATV users would be accommodated on 27 miles of designated ATV trails under the Open Space Master Plan. This separation of uses would eliminate conflicts between motorized and non-motorized users and protect sensitive habitats in the Valley.

ATV trails are planned to have a minimum width of 7 feet for one way travel and 12 feet for two way travel. Trail surfaces would vary from natural surfaces to prepared surfaces. Prepared surfaces would be constructed in a similar manner to a rural roadway, with a sub-base and surface course or wearing tread. Drainage is an important consideration as poorly drained areas will become rutted under normal use. ATV trails should be developed in a manner consistent with guidelines for ATV trails as set forth by the American Motorcyclist Association.

In addition to specific trails identified as ATV trails, a specific area of open space land is planned solely for ATV use. This area, the Newport Motor Sports Park, is described in detail in Section 2.4 - Proposed Parklands.



Typical benched trail.

Technical Trails

The third trail type included in this plan is technical trails for hiking and mountain biking. These trails involve steeper slopes and difficult terrain; they are intended for use by the more experienced or technically advanced user. As part of the overall trails network, these trails would often stem directly from non-technical hiking and biking trails. On some open space areas programmed for conservation, technical trails would be the only types of trail provided (See Section 2.3 - Conservation Lands).

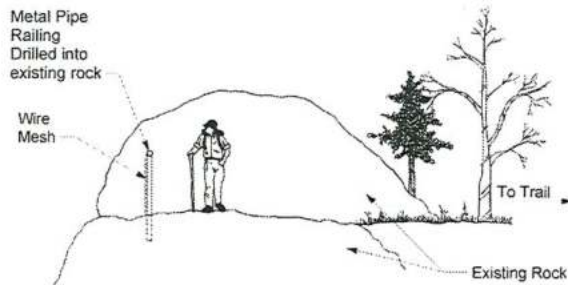
Key Trails

The Trails Network plan illustrates the types and locations of the planned trails within the Wyoming Valley. Two regional hiking and mountain biking trails would provide the backbone to the Trails Network. These include:

- **The Escarpment Trail**, which would run on top of the northern reach of Penobscot Mountain between Mocanaqua and Nanticoke along the Susquehanna River.
- **The Penobscot Ridge and Wilkes-Barre Mountain Trails**, which would run the length of the southern reach of Penobscot Mountain and Wilkes-Barre Mountain. This trail would be an important connector of existing and proposed open space areas, including Ashley Planes and the Tubs Nature Area.

These two regional trails are east-west spines along the Valley, providing access to major cultural and recreation facilities throughout the area. A set of three cross-valley trails, also illustrated on the Trails Network map, provide north-south connections between the Escarpment Trail and Penobscot Ridge and Wilkes-Barre Mountain Trails as well as other cultural and recreation facilities in the Wyoming Valley.

A regional ATV **Central Valley Trail** (shown in orange on the Trails Network plan) has been planned for ATV use in the southern portion of the Valley between Sugar Notch and Mocanaqua. This trail provides access from each of the small communities in the southern Wyoming Valley to the planned Newport Motor Sports Park, an area specifically set aside for ATV use in Newport Township.

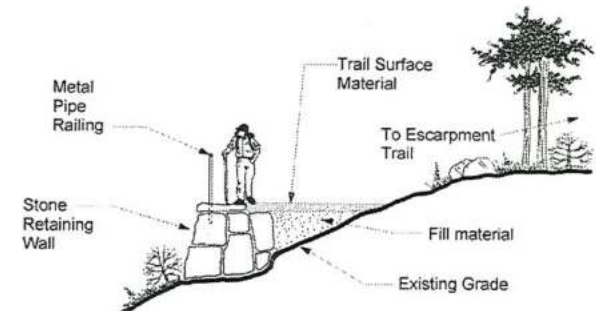


Example Overlooks.

Other important trails planned apart from this plan are also shown on the Trails Network map, in order to illustrate the connectivity between trails and the goal of an integrated Valley-wide trail network. These trails include:

- **The Delaware & Lehigh (D&L) Back-track Trail.** This hiking trail is planned as the northernmost section of a comprehensive trail system planned by the D&L Canal National Heritage Corridor Commission. The complete D&L trail is planned to extend southward to the City of Bristol, in Bucks County just north of Philadelphia.
- **The Susquehanna Warrior Trail.** This multi-use hiking, biking, and walking trail is planned between the towns of Kingston and Shickshinny, generally following the north bank of the Susquehanna River. The section of this trail between West Nanticoke and Shickshinny parallels the proposed Escarpment Trail on the opposite side of the Susquehanna and, with appropriate river crossings, could provide a complete trail loop system.
- **The Levee Trail.** This trail follows the Susquehanna River southwest from the City of Wilkes-Barre to north of Nanticoke. The Lower Wyoming Valley Open Space Master Plan proposes to extend this multi-use trail to the Susquehanna River Park, where it will connect with the proposed Escarpment Trail.

The following pages describe in more detail three of the proposed trails, including expected costs associated with their development and suggested phasing alternatives.



Example Overlooks.

Trails Network

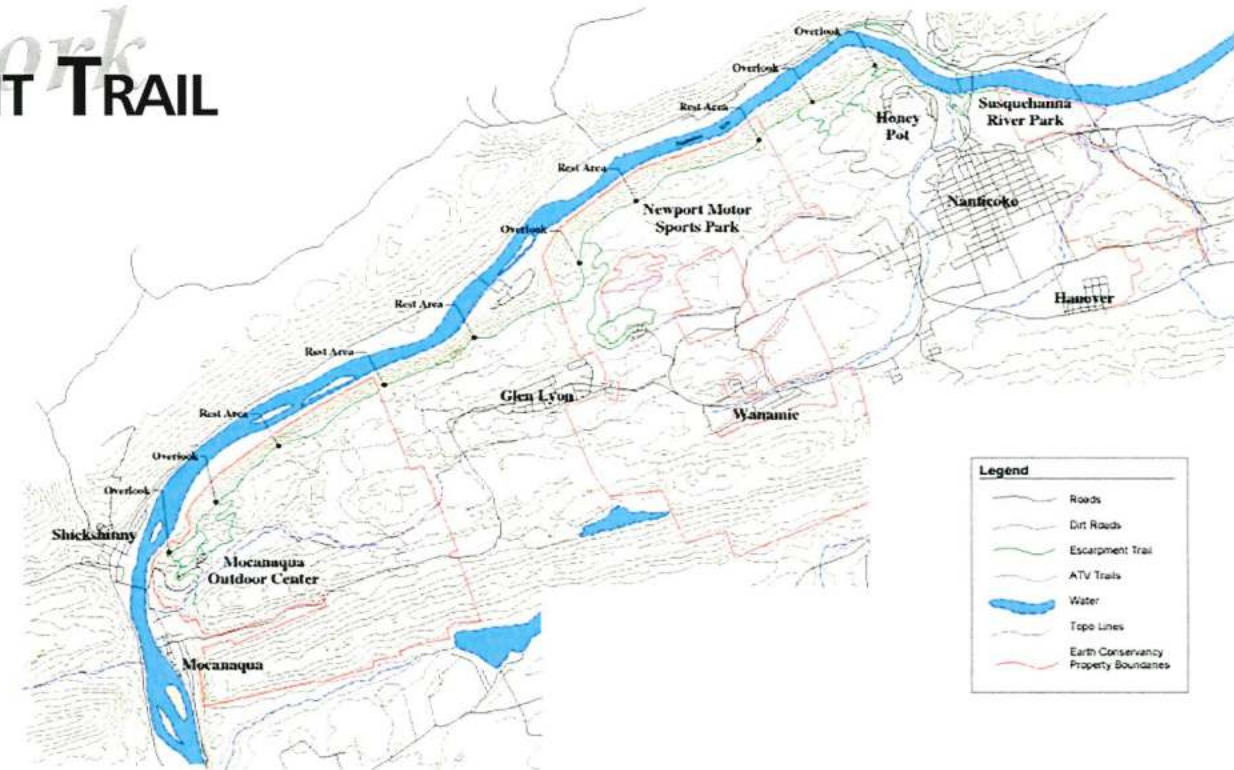
ESCARPMENT TRAIL

Description

The Escarpment Trail would be located on top of the prominent ridge that extends from Mocanaqua to Nanticoke along the Susquehanna River, technically known as the Northern Reach of Penobscot Mountain. Three trailhead facilities are planned as access points to the trail. These would be located near the communities of Mocanaqua, Nanticoke, and Glen Lyon. These trailhead facilities would include parking, access to the trail, and informational signage and/or materials. Restrooms could be provided in these areas as well.

Ultimately, three proposed parklands are envisioned to be developed adjacent to and in conjunction with these trailhead facilities. These parks - the Mocanaqua Outdoor Center, the Susquehanna River Park, and the Newport Motor Sports Park - are described in detail in Section 2.4 - Proposed Parklands.

The Escarpment Trail would be an unimproved hiking trail connected to a secondary set of hiking and technical trails looping back to the three trailheads. Following the rolling ridge top



from peak to peak, the trail would pass a series of rock outcroppings overlooking many wonderful views of the Susquehanna River. Five improved scenic overlooks would be located along the trail, as well as additional rest areas with benches and other amenities. Directional signage would also be located along the length of the trail, where appropriate.

Specific information detailing proposed site furniture, specific trail location, and trail sections is located in the appendix of this document.

The majority of the Escarpment Trail already exists; only general clearing, formalized trail designation, and access points are required to create a functional trail.

The Escarpment Trail is planned to link with the planned Susquehanna Warrior Trail on the north side of the Susquehanna River and with a proposed extension to the planned Levee Trail. Proposed cross-valley connector trails would link the Escarpment Trail to other regional trails.

Site Program Summary

- Hiking and Mountain Biking Trails
- Technical Trails
- Scenic Overlooks
- Trail Length: 8.9 Miles
- Initial Development of 3.3 Mile Moconagua Loop



View of Shickshinny from Escarpment Trail Overlook near Mocanaqua



Existing Informal Trail

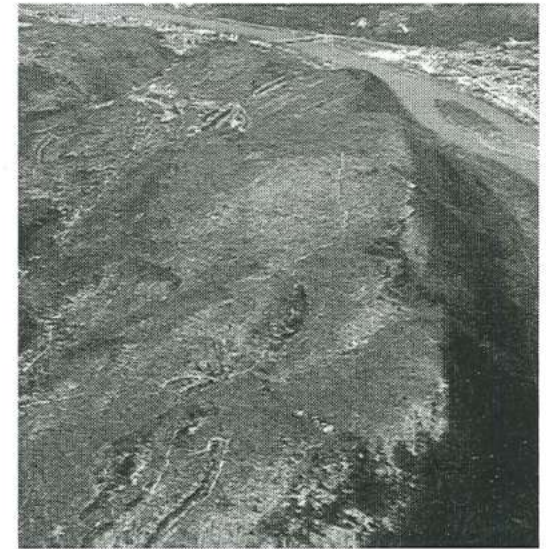
Implementation Issues

- Existing informal trails need minor improvements to connect to trailheads and avoid steep slopes.
- Portions of the trail are not owned by Earth Conservancy and would require acquisition or trail easements.

Initial Development

The first portion of the trail planned for implementation is the Moconagua Loop where there are spectacular views of the Susquehanna River and the Valley below along rock outcroppings. Short-term development of this site requires a gravel parking lot located off an the existing Township road just north of Mocanaqua, signage, and improvements to trails leading to the top of the ridge.

It is hoped that the designation and development of this portion of the Escarpment Trail will develop interest and spur implementation of the remaining portions of the trail.

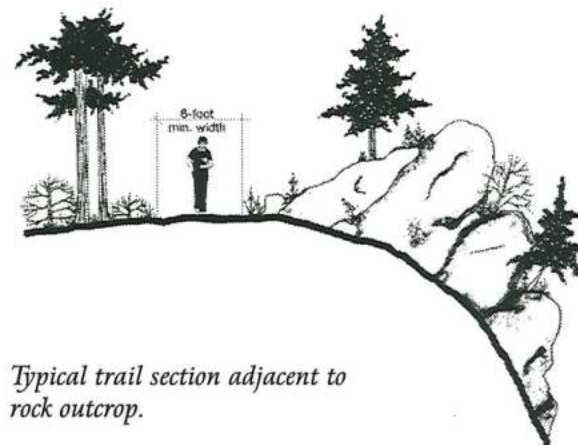


The Escarpment Ridge

Costs

Costs for developing the Moconagua Loop section and trailhead facility are estimated at approximately \$70,512.

Preliminary cost estimates for the development of the remainder of the Escarpment Trail (north to Nanticoke) are estimated at \$75,000 - \$100,000.



Typical trail section adjacent to rock outcrop.

Trails Network

WYOMING VALLEY SCENIC DRIVE

Description

The Lower Wyoming Valley Open Space Master Plan includes a Scenic Drive through the Wyoming Valley to emphasize its scenic natural beauty and rich history. The route passes historic and cultural sites, natural areas, and attractive views overlooking the Valley. This drive is also designed to connect with the D&L Canal National Heritage Drive which extends from Luzerne County to Bucks County.

The Scenic Drive, shown in red on the Trails Network map, would make use of existing roadways and be organized into a west loop and an east loop. Features of the west loop would include Lily Lake, the Susquehanna River, overlooks from the top of southern reach of Penobscot Mountain, and the historic communities of Wanamie, Glen Lyon, and Mocanaqua. An alternate route to the west loop would follow the Susquehanna River on its north side along Route 11. The east loop of the Scenic Drive would include the historic community of Georgetown, the Giant's Despair overlook, the Ashley Planes historic area, and downtown Wilkes-Barre.



The scenic drive would follow beautiful country roads located throughout the Wyoming Valley.

The two loops would be connected by Main Street and Back Road through Ashley, Sugar Notch, Warrior Run, and the Hanover section of Nanticoke. The historic Huber Breaker is also located along this connection off Main Street in Ashley.

Roadside signage, maps, and an audio tour would guide visitors along the Scenic Drive.



The drive includes Public Square in downtown Wilkes-Barre.

Initial Development

The first step towards implementation of the Scenic Drive would be the distribution of brochures with maps and historical information describing communities and views along the drive and the installation of roadside signage to mark the route.



Scenic ridgetop view along the Scenic Drive.

Site Program Summary

- Scenic Drive Signage
- Scenic Drive Map
- Audio Tour
- Distance: 37.6 Miles.

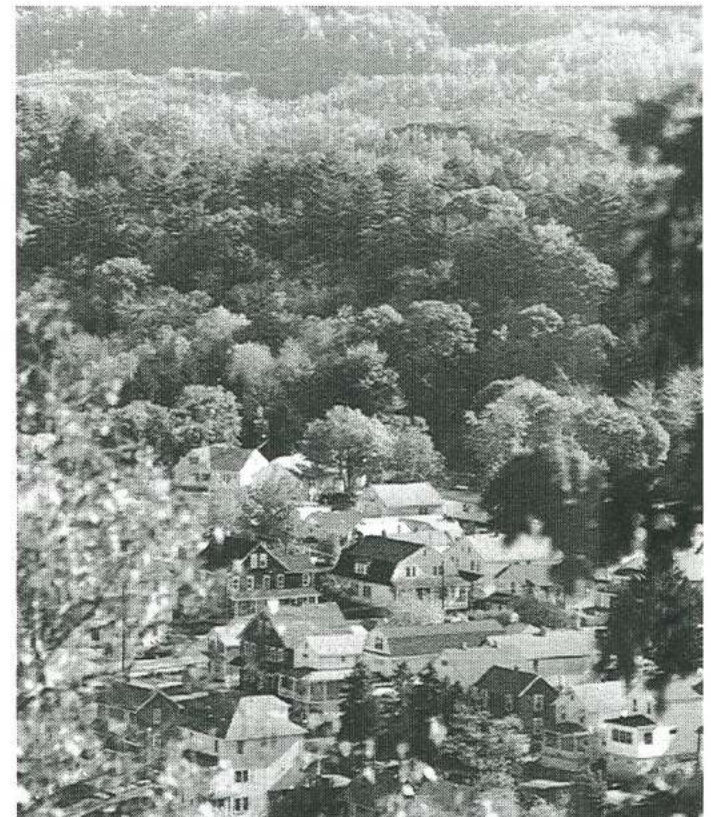
Implementation Issues

PennDOT and Luzerne County support for the project is crucial in the development of roadway signage and pull-offs.

Costs

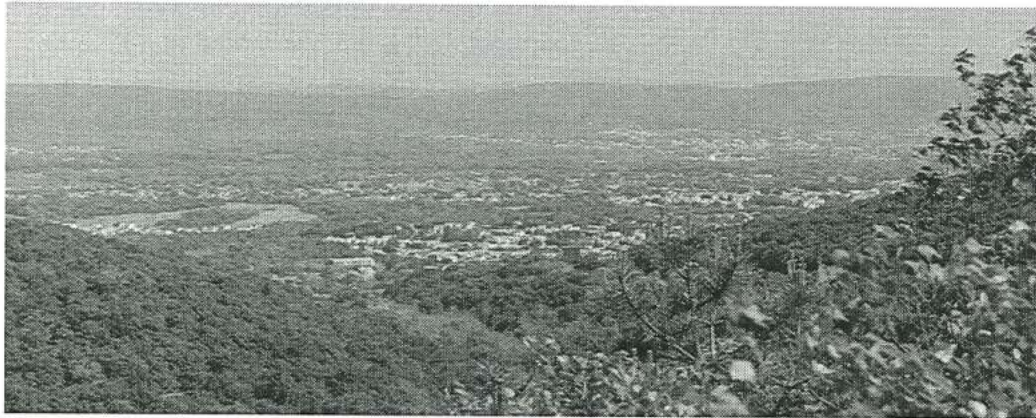
Costs for developing the initial brochures and roadway signage are estimated at \$19,200.

Preliminary cost estimates for the development of the remainder of the Scenic Drive, including an audio tour and designated scenic overlook areas, are estimated at \$50,000 - \$70,000.



The Scenic Drive passes historic communities, such as Glen Lyon.

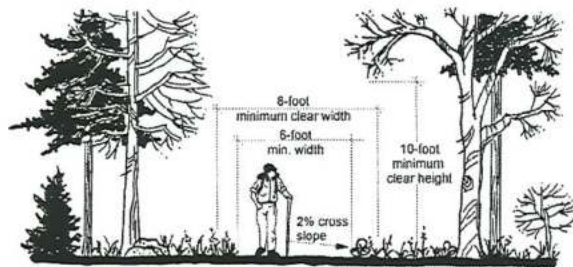
PENOBSCOT RIDGE & WILKES-BARRE MOUNTAIN TRAIL



View of the Wyoming Valley from the Penobscot Ridge

Description

The Penobscot Ridge Trail and Wilkes-Barre Mountain Trail would be located along the mountain ridgetops from the Susquehanna River south of Mocanaqua to the Tubs Nature Area east of Wilkes-Barre. These trails would create a regional pedestrian and mountain bike connection the length of the valley, providing access to the Delaware & Lehigh Canal National Heritage Corridor, Lily Lake, and conservation lands and proposed parklands identified in this plan, such as the Penobscot Ridge Retreat Area, the Penobscot Ridge Mountain Bike Area, and the Ashley Planes Heritage Park (See Sections 2-3 and 2-4).



Typical flat grade trail.

Costs

Preliminary long-term costs for the development of the entire Penobscot Ridge and Wilkes-Barre Mountain Trail; including trail delineation and signage is estimated at between \$50,000 - \$100,000. This does not include roadway crossings.

Implementation Issues

- Land along the Penobscot Ridge and the Wilkes-Barre Mountain Ridge has begun to be subdivided and developed. The trail must be carefully sited to avoid development and reduce the number of acquisitions or easements required to build it.
- Interstate 81 crosses the Penobscot Mountain south of Ashley and Sugar Notch. Two elevated pedestrian bridges would be required to provide a safe highway crossing and a continuous trail.



The Penobscot Ridge Trail and Wilkes-Barre Mountain Trail would be a regional destination.

Site Program Summary

- Hiking and Mountain Biking Trails
- Technical Trails
- Trails Length:
Penobscot Ridge - 14.5 Miles
Wilkes-Barre Mountain - 6.7 Miles

Trails Network

OTHER TRAILS

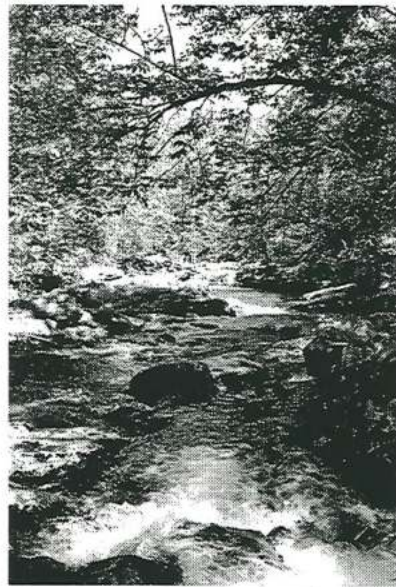
Description

Three “cross-valley” hiking and biking trails are planned to connect the Escarpment Trail with the Penobscot Ridge Trail. These trails, illustrated on the Trails Network map, are (from west to east) as follows:

- **Conyngham Cross Valley Trail**
- **Newport Cross Valley Trail**
- **Hanover Cross Valley Trail**

In addition to linking the Escarpment and Penobscot ridgetops these trails provide access between these ridgetop trails and towns, cultural institutions, and recreation areas within the Valley.

Another trail planned is the **River Trail**. This non-motorized multi-use trail would serve as



Scenic streams near proposed trails.

an extension of the existing Levee Trail, which begins on top of the levee in downtown Wilkes-Barre and extends southwest along the Susquehanna River. The proposed River Trail extends the Levee Trail to Nanticoke, where it would link to the northernmost end of the proposed Escarpment Trail. The result is a trail connection along the Susquehanna River between the Escarpment Trail and downtown Wilkes-Barre.

Finally, a **Central Valley ATV Trail** is proposed linking municipalities in the southern Wyoming Valley. This trail, intended solely for use by motorized off-highway vehicles, such as ATVs and motorbikes, is illustrated in orange on the Trails Network map.

Costs

Preliminary long term costs for these trails are as follows:

Conyngham Cross Valley Trail: \$25,000-\$50,000.

Newport Cross Valley Trail: \$25,000-\$50,000.

Hanover Cross Valley Trail: \$25,000-\$50,000.

River Trail: \$25,000-\$50,000.

Costs for the Central Valley ATV Trail are detailed as part of the proposed Newport Motor Sports Park (Section 2.4, Proposed Parkland).

Site Program Summary

- Hiking and Mountain Biking Trails
- Provision of Connections between Municipalities and Proposed Ridgetop Trails.
- Trail Lengths:
 - Conyngham Cross Valley - 4.3 miles
 - Newport Cross Valley - 6.5 miles
 - Hanover Cross Valley - 7.0 miles
 - River Trail (extension) - 0.7 miles

2.3 Conservation Lands

The second component of the Lower Wyoming Valley Open Space Master Plan is land set aside as conservation land. The identification of these areas on Earth Conservancy property was based on the following objectives:

- Provide land for **passive recreation**, such as hiking, hunting, and fishing.
- Protect **threatened and endangered species** habitat.
- Maintain large areas of **contiguous habitat**.
- Protect the **scenic quality** of the mountain ridges.
- Set aside land within areas planned for development with **steep slopes, wetlands, floodplains, or irreversible mining scars**.

The accompanying map, Conservation Lands, illustrates those areas identified for conservation. The three types of conservation lands are:

Conservation Areas. These are large contiguous parcels of land set aside for preservation and non-intensive recreational uses, such as hiking and mountain biking. Typically, these areas are slated for open space use under the Earth Conservancy Land Use Plan. The protection of these areas provides for the long-term maintenance of large, contiguous parcels of forested lands, thereby maintaining scenic green ridgetops and natural habitats.

Open Space Lands. These are specific areas of land set aside for open space within parcels slated for development under the Earth Conservancy Land Use Plan. These lands typically involve features which either preclude development due to irreversible mine scars, steep slopes, and floodplains; or involve natural features which require protection, such as wetlands and threatened or endangered species habitat. Also included in this category is land that would be provided as buffers on either side of proposed trails to protect them from new development.

Conservation Program Areas. These program areas include land within planned conservation areas that has been determined to be ideal for site-specific, low-impact open space uses, such as camping, mountain biking, and rock climbing. These areas require minor improvements, such as access roads and parking lots. Three conservation program areas are described in detail on the following pages.

Potential owners of conservation lands include: the Pennsylvania Bureau of State Forests, the Pennsylvania Game Commission, Luzerne County, and land conservation organizations, such as the Wildlands Conservancy or Nature Conservancy. These ownership alternatives are described in Section 3.3 - Open Space Management.

PENOBSCOT RIDGE MOUNTAIN BIKE AREA

Description

The Penobscot Ridge Mountain Bike Area would encompass the large reclaimed areas of land to the south of Wanamie and the conservation lands on the Penobscot Ridge. Mountain bike trails are planned for the reclaimed areas as an interim use prior to a residential development opportunity. The combination of existing trails on the site, interesting vegetation, open fields, wooded areas, and non-dangerous mine features make mountain biking an ideal low-impact interim use for the site. A trailhead facility with parking and comfort facilities would be provided at a site just to the south of Wanamie. Another, smaller trailhead facility would be developed at an access point on top of the Penobscot Ridge off of Alden Mountain Road. Trails would link to the regional Penobscot Ridge Trail as well as across the valley to the Escarpment Trail. Once planning is underway for residential development, new trails could be incorporated into the plans within open space greenways and buffers.



The reclaimed coal mining areas on the Penobscot Ridge provide excellent areas for mountain biking.

Site Program Summary

- Hiking and Mountain Biking Trails
- Technical Trails
- Trailhead Facility
- Total Acreage: 1557





Mountain biking has become an extremely popular recreational activity.

Initial Development

Initial development of the Penobscot Ridge Mountain Bike Area would include: a gravel parking lot adjacent to Wanamie, minor access roads, minor trail delineation in order to create connections to existing trails, and appropriate signage.

Costs

Initial development costs for this project are estimated at \$28,488.

Preliminary long-term cost estimates for this site are estimated at \$75,000 - \$100,000. This includes utilities and restroom at the trailhead facility.



Varied terrain at the site creates excellent challenges for the skilled mountain biker.

Conservation Lands

PENOBSCOT RIDGE RETREAT AREA

Description

The Penobscot Ridge Retreat Area is planned as a retreat area for local organizations, such as the Boy Scouts or church groups. The site would remain largely undeveloped with only access roads and primitive camping areas, although there is opportunity for primitive cabin development along the southern base of the ridge. Uses for the site would include camping, hiking, mountain biking, and conservation areas. Access to Lily Lake could be achieved through an agreement with the Pennsylvania Fish and Boat Commission, which owns the small strip of land in between the site and the lake. The site would also form the southern end of the Penobscot Ridge Trail which would extend northward towards the Ashley Planes Heritage Park and Tubs Nature Area.



Lily Lake

Site Program Summary

- Hiking and Mountain Biking Trails
- Conservation Land
- Primitive Camp Sites
- Remote Campground Area
- Access to Lily Lake
- Total Acreage: 1,110

Initial Development

Initial development of the Penobscot Ridge Retreat Area would include parking, access roads, local trail delineation, and signage. These simple provisions would allow for access to the area, camping, and hiking.

Costs

Initial development costs for this project are estimated at approximately \$134,088. The majority of this estimate is linked to the development of an approximately one quarter-mile long access road through difficult terrain.

Long-term plans for this site include the development of rustic cabins, utilities, and restroom facilities. The preliminary estimate for these projects is \$275,000 - \$300,000.

Implementation Issues

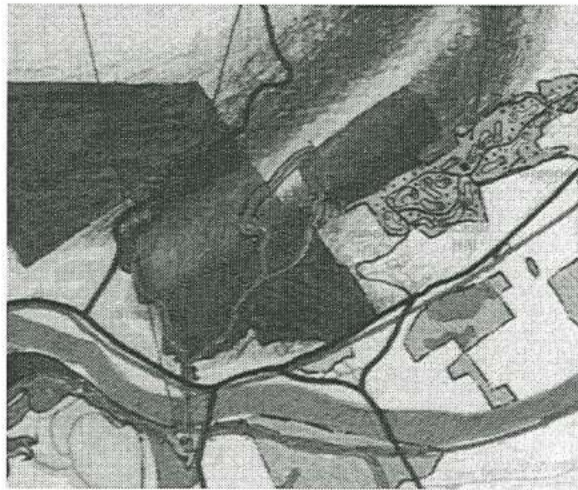
Access to the Earth Conservancy parcel is difficult and may require agreements with adjacent land owners.

Conservation Lands

TILBURY KNOB RECREATION AREA

Description

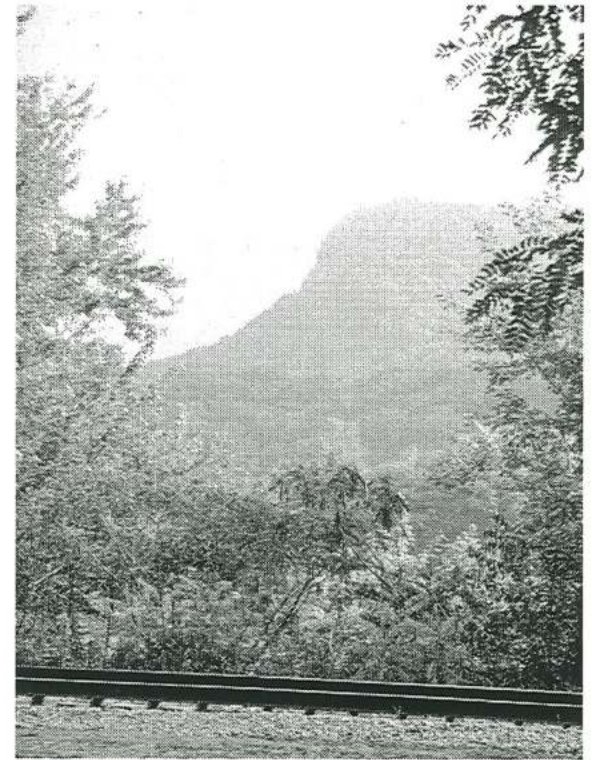
The Tilbury Knob Recreation Area is located east of West Nanticoke on the north side of the Susquehanna River, and is adjacent to the Lackawanna State Forest. Prominent rock outcroppings in this area are currently used as recreational rock climbing areas. This area is planned as a recreation area for rock climbing, hiking, and mountain biking. Hiking and mountain biking trails would link to trails north of the Plymouth Residential Golf Community and to the planned Susquehanna Warrior Path. The plan also maintains the site as conservation land to preserve the large contiguous habitat linked to the Lackawanna State Forest.



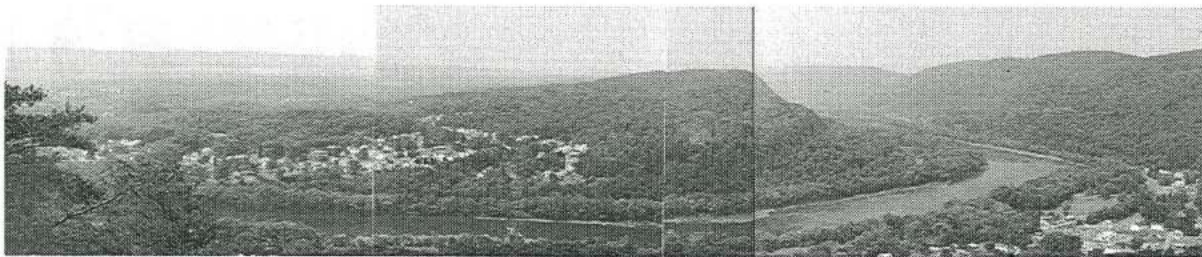
The Tilbury Knob Recreation Area would have hiking and mountain biking trails surrounded by conservation land.

Costs

Long-term development costs for this site are estimated at \$50,000 - \$75,000. This includes costs for parking facilities, access roads, local trails, and signage. The bulk of the costs associated with this project are due to roadway costs.



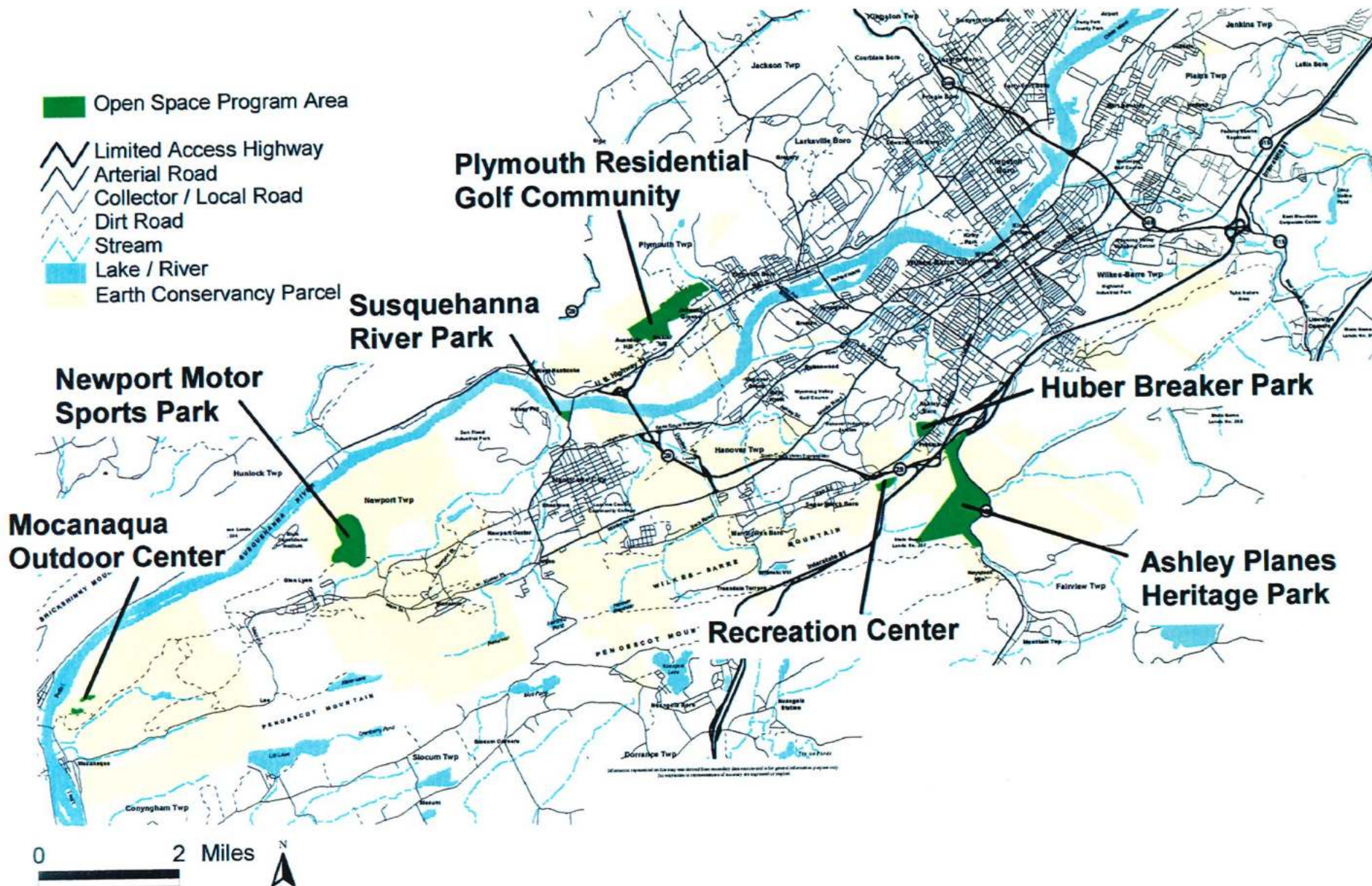
View of Tilbury Knob.



Views of Honeypot and the Escarpment Ridge from Tilbury Knob.

Site Program Summary

- Rock Climbing Area
- Hiking and Mountain Biking Trails
- Technical Trails
- Conservation Land
- Total Acreage: 457



Earth Conservancy Proposed Parklands

2.4 Proposed Parkland

The third component of the Lower Wyoming Valley Open Space Master Plan is areas within the open space system planned as proposed parklands for more intensive recreational use. These parklands include a range of recreational facilities from community parks to privately developed sports facilities. The accompanying map, Proposed Parklands, illustrates areas identified for programmed recreation uses. The identification of these parklands was based on the following objectives:

- Provide **active recreation** areas for local residents and visitors.
- Highlight the **natural and historic features** of the Wyoming Valley.
- Site **open space programs** as trailheads to the regional trail network.
- Create major programs that will be open space **destinations** for **local residents and visitors**.
- Develop facilities which generate **economic development opportunities**.
- Identify **long-term opportunities** for open space within the Valley.

Some of the proposed parklands are located on properties not owned by the Earth Conservancy. These parklands were included because they were identified as significant open space opportunities that are critical to the structure of the Lower Wyoming Valley Open Space Plan as a whole. Implementation of these off-site parklands will require negotiations with existing landholders and local municipalities. Potential owners of these proposed parklands, as well as the proposed parklands on Earth Conservancy property, include both public and private organizations. Ownership alternatives are described in Section 3.3 - Open Space Management.

The seven proposed parklands and their short-term and long-term development goals are described in detail on the following pages.

Proposed Parkland

ASHLEY PLANES HERITAGE PARK

Description

The Ashley Planes Heritage Park is a key component of both the Lower Wyoming Valley Open Space Network and the Delaware & Lehigh Corridor.



Ruins of old mining buildings, such as these, would add to the draw of the Ashley Planes.

The park would encompass the historic Ashley Planes rail area. It would transform the old railroad beds into a series of hiking and biking rail trails linking to the Penobscot Ridge Trail, the D&L Trail and the Backtrack Trail to the south. The park would incorporate interpretive signage along the trails to provide information on the rich mining history and environmental resources of the area. A major trailhead with parking and a comfort station would be located at the base of the park off Route 309.

Initial Development

Initial development of the Ashley Planes Heritage Park would include a gravel access road and parking lot, improvement and connections to existing trails, as well as directional and interpretive signage.



Signage could be used to interpret the history of the Ashley Planes.

Costs

Short-term development costs are estimated at \$65,688.

Long-term development of the site, including appropriate site furnishings, restrooms, utilities, and comprehensive interpretive signage are estimated at \$191,000 - \$216,000.



Today, the Ashley Planes appear as dirt roads or paths.

Site Program Summary

- Hiking and Mountain Biking Trails
- Heritage Park
- Historical Interpretive Trails
- Connection to Huber Breaker
- Connection to D & L Trail
- Acquisition of Contiguous Lands
- Conservation Area
- Trail Lengths: 3.2 Miles
- Total Acreage: 395

Implementation Issues

- Portions of the proposed Ashley Planes Heritage Park are not owned by the Earth Conservancy and would require acquisition or land easements.
- Significant dumping has occurred on areas within the utility corridors.



The waterfalls at Ashley Planes are a popular local attraction.

Proposed Parkland

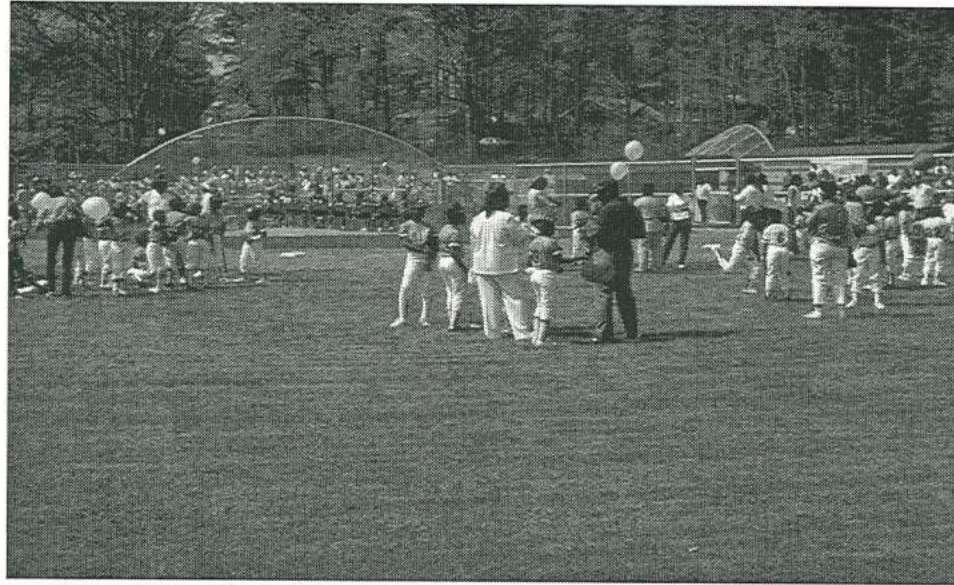
RECREATION CENTER

Description

A community recreation center is planned at Sugar Notch between Route 29 and Interstate 81. The recreation facility would include both indoor and outdoor recreation activities. Outdoor facilities would contain multi-use fields for soccer, softball, baseball, and other activities. Indoor facilities would include a gymnasium facility for use with basketball and other league sports taking place in the winter, as well as work-out rooms and a community swimming pool facility. The recreation center is conceived as a joint municipality facility. Communities within the Lower Wyoming Valley would form a partnership to manage and maintain the facility in common to serve their resident populations.

Initial Development

The short-term implementation of the Recreation Center would focus on the development of outdoor recreational ballfields. These fields would be accessed by gravel roads and parking and would have appropriate signage.



Recreation facilities and ballfields create community gathering places.

Site Program Summary

- Hiking and Mountain Biking Trails
- Indoor Recreation Facility
- Swimming Pool
- Ballfields
- Connection to Huber Breaker
- Total Acreage: 22

Implementation Issues

Land planned for the recreation center requires mine reclamation prior to construction.

Costs

Short-term development costs are estimated at \$1,016,400.

Long-term development of the site, including site furnishings, playground equipment, utilities, and a state of the art indoor recreation facility with gymnasium and swimming pool are estimated at \$1.5 - 1.75 million.

Proposed Parkland

PLYMOUTH RESIDENTIAL GOLF COMMUNITY

Description

The Plymouth Residential Golf Community is a proposed development located on the north side of the Susquehanna River, off Route 11 just west of Plymouth Borough on a ridge overlooking the Wyoming Valley. A large portion of this site has been reclaimed from mining disturbance; however, the Avondale Mining Pit is located adjacent to the site. The reclaimed property has great views over the valley and is ideal for a mixed-use development combining residential and recreational activity. The development would include middle-income housing units sited around an eighteen-hole golf course and club house facility. A network of trails would link residential areas to conservation areas on the property and to Tilbury Knob. A small community park with ballfields, picnic areas, and play equipment would also be included as part of the development. The pit would be used to interpret local mining history until it can be filled and used for ballfields.



Reclaimed mining pit converted to ballfield



Views and vistas at the Plymouth Site would add to the aesthetics of the golf course, such as this one located in the Valley.

Site Program Summary

- Mixed Residential and Recreational Development
- Golf Course
- Hiking and Mountain Biking Trails
- Community Park and Ballfields
- Total Acreage: 232

Implementation Issues

Guard-rails and fencing would be required to control access to the pit prior to reclamation.

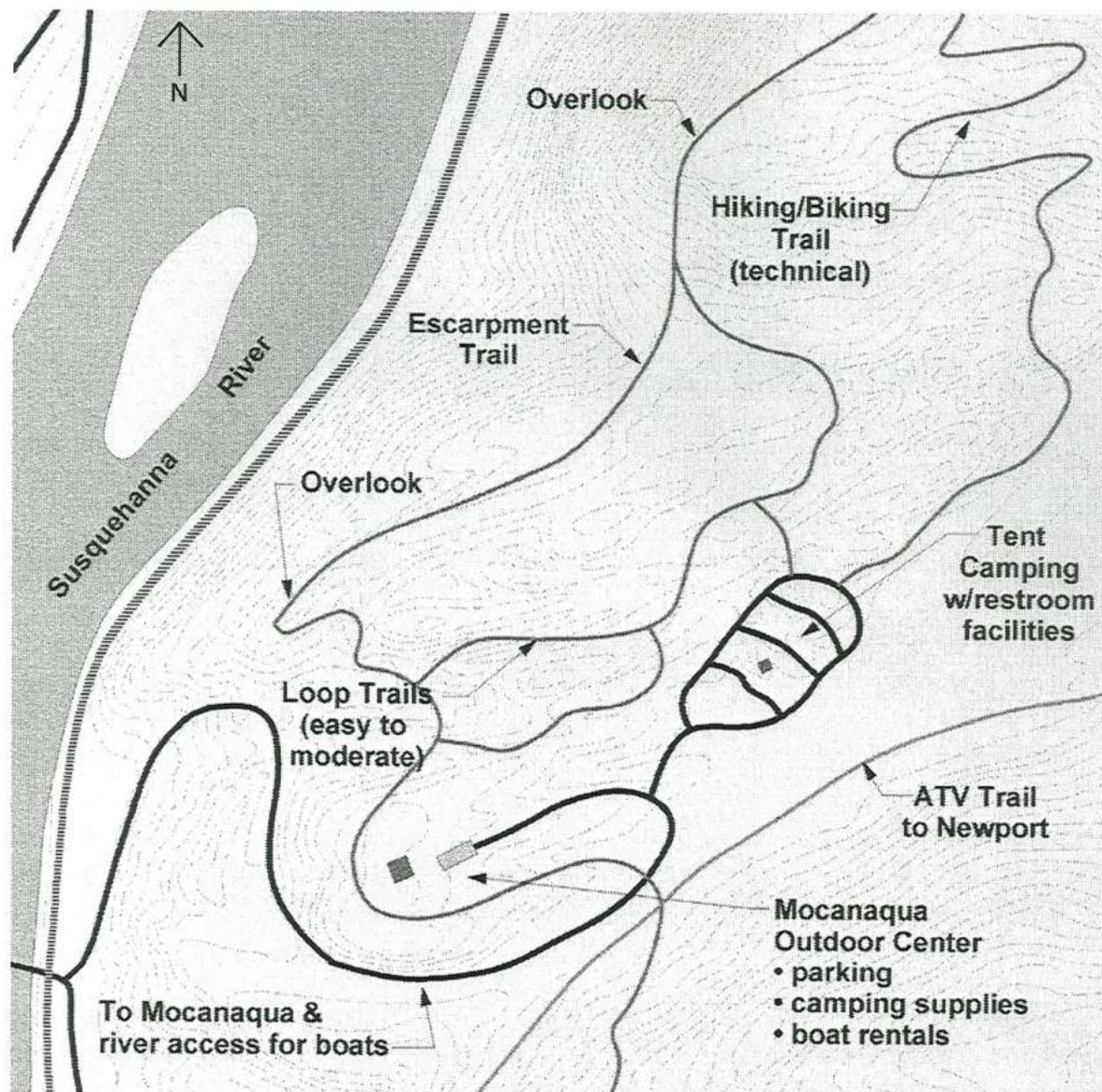
Costs

Long-term costs for the development, including access roads, local trails, a community park, and utilities are estimated at \$1.5 - \$1.6 million.

This cost does not include housing development or the proposed golf course. These costs are expected to be incurred by a private land developer.

Proposed Parkland

MOCONAQUA OUTDOOR CENTER



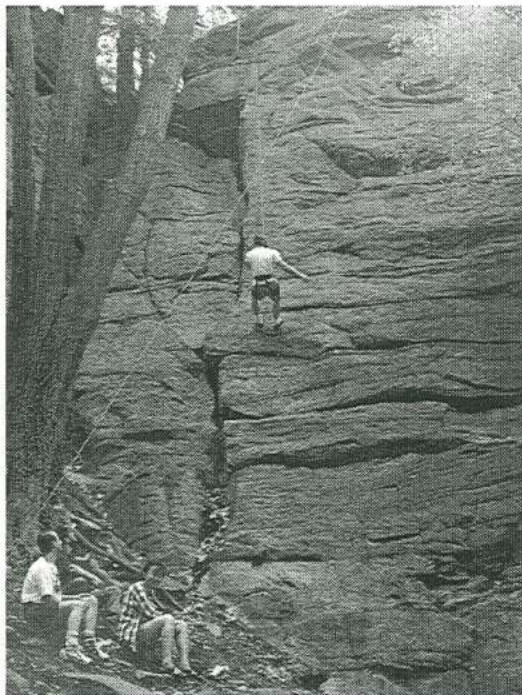
Canoeing

Description

The Mocanaqua Outdoor Center would be an active destination for local outdoor enthusiasts and tourists providing an equipment rental and sales facility, guide services, parking facilities, comfort stations and a campground. As the trailhead to the Escarpment Trail, it would be a starting area for hiking and biking trails, that provide access to key lookout points along the southern portion of the Escarpment Trail and to shorter loop trails and rock climbing areas. In addition, the center would provide access to boating activities on the Susquehanna River, such as canoe and paddleboat rentals.

Costs

Costs for the long term development of the site, including an access road and parking, a building for rental by a outfitter, a tent campground with bathhouse, site furniture, local trails, signage and utilities, are estimated at \$1.8 - 1.9 million.



Rock climbing area near Moconagua



Example campground bathhouse

Implementation Issues

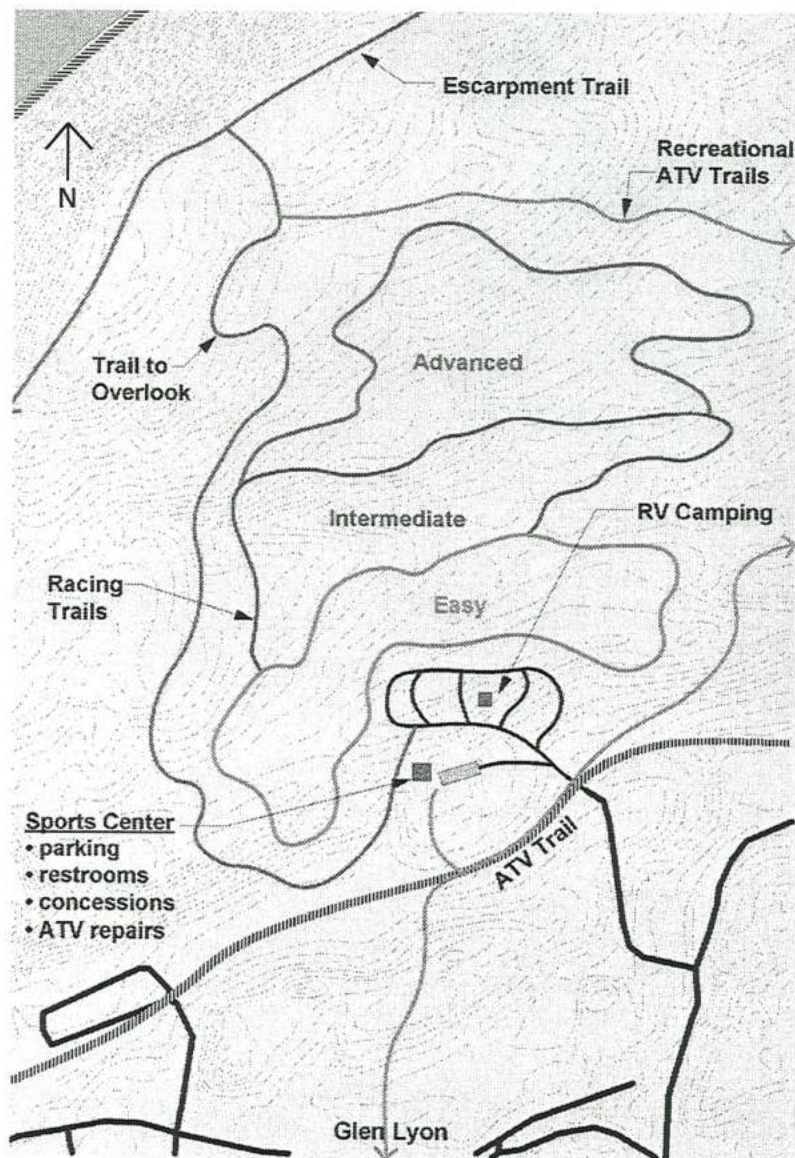
- Reclamation of culm banks would be required prior to development.
- An access road from Mocanaqua to the facility would need to be constructed to avoid the waste water treatment facility.
- Boat ramp access on the river would require land acquisition or easement.
- Dumped trash on the site would require clean-up before the center could be opened.

Site Program Summary

- Equipment Rental and Sales Facility
- Guide Services
- Rock Climbing Area
- Boat Ramp
- Connection to Escarpment Trail
- Campground
- Hiking and Biking Trails
- Technical Trails
- Total Acreage: 16

Proposed Parkland

NEWPORT MOTOR SPORTS PARK



Description

Significant slopes and mine-scarred land make the Newport area an ideal location for the Newport Motor Sports Park. This park is planned as a full scale, income producing ATV and motorbike racecourse and trail system. It would be a destination point for ATV users both from within the Wyoming Valley and beyond.

The park would contain ATV services, such as a small gas station and ATV equipment sales. The racecourse would be located at the western end of the site while ATV recreation trails would traverse the eastern portion of the property. Recreational vehicle (RV) camping facilities, buffered hiking and mountain bike trails, a trailhead for the Escarpment Trail, and ATV access to an overlook on the ridge would also be provided.

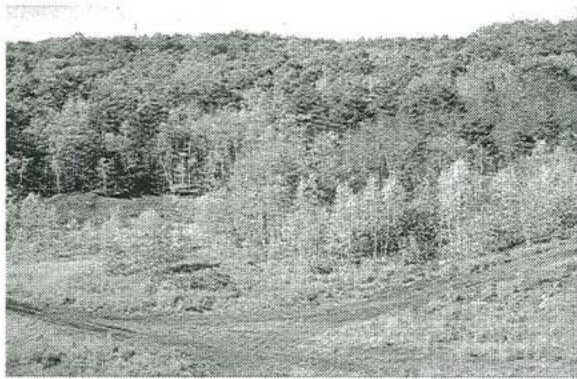
The Newport Motor Sports Park would be accessible by the Central Valley ATV Trail, a dedicated motorized vehicle trail, from all the small communities in the Lower Wyoming Valley.



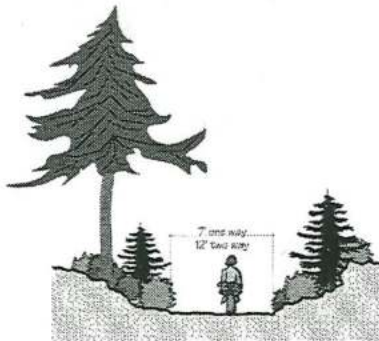
ATV Riding is a popular year round sport in the Wyoming Valley

Costs

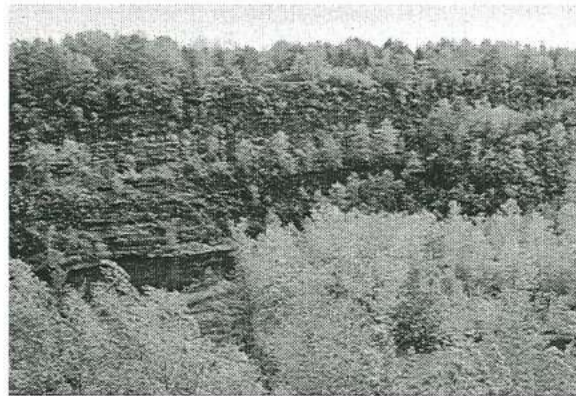
Costs for the long-term development of the site, including access roads and parking lots, a central building, RV campground, site furniture, local hiking trails, utilities, directional signage, ATV racecourse and trails, picnic areas, and a grandstand are estimated at \$2.1 - \$2.2 million.



The Newport parcel contains a number of existing ATV trails.



Example ATV Trail Tread



The terrain and landscape of the Newport parcels provide an excellent opportunity for ATV use.

Site Program Summary

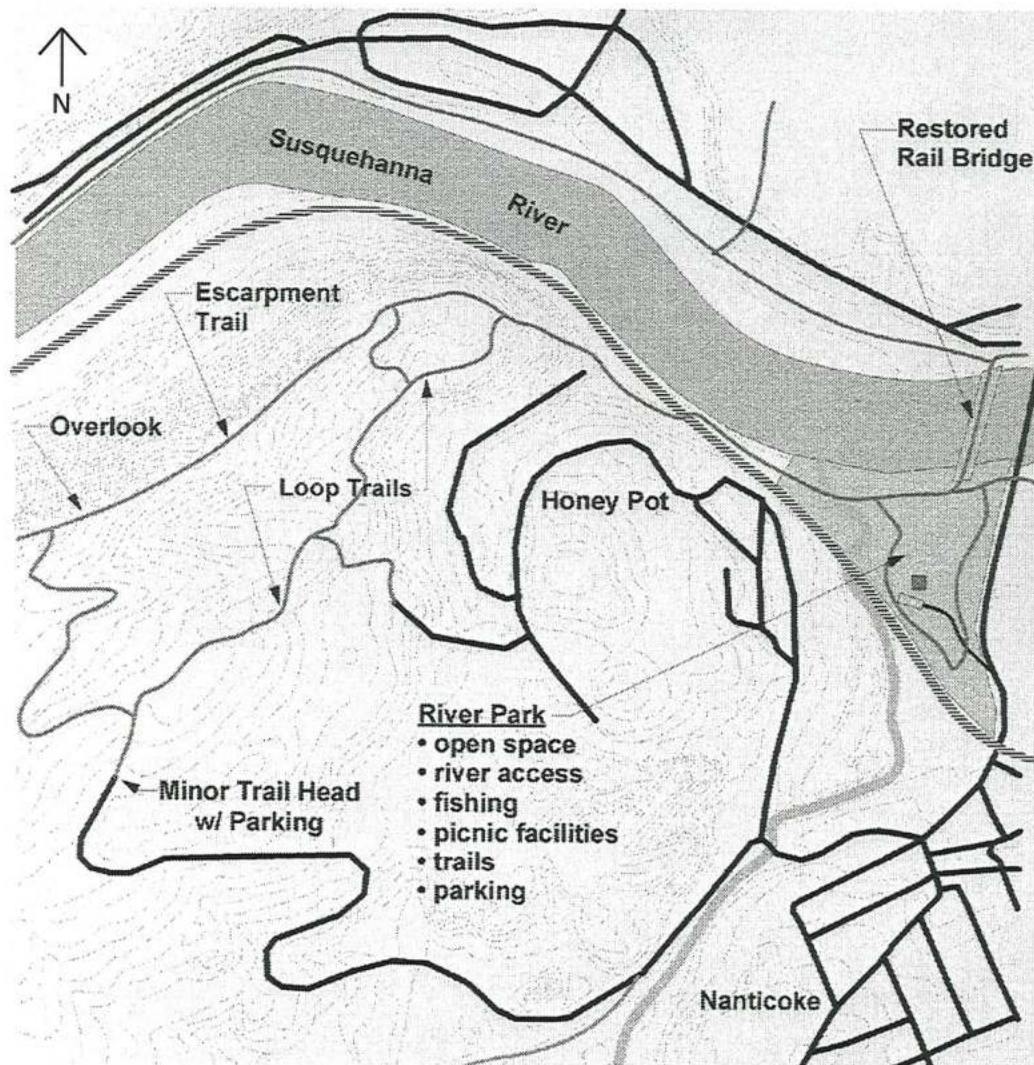
- ATV and Motorbike Racecourse: 2.5 Miles
- ATV and Motorbike Services Facility
- ATV and Motorbike Trails: 9 Miles
- RV Camping
- Non-motorized access to Escarpment Trail
- Central Valley ATV Trail: 15.9 miles
- Total Acreage: 178

Implementation Issues

- ATV recreational trails would need to be moved periodically to accommodate reclamation on the eastern portion of the site.
- Dumped trash would require clean-up prior to development.

Proposed Parkland

SUSQUEHANNA RIVER PARK



Description

The Susquehanna River Park is an urban waterfront park in the City of Nanticoke. It is also the northeastern end of the Escarpment Trail, the western end of the Levee Trail to Wilkes-Barre, and a midpoint connection to the Susquehanna Warrior Trail across the river over the abandoned rail bridge. Located within the triangle of land to the west of Nanticoke's Market Street, the park would be bound by the active Conrail railroad tracks, the abandoned railroad tracks leading across the river, and the river itself. It would contain picnic facilities, a fishing pier, a boat ramp, a playground, and an area of riverfront parkland. Boat facilities could be coupled with the proposed facilities in Mocanaqua, creating a put-in and take-out for boaters on the river.

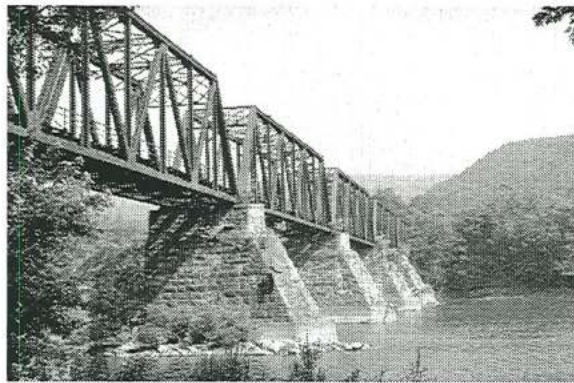
The City of Nanticoke has recently planned to create the Lower Broadway Park located to the south and east adjacent to the Susquehanna River Park. The Lower Broadway Park is planned to include a community recreation area and golf course. The two park plans are compatible and could be combined. The proposed Susquehanna River Park extends the program and boundaries of the Lower Broadway park to take advantage of the Susquehanna River as a resource to the community and to provide connections to the regional trail network.

Costs

Costs for the long-term development of the Susquehanna River Park, including parking, trails, restrooms, fishing piers, site furniture, restrooms, and other amenities are estimated at \$1.2 - 1.3 million. The costs of rehabilitating the abandoned railroad bridge are unknown.



Play equipment



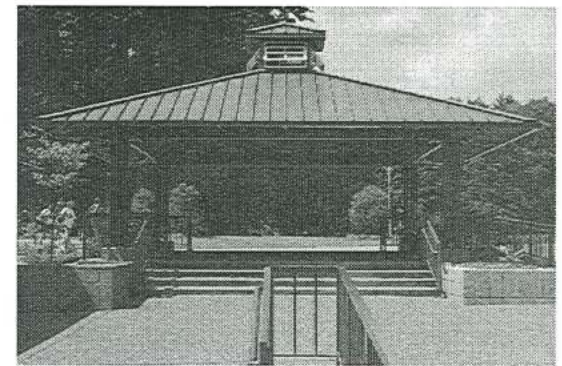
The abandoned railroad bridge would be restored as a pedestrian and bicycle bridge.

Implementation Issues

- The park is located on land owned by the City of Nanticoke and Conrail requiring acquisition or land easements for implementation.
- Access from the trailhead in the park to the Escarpment Trail is difficult due to the active rail line, steep topography, and subdivided land ownership in Honeyport. This access may require a constructed boardwalk or major grading along the slope northeast of Honeyport.
- The rail bridge across the river would require acquisition and renovation.
- The park should be developed in concert with existing City of Nanticoke park plans for the Lower Broadway Park on adjacent property.

Site Program Summary

- Fishing Pier
- Boat Ramp
- Multi-Use Trail
- Picnic Facilities
- Playground
- Access to Escarpment Trail
- Total Acreage: 178



The park would include picnic shelters and pavilions, such as this one.

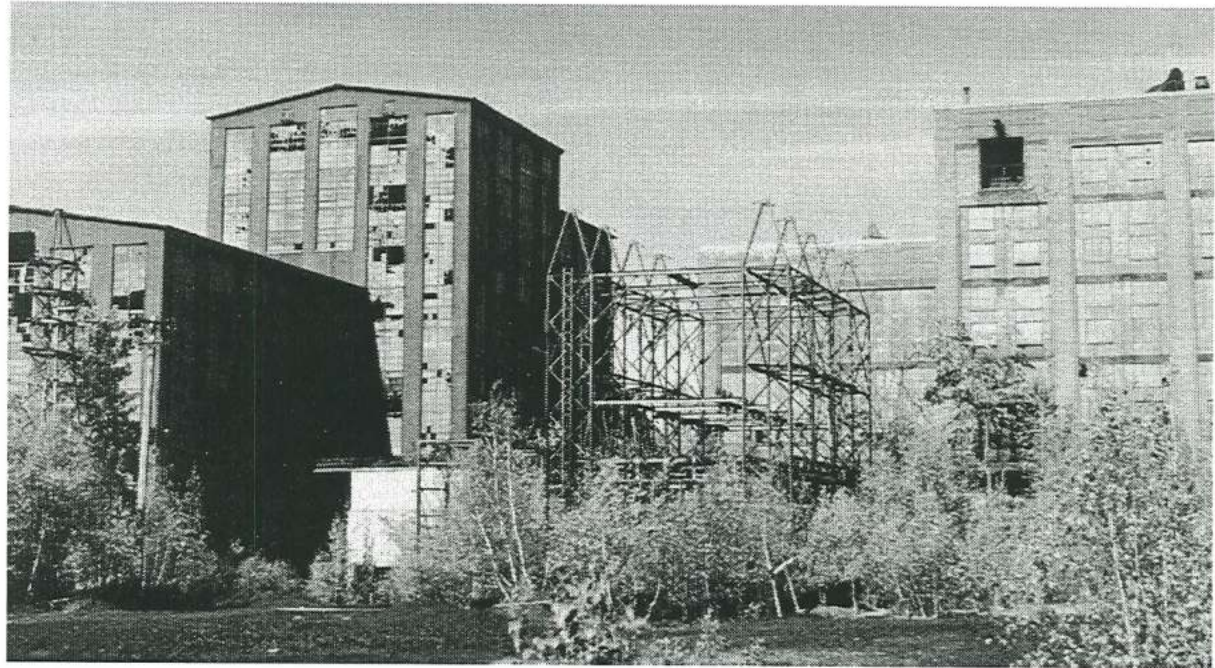
Proposed Parkland

HUBER BREAKER PARK

Description

The Huber Breaker in Ashley is one of the largest coal breakers ever built. The facility, which is highly visible and accessible to travelers on Interstate 81, provides an excellent opportunity as the centerpiece of the Huber Breaker Park. The breaker itself would be stabilized and transformed into an "outdoor sculpture" that would serve as the central focus of the park.

The park would function both as a community park and as a regional information and interpretive facility. It would include short interpretive trails, an outdoor amphitheater for community activities, an interpretive facility for environmental education and historic interpretation, and an information center. In addition to learning about the history and environment of the region, visitors could obtain materials and maps describing recreational opportunities and trails in the Lower Wyoming Valley and the Delaware & Lehigh Canal National Heritage Corridor.



The currently deteriorating Huber Breaker could be stabilized and become a historic centerpiece for the proposed park.

The information and interpretive facilities could be located in the Earth Conservancy offices that once housed the offices for the Blue Coal Corporation. The Delaware & Lehigh Canal National Heritage Corridor Manage-

ment Action Plan includes this concept for the Huber Breaker Park as the corridor landing for the Wyoming Valley Reach of the overall Delaware & Lehigh Corridor.

Site Program Summary

- Lower Wyoming Valley Open Space Information Center
- Wyoming Valley Reach Landing for Delaware & Lehigh Corridor
- Environmental Education and Historic Interpretation Center
- Mining History Interpretive Trails, Exhibits, and Displays
- Outdoor Amphitheater
- Stabilization of historic Huber Breaker
- Connection to Ashley Planes Heritage Park
- Total Acreage: 33

Implementation Issues

- The Huber Breaker is in poor condition and must be stabilized.
- Only the portion of land containing the Earth Conservancy offices is owned by the Earth Conservancy; therefore, the Huber Breaker and surrounding lands must be acquired.
- The lands surrounding the Huber Breaker must be reclaimed before a park can be built.

Costs

Costs for the long-term development of the Park, including the renovation of the existing office building as an educational center, landscaping, picnic facilities, and a community amphitheater are estimated at \$1.4-1.5 million. The cost of stabilizing the deteriorating Huber Breaker are unknown.



The Blue Coal Corp. Huber Colliery sign could be restored as the entrance to the park.



LOWER WYOMING VALLEY OPEN SPACE MASTER PLAN

Chapter 3
Implementation

3.1 Overview

The Lower Wyoming Valley Open Space Master Plan is a progressive and ambitious concept that will require a concerted effort by a variety of local government agencies, private sector organizations, municipalities, business leaders, and community residents. These groups, who have the ability, influence and authority to guide open space development, must become partners in the implementation of the open space network through ownership, funding, or management. They also must be supported by Federal and State agencies, working in concert with their goals. Serious commitment, intense negotiation, and visionary leadership is required to give this plan physical reality.

This implementation strategy provides a blueprint for achieving the vision of the Lower Wyoming Valley Open Space Network. Section 3.2 - Costs and Funding details costs required to fund the network in the short and long-term and potential funding sources. Section 3.3 - Open Space Management describes agencies and groups which have been involved in open space, conservation, or recreation in the region and which should become partners in the implementation process. Finally, Section 3.4 - Open Space Operations and Maintenance outlines the management and organizational issues that must be addressed to ensure a safe and successful Open Space Network.

Implementation Priorities

The proposed Lower Wyoming Valley Open Space Network consists of approximately 55 miles of hiking and mountain biking trails, 27 miles of ATV trails, 6,694 acres of conservation land, 4,258 acres of designated open space, and 10 recreation facilities on 4,013 acres. It is expected that this open space development effort will be implemented over the next twenty years, project by project. In order for implementation of the Open Space Network to be coordinated effectively, there must be a clear set of priorities. For this reason the Trails Network, Conservation Lands, and Proposed Parklands described in chapter two have each been divided into two types of projects: those that are considered **initial development projects** and those that are **long-term development projects**.

The **initial development projects** were selected in order to focus energy and funds on projects that can be built and opened to the public relatively quickly and easily. These projects will enable the Open Space Network to have a physical reality and generate support from the public without significant costs or requiring land acquisitions and easements. The implementation of these projects could be tied to the Year 2000 as a millenium goal. These

initial development projects also have a long-term phase. This enables the projects to be implemented quickly and then expanded over time.

The **long-term development projects** include those projects that will take more time and effort to generate support and funding from the community and open space partners. These projects often include areas of land that are not owned by the Earth Conservancy or require significant financial investment (over one million dollars). Once the initial development projects are open to the public and the Lower Wyoming Valley Open Space Network is established, enough momentum should be created to assist in the implementation of these long-term projects. If any immediate opportunity arises to implement a long-term project in the short-term, such an opportunity should be taken.

Initial Development Projects

- Escarpment Trail
- Wyoming Valley Scenic Drive
- Penobscot Ridge Mountain Bike Area
- Penobscot Ridge Retreat Area
- Ashley Planes Heritage Park
- Recreation Center

Long-Term Development Projects

- Penobscot Ridge and Wilkes-Barre Mountain Trail
- Cross Valley Trails
- River Trail
- Tilbury Knob Recreation Area
- Plymouth Residential Golf Community
- Mocanaqua Outdoor Center
- Newport Motor Sports Park & ATV Central Valley Trail
- Susquehanna River Park
- Huber Breaker Park

Steps to Implementation

Implementation of the Earth Conservancy Open Space Plan will be a long process involving many organizations and funding sources and will require much coordination. The following initial steps provide a framework for the implementation of the plan:

1. Establish an Open Space Management Organization.

A management organization should be established to provide leadership for the open space system, facilitate implementation, coordinate efforts by the partners, and help manage the open space system once it is complete.

2. Develop a Public Information, Education and Outreach Campaign.

This campaign would target local communities, businesses, and residents to provide information on the Lower Wyoming Valley Open Space Network, educate people to take pride in and be stewards of open space, and garner support for the implementation and management of the network.

3. Develop a Comprehensive Signage Program.

A well thought out signage program strategically placed along all trails and open space parcels would give the network a visible presence

in the valley and contribute to the public information, education, and outreach campaign in the first phases of implementation. It would also help guide users safely through the open space system and educate visitors on the cultural and natural significance of the landscape.

4. Establish a Conflict Management Program.

A conflict management program should be initiated in order to resolve issues as they arise throughout the Wyoming Valley. The first step in this program is the development of a Trails Advisory Council, which would include members of various trails and open space user groups. This group would be charged with managing and mitigating conflicts as they occur.

5. Assess Open Space Development over Time.

Open space needs and goals within the valley must be reassessed periodically to assure that the Lower Wyoming Valley Open Space Network is contributing to the quality of life within the valley. Similarly, the condition of open space components and trails must be continually monitored to assure public safety and reduce liability.

Open Space Costs

Implementation costs of the Trails Network, Conservation Lands, and Proposed Parklands are described on the following pages. Initial development projects are divided into initial development costs and long-term development costs. Long-term development projects list only long-term costs.

The initial development cost descriptions provide costs for specific items, such as parking and signage. These costs represent reasonable generic costs for those items; however, they should only be used to approximate what the total cost will be. These costs also include a 10 percent design and engineering fee and a 10 percent environmental assessment fee. These ratios are typical percentages in open space development, but the actual cost may vary widely due to specific site conditions and the fees of individual contractors. Finally, the short-term initial costs for trails assume that trail development includes a large portion of existing trails. The linear feet cost represents only new trail connections and trail relocations.

Long-term development costs are developed for trails, conservation lands, and proposed parklands that are more likely to be developed in the future. These costs are given as a range in order to account for unforeseen costs that may

occur in the future and for the unpredictability of costs in a fluctuating economy. These long-term costs do not include a design and engineering fee or an environmental assessment fee. Trail costs assume that half of each trail is currently existing. During the process of trail planning and design, it may be found that more or less of these trails exist and the cost would vary accordingly.

Some of the Trails Network and Proposed Parklands are located on properties that are not owned by the Earth Conservancy. It is anticipated that trail easements or land donations with tax benefits will be the most effective method of securing access or ownership of these lands. However, it may be necessary in some cases to purchase land. These potential acquisition costs are not included in the implementation costs described on the following pages.

Similarly, some of the Trails Network and Proposed Parklands are located in areas that have been mined. This plan does not anticipate that reclamation would be required prior to open space development. Therefore, reclamation costs are not included in the implementation costs.

3.2 Open Space Costs & Funding

Trails Network

TRAIL COSTS

Escarpment Trail

	Units	Cost per Unit	Total Cost
<i>Initial Development of the Mocanaqua Loop</i>			
Trails	5,280 lf	\$ 7	\$ 36,960
Parking (gravel)	20 spaces	\$ 600	\$ 12,000
Directional Signage	20 signs	\$ 250	\$ 5,000
Entry Signs	4 signs	\$ 1,200	\$ 4,800
10% Design & Engineering Fee			\$ 5,876
10% Environmental Assessment Fee			\$ 5,876
Total			\$ 70,512
<i>Long-term Development of the Entire Trail</i>			\$75,000 - 100,000
- Site Furniture			
- Interpretive & Informational Signage			
- Overlooks			
- Parking (gravel)			
Total Development of Escarpment Trail			\$146,000 - 171,000

Wyoming Valley Scenic Drive

<i>Initial Development of the Scenic Drive</i>			
Maps	1000 maps	\$ 1	\$ 1,000
Signage	60 signs	\$ 250	\$ 15,000
10% Design & Engineering Fee			\$ 1,600
10% Environmental Assessment Fee (optional)			\$ 1,600
Total			\$ 19,200
<i>Long-term Development of the Scenic Drive</i>			\$50,000 - 70,000
- Audio Tour			
- Overlooks			
Total Development of Scenic Drive			\$69,000 - 90,000

Penobscot Ridge Trail**Long-term \$ 50,000 - 100,000**

- Trails

- Signage

(Roadway crossings are not included)

Wilkes-Barre Mountain Trail**Long-term \$ 50,000 - 100,000**

- Trails

- Signage

Conyngham Cross Valley Trail**Long-term \$ 25,000 - 50,000**

- Trails

- Signage

Newport Cross Valley Trail**Long-term \$ 25,000 - 50,000**

- Trails

- Signage

Hanover Cross Valley Trail**Long-term \$ 25,000 - 50,000**

- Trails

- Signage

Levee Trail**Long-term \$25,000 - 50,000**

- Trails

- Signage

Conservation Lands

PROGRAM COSTS

Penobscot Ridge Mountain Bike Area

Initial Development

Parking (gravel)	20 spaces	\$ 600	\$ 12,000
Local Trails	1320 lf	\$ 7	\$ 9,240
Signage	10 signs	\$ 250	\$ 2,500
10% Design & Engineering Fee			\$ 2,374
10% Environmental Assessment Fee (optional)			\$ 2,374
Total			\$ 28,488

Long-term Development of the Mountain Bike Area

\$75,000 - 100,000

- Restrooms
- Utilities

Total Development of Penobscot Ridge Mountain Bike Area

\$ 103,500 - 128,500

Penobscot Ridge Retreat Area

Initial Development

Parking (gravel)	20 spaces	\$ 600	\$ 12,000	
Access Roads	600 lf	\$ 150	\$ 90,000	
Local Trails	1320 lf	\$ 7	\$ 9,240	
Signage	2 signs	\$ 250	\$ 500	
10% Design & Engineering Fee			\$ 11,174	
10% Environmental Assessment Fee (optional)			\$ 11,174	
Total				\$ 134,088

Long-term Development of the Retreat Area

\$275,000 - 300,000

- Rustic Cabins
- Restrooms
- Utilities

Total Development of Penobscot Ridge Retreat Area

\$ 409,000 - 434,000

Tilbury Knob Recreation Area

Long-term \$50,000 - 75,000

- Parking (gravel)
- Access Roads
- Local Trails
- Signage

Proposed Parklands

PROGRAM COSTS

Ashley Planes Heritage Park

Initial Development

Parking (gravel)	50 spaces	\$ 600	\$ 30,000
Access Road	50 lf	\$ 150	\$ 7,500
Trails	1320 lf	\$ 7	\$ 9,240
Directional Signage	20 signs	\$ 250	\$ 5,000
Interpretive Signage	2 signs	\$ 1,500	\$ 3,000
10% Design & Engineering Fee			\$ 5,474
10% Environmental Assessment Fee			\$ 5,474

Total **\$ 65,688**

Long-term Development of the Park

\$ 125,000 - \$150,000

- Site Furnishings
- Restrooms and Utilities
- Interpretive Signage

Total Development of Ashley Planes Heritage Park

\$191,000 - 216,000

Recreation Center

Initial Development

Parking (gravel)	100 spaces	\$ 600	\$ 60,000
Access Roads	2000 lf	\$ 150	\$ 300,000
Ballfields	4 fields	\$ 121,500	\$ 486,000
Signage	4 signs	\$ 250	\$ 1,000
10% Design & Engineering Fee			\$ 84,700
10% Environmental Assessment Fee			\$ 84,700

Total **\$ 1,016,400**

Long-term Development of the Center

\$ 1,500,000 - 1,750,000

- Site Furniture and Play Equipment
- Indoor Recreation Facility
- Utilities

Total Development of the Recreation Center

\$2,516,000 - 2,766,000

Mocanaqua Outdoor Center**Long-term \$1,800,000 - 1,900,000**

- Parking (gravel)
- Access Road
- Outfitter Building
- Site Furniture
- Tent Campground
- Local Trails
- Directional Signage
- Campground Bathhouse
- Utilities

Newport Motor Sports Park**Long-term \$ 2,100,000 - 2,200,000**

- Parking (gravel)
- Access Road
- Building
- RV Camping
- Local Hiking Trails
- Site Furniture
- ATV Track
- ATV Recreational Trails
- ATV Central Valley Trail
- Grandstand
- Picnic Shelters
- Directional Signage
- Utilities

Susquehanna River Park**Long-term \$1,200,000 - 1,300,000**

- Parking (paved)
- Access Roads
- Multi-use Trails
- Fishing Piers
- Site Furniture
- Picnic Shelters
- Play Equipment
- Restrooms
- Rehab of Railroad Bridge
- Directional Signage
- Landscape Allowance
- Utilities

Huber Breaker Park**Long-term \$ 1,400,000 - 1,500,000**

- Parking (paved)
- Access Road
- Office Building Renovation for Center
- Amphitheater
- Site Furniture
- Directional Signage
- Interpretative Signage
- Picnic Shelters
- Landscape Allowance
- Utilities

(Stabilization of Huber Breaker not included)

Plymouth Residential Golf Community**Long-term \$1,500,000 - 1,600,000**

- Access Road
- Local Trails
- Community Park
- Utilities

(Costs for housing site development, golf course development, and reclamation not included.)

Summary of Funding Sources

Funding the implementation of the Lower Wyoming Valley Open Space Master Plan will depend on a concerted effort to raise money from a number of funding sources. The following summaries describe possible funding sources for the broad range of open space components described in this plan.

Commonwealth of Pennsylvania

The most likely source of funding for the development of the Escarpment Trail and trailhead facilities could come from the Pennsylvania Department of Conservation and Natural Resources (DCNR) Programs. "The new Department of Conservation and Natural Resources establishes cabinet level status for Pennsylvania's state parks and forests and also places conservation and recreation programs dealing with local recreation, heritage parks, rivers conservation, greenways, trails and open spaces under a single agency. A key priority of this agency is to bring its programs into towns and cities across Pennsylvania and to provide leadership linking agency resources with local conservation efforts." (Source: DCNR Community Conservation Partnership Initiative)

"The Community Conservation Partnership initiative joins DCNR with communities, non-profit groups and the private sector in conserving Pennsylvania's valuable natural and cultural heritage. DCNR partnerships involve greenways, open spaces, community parks, rail trails, river corridors, natural areas, indoor and outdoor recreation and environmental education. Agency programs will be linked with efforts to conserve natural and historic resources, provide recreation, enhance tourism, and foster community development." (Source: DCNR Community Conservation Partnership Initiative)

The following programs are operated under this agency. The current contact person for these programs at DCNR's Northeast Field Office (570) 963-4157.

Keystone Community Grant Program

The Commonwealth of Pennsylvania makes available grant moneys to municipal governments through this program to support greenway and park planning, design and development. Applications for these grants are due in the Fall of each year, and most projects require a 50 percent match from the local project

sponsor. The amount of maximum award varies with the requested activity. Planning grants are typically awarded \$50,000 or less. Land acquisition and construction grants are typically awarded \$125,000 or less.

Community Grants

Small community grants are also awarded through the Keystone program to municipalities for recreation, park and conservation projects. The small community component provides 100 percent funding with a \$20,000 maximum award, for material costs and professional design fees to municipalities with fewer than 5,000 residents so they may develop basic recreation projects.

The Community Grants Program is comprehensive and could be used to fund a large number of open space components, including the Escarpment Trail, the Susquehanna River Park, the Penobscot Ridge Trail, the Recreation Center, and the Tilbury Knob Recreation Area.

Heritage Park Grants

Heritage Parks Grants promote public-private partnerships to preserve and enhance natural, cultural, historic, and recreation resources to stimulate economic development through heritage tourism. Grants are available to municipalities, nonprofit organizations, or federally designated commissions acting on behalf of the municipalities in heritage park areas. Grants are awarded for a variety of purposes, including: feasibility studies, development of management action plans for heritage park areas, specialized studies, implementation projects, and hiring of state heritage park managers. Grants require a 25 to 50 percent local match. Heritage Parks Grants could be used to fund projects associated with the Passage of the D&L Canal National Heritage Corridor, such as the Ashley Planes Heritage Park and the Huber Breaker Park.

Land Trust Grants

The Commonwealth of Pennsylvania DCNR can also award land acquisition grants for areas where rare or threatened species exist. Grants are made available to nonprofit land trusts of land conservancies and require a 50 percent match. Award amounts will vary; however, they usually support the acquisition of hundreds of acres of land. Applications are due in the Fall of each year.

Rails-to-Trails Grants

These grants provide 50 percent funding for the planning, acquisition or development of rail-trail corridors. Eligible applicants include municipalities and nonprofit organizations established to preserve and protect available abandoned railroad corridors for use as trails or future rail service. Rails-to-Trails Grants may be used to fund studies or implement the ATV Central Valley Trail or the Ashley Planes Historic Park trails.

Urban and Community Forestry Grants

These grants can be used to encourage the planting of trees in Pennsylvania communities. Municipal challenge grants provide 50 percent of the cost of the purchase and delivery of trees. Special grants are available for local volunteer groups, civic clubs, and municipalities to train and use volunteers for street tree inventories, and other projects in urban and community forestry.

The Recreational Trails Program (DCNR) National Recreation Trails Fund Act (NRTFA) or Symms Act Grants

This source of funding is a subset of TEA-21, and is administered by DCNR. Funds from this program can be used for the acquisition of land and the construction of trail treads and trail facilities. Applications for this funding are due in March 1999. Land acquisition will require a 50 percent match from the local sponsor. Construction projects will require a 20 percent match from the local sponsor. DCNR will provide up to a maximum award of \$150,000. Thirty percent of the Symms funds must be used on trails that support motorized recreation; therefore, these grants may be used to fund the Newport Motor Sports Park and Central Valley ATV Trail.

TEA-21 Enhancements Program

Some of the Wyoming Valley trails may be eligible for financial assistance through the PennDOT Transportation Program, as a subset of TEA-21. Technically, the hiking trails may not be considered a “transportation” facility. However, with the support of local communities, the county and congressional offices, PennDOT might be persuaded to provide funding for the project and its trailheads. Funding for trail projects throughout Pennsylvania varies; it is not unusual to see funding of \$300,000 to \$500,000 per project. Applications must be made with PennDOT, and information on the program may be obtained from the PennDOT District Office.

Surface Transportation Program (STP) Funds

TEA-21 Surface Transportation Program funds can be used for bicycle and pedestrian facility construction or non-construction projects, such as brochures, public service announcements, and route maps. The projects must be related to bicycle and pedestrian transportation and must be part of the Long Range Transportation Plan. These funds are normally programmed locally and included in the community’s overall Transportation Improvement Program (TIP). These funds are administered by PennDOT.

Scenic Byway Funds

The Scenic Byway program is a subset of TEA-21 and is designed to protect and enhance America’s designated scenic roadways. The Wyoming Valley Scenic Drive is defined in this plan as a future Scenic Byway and could be eligible for these funds. Money is available through this program to support planning, design, safety and facility development, cultural and historic resource protection, and tourism information signage. Bicycle and pedestrian facilities can be developed in conjunction with scenic roadway projects. Some states with Scenic Byway programs have developed greenway and trail facilities adjacent to roadways using funds from this program. PennDOT administers this program.

Federal Sources of Funding

Area Development Programs

Grants from this program are typically awarded for the development of industrial parks, and other projects that contribute to job growth. The Newport Motor Sports Park may be a project that would be eligible under this program. Grants are awarded to municipalities, nonprofit organizations and institutions. In 1997, four grants were awarded, ranging from \$200,000 to \$500,000. A match of at least 50 percent is required and the project must demonstrate a relationship to the agency's strategic plan and a statewide strategic plan for economic development. Call (717) 655-5581 for more information and to obtain an application.

Community Development Block Grant Programs

Portions of the Open Space Network may be eligible for funds from the Housing and Urban Development Community Development and Block Grant (CDBG) Program, if it can be proven that projects would benefit low-income populations. CDBG grants could be used for recreation facilities that would meet these requirements, such as the Mocanaqua Outdoor Center, the Susquehanna River Park, the Huber Breaker Park or the Recreation Center. Grants from this program range from \$50,000 to

\$200,000 and are either made to municipalities or non-profits. There is no formal application process. Requests for funding should be submitted to the Luzerne County Office of Community Development at (717) 824-7214.

Land and Water Conservation Fund Grants

The Land and Water Conservation Fund (LWCF) has historically been one of the most important sources of federal funds for local park facility development. In recent years, Congress has been inconsistent in its allocations to LWCF. It is anticipated that Congress will increase funding for LWCF in Fiscal Years 1999 and 2000. These funds are distributed by the National Park Service would be available to the Pennsylvania DCNR starting in the year 2000. They require a 50 percent match from the local project sponsor. Contact DCNR's Northeast Field Office at (570) 963-4157 for more information. LWCF grants could be used to fund most of the components of the Lower Wyoming Valley Open Space Master Plan, including the Escarpment Trail, the Mocanaqua Outdoor Center, the Susquehanna River Park, the Recreation Center, the Penobscot Ridge Retreat Area, the Penobscot Ridge Mountain Bike Area, the River Trail and the Tilbury Knob Recreation Area.

Local Funding Sources

Local Capital Improvements Program

Local governments throughout the nation have initiated yearly appropriations from local general revenue for greenway and trail development through their capital improvements programs (CIP). In Raleigh, North Carolina, greenways continue to be built and maintained, year after year, due to a dedicated source of annual funding, administered by the Parks and Recreation Department. Luzerne County and communities throughout the Wyoming Valley should consider dedicating a portion of local revenues to the development of the Lower Wyoming Valley Open Space Network. Each dollar invested in these resources could yield revenue in the form of increased private development and tourism.

Public Sector Bonds

In recent years, several communities throughout the nation have asked local residents to financially support the development of community trail and greenway systems through bond referendums. The Charlotte-Mecklenburg County area, for example, passed four consecutive referendums that generated more than \$3 million for their greenway program.

Generally, a bond program will be successful if it is tied to specific projects, and can be clearly demonstrated as an investment in economic growth. The tourism benefits of greenways have been well documented, especially in rural areas like the Wyoming Valley. Voters in Monroe County, Pennsylvania, passed an open space bond referendum last spring to raise \$25 million to purchase natural areas, development rights, and farmland in the Pocono Mountains. A Park, Greenway and Open Space Bond referendum may be one way in which to quickly add significant value to the landscapes of Luzerne County.

Private Funding Sources

Many communities have solicited trail funding from a variety of private foundations, corporations, and other conservation-minded benefactors. As a general rule, local foundations and businesses will have a greater interest in and be more likely to fund a local project, such as the Escarpment Trail. These local sources should be approached first, before seeking funds outside the community.

Local Businesses

Local industries and businesses may agree to provide support for development of open space through: donations of cash to a specific project; in-kind donations of equipment and labor by corporations to reduce the cost of implementation; and discounts in the cost of essential materials purchased from local businesses for implementation.

This method of raising funds requires a great deal of organizational coordination. The Wilkes-Barre Chamber of Business and Industry could be a lead group in raising necessary capital or identifying local resources that could be used to build the Lower Wyoming Valley Open Space Network.

Corporations and Foundations

Pennsylvania Power & Light Co. Community Partnership Program

PP&L awards grants to community development projects across its service area through its Community Partnership Program. These projects, organized by nonprofit agencies, organizations, and municipalities, aim to create jobs, help businesses grow, and improve the quality of life. 1997 grant recipients received between \$10,000 and \$75,000 for projects focused on community improvements, historic rehabilitation, protection of natural and cultural resources, entrepreneurship, and business expansion. The Lower Wyoming Valley Open Space Network is eligible to apply for these grants for all of its projects.

American Greenways DuPont Awards

The American Greenways Program of the Conservation Fund's (a national nonprofit land conservation organization) has teamed with the DuPont Corporation and the National Geographic Society to award small grants (\$500 to \$2,500) to stimulate the planning and design of greenways. These grants can be awarded to nonprofit organizations, public agencies, and individuals and used for activities such as mapping, conducting ecological assessments, surveying land, holding conferences, developing brochures, producing interpretive displays, incorporating land trusts, building trails, and other creative projects. Grants cannot be used for academic research, institutional support, lobbying, or political activities. These awards could support planning and public outreach for the Escarpment Trail or the Penobscot Ridge Trail.

Fish America Funds

The Fish America Foundation provides funding to public and private organizations for projects that enhance or conserve water and fisheries resources, including community efforts. The grant award is approximately \$10,000. It could be used to support reclamation projects for acid mine drainage and to conserve lands around Lily Lake.

Trail Sponsors

A sponsorship program for trail amenities allows for smaller donations to be received both from individuals and businesses. The program must be well planned and organized, with design standards and associated costs established for each amenity. Project elements which may be funded can include exhibits, benches, trash receptacles, signage, and picnic areas. Usually, plaques recognizing the individual contributors are placed on the constructed amenities. It may be possible to literally sell portions of the trails to local donors through a coordinated program.

Volunteer Fund Raising

Community volunteers may help with fund raising. Potential sources of volunteer fund raisers in the Wyoming Valley could include local bicyclists, historical groups, trail groups, and civic clubs, such as Kiwanis, Rotary, and Lions Clubs.

"Buy-a-Foot" Programs

"Buy-a-Foot" programs have been successful in raising funds and awareness for trail projects across the country.

Funding Scenarios

The majority of open space projects are large projects that will require several funding sources to finance implementation. Many of these funding agencies also require that other agencies or groups finance a percentage of the project. In order to develop a funding strategy for implementation, a series of funding scenarios have been developed. These scenarios provide specific grant amounts for the initial projects and list appropriate funding sources for long-term development projects.

The amount of funding available through grants and the number of grants and funds available varies every year. Therefore, it is impossible to predict what funds will be available five to twenty years in the future. The funding sources listed in this section are considered relatively stable; however, specific funding guidelines and criteria are likely to change and new grant programs are likely to be started. It is important that these scenarios and the funding descriptions are used only as a starting point in the implementation process. Additional funding sources should be researched with every project.

Trails Network

FUNDING SCENARIOS

Escarpment Trail

Initial Development of the Mocanaqua Loop

Initial Development Costs:	\$70,512
Potential Funding Sources:	
- TEA-21 Symms Act	\$20,000
- Land and Water Conservation Fund Grant	\$25,000
- Local Trails Organizations Donations/Sponsorship (Match)	\$5,000
- DCNR Community Grant for Mocanaqua (Small community)	\$15,000
- Luzerne County Match for TEA 21/LWCF	<u>\$5,512</u>
Total	\$70,512

Long-term Development of Entire Trail

Potential Long-term Costs:	\$75,000 - 100,000
Potential Funding Sources:	
- TEA-21 Enhancements Grant	
- TEA-21 Symms Act	
- Land and Water Conservation Fund Grant	
- Local Trails Organizations Donations/Sponsorship (Match)	
- DCNR Community Grant for Newport/Nanticoke	
- Newport and Nanticoke match for DCNR Grant	
- Luzerne County Match for TEA 21/LWCF	

Wyoming Valley Scenic Drive

Initial Development of the Scenic Drive

Initial Development Costs:	\$19,200
Potential Funding Sources:	
- TEA-21 Scenic Byways Funds	\$15,360
- Local Match for Scenic Drive (Needs local sponsor)	<u>\$3,840</u>
Total	\$19,200

Long-term Development of the Scenic Drive

Potential Long-term Costs: \$50,000 - 70,000

Potential Funding Sources:

- TEA-21 Scenic Byway Funds
 - Local Match for Scenic Drive (Needs local sponsor)
-

Penobscot Ridge & Wilkes-Barre Mountain Trails

Potential Long-term Costs: \$50,000 - 100,000 each

Potential Long-term Funding Sources:

- Keystone Community Grant
 - Community Grant
 - TEA-21 NRTFA Grant
 - Local Project Sponsor 20% Match for TEA-21 Grant
 - Local Trail Groups In-Kind Services and Donations
-

Cross Valley Connector Trails

Potential Long-term Costs: \$25,000 - 50,000 each

Potential Long-term Funding Sources:

- Keystone Community Grant
 - Community Grant
 - TEA-21 NRTFA Grant
 - Local Project Sponsor 20% Match for TEA-21 Grant
 - Local Trail Groups In-Kind Services and Donations
-

Levee Trail

Potential Long-term Costs: \$25,000 - 50,000

Potential Long-term Funding Sources:

- Land and Water Conservation Fund (LWCF) Grant
 - TEA-21 Enhancements Program Grant
 - Local Government Matches of TEA-21 and LWCF Grants
 - Private Sector Contributions from Area Businesses
-

Conservation Lands

FUNDING SCENARIOS

Penobscot Ridge Retreat Area

Initial Development of Retreat

Initial Development Costs:	\$134,000
Potential Funding Sources:	
- Land and Water Conservation Fund Grant	\$12,000
- Luzerne County Match of LWCF	\$12,000
- Private Sector Sponsorship (Naming Potential with Gift) (Match for TEA-21)	\$40,000
- TEA-21 Enhancement Grant (Road Construction)	<u>\$70,000</u>
Total	\$134,000

Remaining Development of Retreat

Potential Long-term Costs:	\$275,000 - 300,000
Potential Funding Sources:	
- Land and Water Conservation Fund Grant	
- DCNR Keystone Community Grant	
- Public Sector Match for Keystone Grant	
- Public Sector Match for LWCF Grant	
- Private Sector Contribution (Naming Opportunity) (Match LWCF)	

Penobscot Ridge Mountain Bike Area

Initial Development of Mountain Bike Area

Initial Development Costs:	\$28,500
Potential Funding Sources:	
- TEA-21 Symms Act	\$10,000
- Local Mountain Bike Club Funding Raising Drive	\$8,500
- Private Sector Sponsorship	\$8,000
- Luzerne County match for TEA-21 Grant	<u>\$2,000</u>
Total	\$28,500

Long-term Development of Mountain Bike Area

Potential Long-term Costs:

\$75,000 - 100,000

Potential Funding Sources:

- Land and Water Conservation Fund Grant (Utilities)
 - Keystone Community Grant
 - Public Sector Match for LWCF and Keystone Grant
 - Mountain Bike Club Contributions
 - Local Private Sector Match for Keystone Grant (Need local sponsor)
-

Tilbury Knob Recreation Area

Potential Long-term Costs:

\$50,000 - 75,000

Potential Funding Sources:

- Keystone Community Grant
 - Land Trust Grant
 - Community Grant
 - Local Project Sponsor 50% Match for Land Trust Grant
 - Land and Water Conservation Fund Grant
 - Local Government 50% Match for LWCF Grant
 - Private Sector Donation (Possible Naming Opportunity)
-

Proposed Parklands

FUNDING SCENARIOS

Ashley Planes Heritage Park

Initial Development of the Heritage Park

Initial Development Costs:	\$65,700
Potential Funding Sources:	
- DCNR Heritage Park Grant	\$30,000
- Ashley Borough Match (DCNR Grant)	\$ 8,000
- Local Historic Preservation Grant	\$ 6,700
- Private Sector Sponsor (Match for TEA-21)	\$ 4,200
- TEA-21 Surface Transportation Program (Road Construction)	<u>\$16,800</u>
Total	\$65,700

Long-term Development of the Heritage Park

Potential Long-term Costs:	\$125,000 - 150,000
Potential Funding Sources:	
- Local Mining Company Contributions	
- DCNR Heritage Grant	
- Historic Preservation Contributions	
- Private Sector Contribution (Naming Opportunity)	
- Local Public Sector Match for Heritage Grant (Requires Local Sponsor)	

Recreation Center

Initial Development of the Center

Initial Development Costs:	\$1,016,400
Potential Funding Sources:	
- Keystone Community Grant	\$150,000
- Land and Water Conservation Fund Grant	\$50,000
- TEA-21 Surface Transportation Program (Road Construction)	\$298,000
- HUD Community Block Development Grant	\$100,000
- Private Sector Contributions (Match for Keystone Grant)	\$40,000
- Local Public Sector Match for LWCF/HUD/TEA-21	\$214,400
- Local Park and Recreation Funds for Ballfield Construction	<u>\$164,000</u>
Total	\$1,016,400

Long-term Development of Recreation Center

Potential Long-term Costs:

\$2,500,000 - 2,750,000

Potential Funding Sources:

- Public Sector Bonds
- Land and Water Conservation Fund Grant
- Keystone Community Grant
- Private Sector Contribution (Naming Opportunity)
- Private Sector Contributions

Newport Motor Sports Park

Potential Long-term Costs:

\$ 2,100,000 - 2,200,000

Potential Funding Sources:

- Private Motor Sports Park Developer/Concessionaire
- TEA-21 Enhancements Program Grant
- TEA-21 Surface Transportation Program Grant (Road Construction)
- TEA-21 NRFTA Grant (Motorized Trails)
- Local Government and/or Private Sector 20% Match for TEA-21 Grants
- Local Motorized Trail Organizations Donations/Sponsorship

Susquehanna River Park

Potential Long-term Costs:

\$ 1,200,000 - 1,300,000

Potential Funding Sources:

- Keystone Community Grant
- Community Grant
- Land and Water Conservation Fund Grant
- Local Government 20% Match for LWCF Grant
- Urban and Community Forestry Grants
- TEA-21 Surface Transportation Program Grant (Road Construction)
- Local Government 20% Match for TEA-21 Grant
- HUD Community Block Grant Program
- Private Sector Contributions/Donations

Huber Breaker Park

Potential Long-term Costs:

\$ 1,400,000 - 1,500,000

Potential Funding Sources:

- HUD Community Block Grant
- Keystone Community Grant
- Heritage Park Grant
- Private Sector Developer/Concessionaire
- Historical Society Donations/Contributions
- Private Citizen Gifts/Donations

Mocanaqua Outdoor Center

Potential Long-term Costs:

\$ 1,800,000 - 1,900,000

Potential Funding Sources:

- Keystone Community Grant
- HUD Community Block Grant Program
- Local Project Sponsor for HUD Grant
- Land and Water Conservation Fund Grant
- Local Project Sponsor for 50% Match of LWCF Grant
- Private Developer/Concessionaire

Plymouth Residential Golf Community

Potential Long-term Costs:

\$ 1,500,000 - 1,600,000

Potential Funding Sources:

- Private Sector Developer/Concessionaire

3.3 Open Space Management

The success of the Lower Wyoming Valley Open Space Network depends on the ability of the Federal, State, and local governments as well as local businesses, communities, residents, and nonprofit groups to organize a management structure to oversee funding, acquisition, construction, and management of the open space network.

The Lower Wyoming Valley Open Space Master Plan incorporates both Earth Conservancy property and non-Earth Conservancy property throughout the Wyoming Valley. Most of the proposed large scale components, such as the Recreation Center, are located on Earth Conservancy property; however, some of the community parks and many of the trails are not. The Earth Conservancy is committed to economic and recreational development throughout the valley; however, Earth Conservancy as an organization is not intended to own and manage an open space network. Open space program facilities and trails are envisioned to be owned and managed by other organizations as part of a network. In order for the Lower Wyoming Valley Open Space Network to be successful, a management organization should be established to lead the implementation effort to acquire, fund, implement, and manage the open space components.

Nationally, successful open space systems have emerged through a partnership among public and private sector organizations, which typically establish an operating structure to take advantage of resources available within a community. These public-private partnerships enable open space systems to be developed and managed in a cost-effective manner, creating ownership and investment throughout the community. For the Lower Wyoming Valley Open Space Network, it is recommended that three different public-private partnership models be considered for the lead implementing organization. These are:

- The Wyoming Valley Open Space Alliance
- The Wyoming Valley Open Space Commission
- The Wyoming Valley Open Space Partnership, Inc.

Each of these types of public-private partnerships is described in this section. One of these models is necessary for the long-term management and operation of the Lower Wyoming Valley Open Space Network.

The Wyoming Valley Open Space Alliance



The Wyoming Valley Open Space Alliance would be a loosely structured group of existing public and private sector groups who are collectively committed to the goals and plan of action defined by this master plan.

The Wyoming Valley Open Space Alliance

The *Wyoming Valley Open Space Alliance* would be a loosely structured group of existing public and private sector groups who are collectively committed to the goals and plan of action defined by this master plan. This group would work to share resources (money, labor, materials, products, etc.) and oversee the implementation of plan objectives, including land acquisition, trail facility development, management and maintenance. Under this ownership and operations scenario, no formal structure is established and all members of the alliance must agree to an organizational framework that allows activities to take place. Members would simply perform duties and functions that are in keeping with their own individual missions and daily operating objectives. For example, a local park and recreation department might be able to expand its service area to include lands that are designated as trails, while the Wilkes-Barre Chamber of Business and Industry could host a fund raising event. This structure may be the most realistic model for beginning the short-term actions defined in this master plan. This model may eventually mature and transform into one of the subsequent models described below. It would be necessary for this organization to meet monthly for at least the first two years of its existence. Staff assistance will need

to come from all organizations involved, however, the Earth Conservancy may be able to take a lead in coordinating and hosting meetings and distributing minutes of meetings to all members. This organizational structure should have a limited life span of no more than five operational years. After this period of existence, it would be desirable to transition this model into one of the two subsequent models.

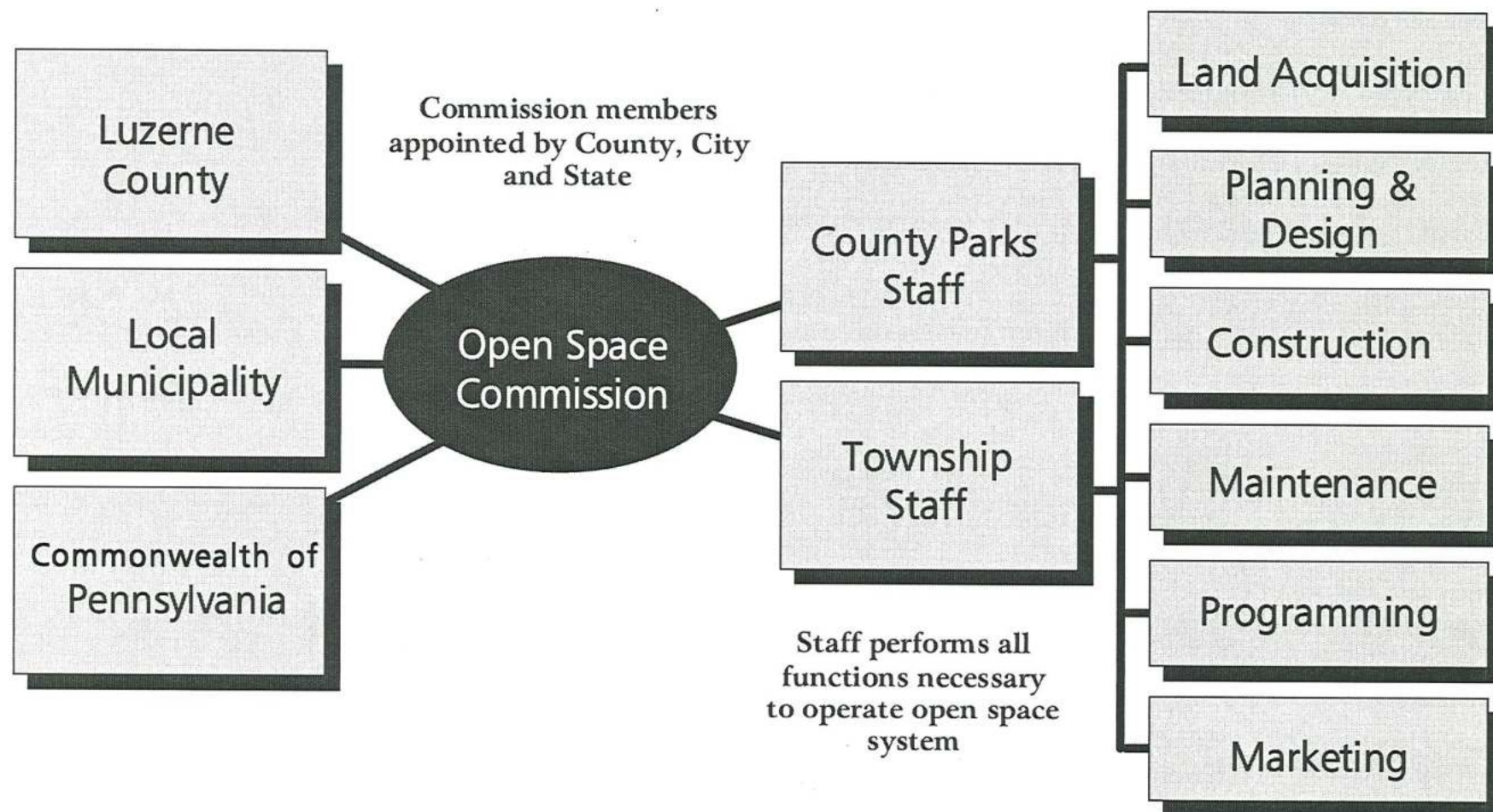
Advantages of this Model

- Ease of early start-up and operation
- No independent staff required
- Low overhead costs
- Use of existing resource base
- Quick to action when issues of ownership and finance have been resolved

Disadvantages of this Model

- Less than part-time devotion to the development of Open Space Network
- Little or no collective authority
- Lack of clear leadership
- May prove difficult to count on a loose alliance to carry out objectives

The Wyoming Valley Open Space Commission



The Wyoming Valley Open Space Commission

The *Wyoming Valley Open Space Commission* would consist of government appointed members and would serve largely as a steward of the Open Space Network and champion for this plan. Members could be appointed by the Commonwealth of Pennsylvania, Luzerne County Board of Commissioners, and local municipalities. Members would serve limited terms and could organize themselves into subcommittees for the purpose of carrying out the objectives defined by this master plan. The Commission would advise the state, county and local municipalities on the best methods for implementing the short and long-term actions. The Commission would also help to raise money, market and promote the Open Space Network and assist in project development in any manner that is deemed appropriate by the government agencies.

The Commission would need to organize itself and elect a chair and vice-chair. This could be accomplished among the members of the Commission, or one of the appointing agencies may choose to determine the position of chair. The Commission would be assisted in its duties by staff from the Luzerne County Parks and Recreation Department and staff from local mu-

nicipalities. The staff would be charged with carrying out the physical recommendations of the Commission as related to land acquisition, planning, design, construction, maintenance, management and programming. Staff should also coordinate the meetings of the Commission and take minutes of the Commission meetings. This Commission should have a limited term of existence of no less than 5 years and no more than 10 years. Meetings of the Commission should occur monthly during the first two years, and then could meet either bimonthly or quarterly, depending on the amount of development activity that is under way. This model offers a good early starting point for implementation of the Open Space Network. It requires buy-in and coordination from state and local government agencies.

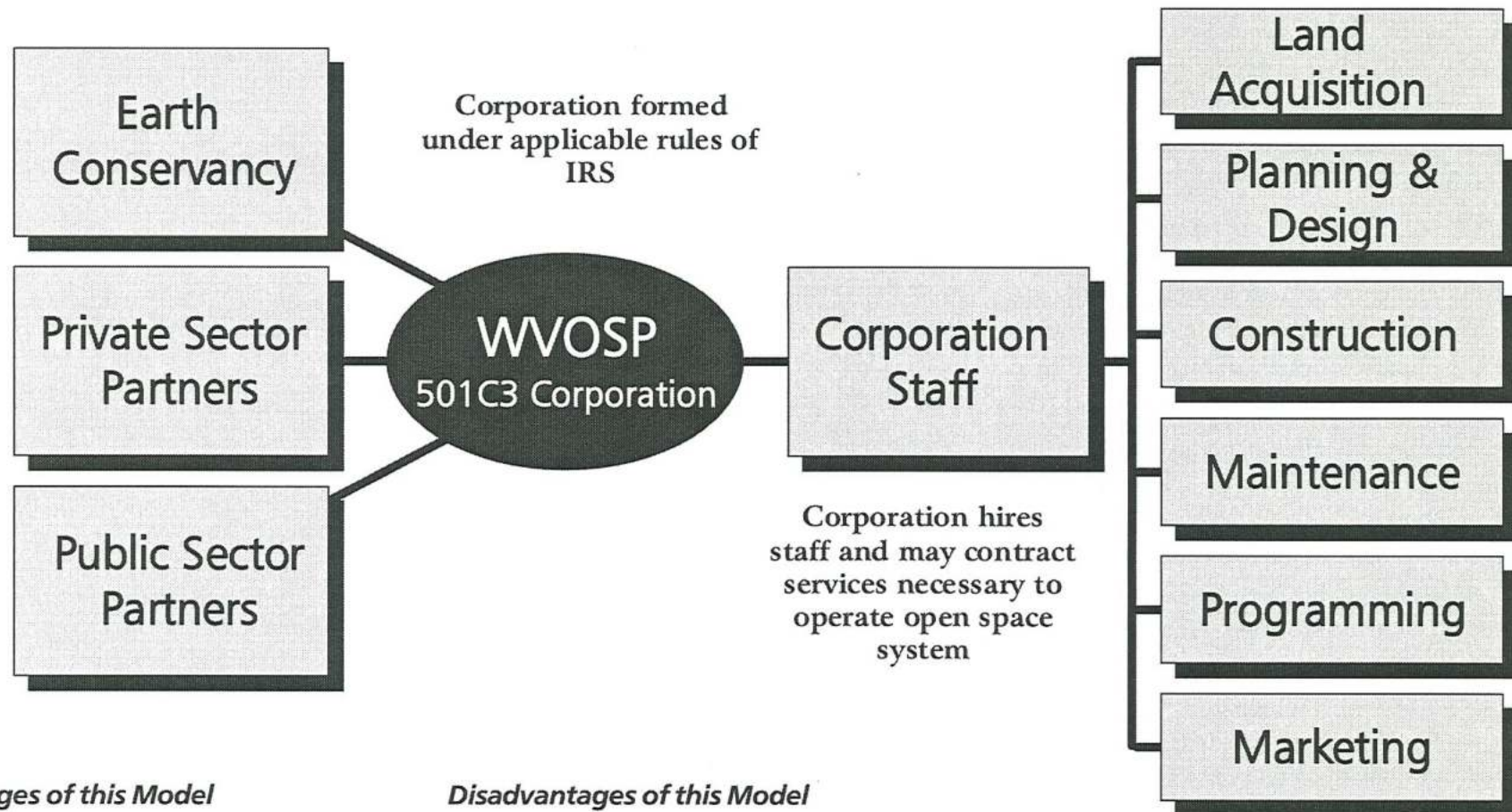
Advantages of this Model

- A more formal structure for operating Valley-wide network
- Makes use of existing municipal structures and staff resources
- Moderate overhead costs

Disadvantages of this Model

- Requires new entity to be formed
- Part-time devotion to the development of Open Space Network
- Requires coordination and cooperation among governments to appoint Commission
- Use of existing municipal staff resources
- Slow to action

The Wyoming Valley Open Space Partnership



Advantages of this Model

- Full-time operation and development of the Open Space Network
- Independent operating structure for development of Valley-wide network
- Fastest to action and driven to succeed in the "marketplace"
- Not a burden on local governments and tax payers

Disadvantages of this Model

- Requires establishment of a new entity
- Could be perceived as a competitor with the public sector
- Highest overhead costs
- Would take time to establish independent 501(c)(3) status with IRS

The Wyoming Valley Open Space Partnership

The *Wyoming Valley Open Space Partnership, Inc.* would be created as a 501(c)(3) nonprofit organization charged with implementing the recommendations of this master plan. The partnership would be comprised of public agencies, private organizations and individuals who would work together to pool talent, resources, goals and implementation strategies to create the Lower Wyoming Valley Open Space Network. The Partnership would:

- Serve as the master developer of the primary open space system;
- Raise the necessary capital and maintenance funding for the system;
- Work to acquire land for the open space system;
- Build, construct, and develop the primary open space and trail corridors; and
- Assist in the development of neighborhood open space.

The Wyoming Valley Open Space Partnership would be managed by a Board of Directors, which could include representatives from the Earth Conservancy, the Wilkes-Barre Chamber of Business and Industry, Luzerne County, local municipalities, user groups, private organizations and others. Membership on the board

would be on a rotational basis so that other organizations and communities can become board members in the future.

The principal responsibilities of the Board and its members would be to define the mission and purpose of the organization; to employ an executive director and hire consultants and staff as needed, to participate in the planning, design and development of open space corridors; and to lend individual as well as collective support to full development of the open space system. The organization would need to adopt a set of bylaws to govern its operations.

The Wyoming Valley Open Space Partnership would be responsible for raising capital for the development and management of the open space system. Because of its nonprofit status, the organization would be provided with the latitude to raise funds from both public and private sources. Once preliminary monies are in place, the partnership would first work to temporarily acquire land for the open space system that would eventually be conveyed to local communities within the Valley. It would also work in partnership with the local communities and private sector groups to manage and maintain public and private open space corridors. This model may eventually be the preferred owner-

ship and operations structure for the Open Space Network as it offers the most independent method for developing and managing the resources defined by this master plan. This organization would operate on a daily basis with full-time staff to serve as stewards of this master plan. The partnership would need to employ its own staff and may eventually have to find its own physical location. It would make sense for the organization to be housed in the Earth Conservancy offices during its formative years. This organization would need to raise funds to support its operations. Some of these funds could come from local government contributions, private foundations and individual contributions. It may take a few years of leadership under one of the other models before this model can be fully realized.

Open Space Partners

Each of the three open space management models relies on cooperation and partnership between public and private organizations. These organizations differ greatly in financial, political, and manpower resources, as well as in their goals and objectives. Therefore, the responsibility of each organization within the Open Space Network would reflect the resources, knowledge, and strengths of the individual organization. Since the network encompasses many types of open space, including a trails network, conservation lands, and proposed parklands, it is expected that some organizations would participate in the overall management of the open space system, while others would become open space partners for specific open space components or geographic areas. These partners could either own open space land or contribute to the implementation, maintenance or management of it.

The following sections describe potential ownership alternatives for each of the open space components and describe potential open space partner organizations, their resources, and how they may contribute to the Open Space Network.

Ownership Alternatives

Trails Network

The regional hiking and mountain biking trails, including the Escarpment Trail, Penobscot Ridge Trail and Wilkes-Barre Mountain Trail, and the cross valley trails are the most complex trails planned within the Lower Wyoming Valley Open Space Master Plan. They encompass 30 miles of trail along mountain ridges on either side of the Valley and 18 miles of trail crossing the width of the valley. The majority of this land remains in large tracts of undeveloped land, including Earth Conservancy property; however, portions have been subdivided. The land around these trails should be acquired and protected from development by either Luzerne County or groups, such as a land conservation organization, a nonprofit partnership or trails organization, or even local municipalities. If land cannot be acquired, trail easements could be obtained with agreement of individual landowners to ensure the continuity of the trails.

The extension of the existing Levee Trail should be acquired by Luzerne County in partnership with the City of Nanticoke and Hanover Township. The Wyoming Valley Scenic Drive should be developed under the jurisdiction of Luzerne County.

Conservation Lands

Conservation program areas, such as the Penobscot Ridge Mountain Bike Area, the Penobscot Ridge Retreat Area and the Tilbury Knob Recreation Area, could all be owned by either Luzerne County or a land conservation organization. However, other ownership alternatives could also protect these areas: portions of the Mountain Bike Area could be owned by a nonprofit trails organization or be protected under private ownership with trail easements; the Retreat Area could be owned by a nonprofit partnership, such as the Wyoming Valley Open Space Partnership; and the Tilbury Knob Recreation Area could be acquired by the Pennsylvania Bureau of State Forests and managed as part of the Lackawanna State Forest to the north.

Other conservation lands identified in the Lower Wyoming Valley Open Space Master Plan should be owned and protected in perpetuity by Luzerne County, a land conservation organization, or the State Game Commission. Open space lands, identified as undevelopable or as buffers to trails, should convey with the surrounding parcels to private ownership with a conservation easement prohibiting development in perpetuity.

Proposed Parklands

The proposed parklands planned for the Lower Wyoming Valley Open Space Master Plan provide a variety of recreational opportunities to local communities. The large variety of recreational types makes it unlikely that any single agency would own all of them; in fact, each of these unique resources has the potential to be owned by several different organizations.

The following table lists potential owners for each trail, conservation land, and proposed parkland in the Lower Wyoming Valley Open Space Network. These organizations are already involved in open space management and are logical candidates for ownership.

Trails Network

POTENTIAL OWNERS

Escarpment Trail, Penobscot Ridge Trail and Wilkes-Barre Mountain Trail

Luzerne County

Land Conservation Organization

Nonprofit Partnership

Nonprofit Trails Organization

Local Municipalities

Private Ownership with Trail Easements

Conyngam, Newport, and Hanover Cross Valley Trails

Luzerne County

Land Conservation Organization

Nonprofit Partnership

Nonprofit Trails Organization

Local Municipalities

Private Ownership with Trail Easements

Levee Trail

Luzerne County

Local Municipalities

Wyoming Valley Scenic Drive

Luzerne County

Conservation Lands

POTENTIAL OWNERS

Penobscot Ridge Mountain Bike Area

Luzerne County

Land Conservation Organization

Nonprofit Trails Organization

Private Ownership with Trail Easements

Penobscot Ridge Retreat Area

Luzerne County

Land Conservation Organization

Nonprofit Partnership

Tilbury Knob Recreation Area

Commonwealth of Pennsylvania Bureau of State Forests

Luzerne County

Land Conservation Organization

Conservation Lands

Luzerne County

Land Conservation Organization

State Game Commission

Commonwealth of Pennsylvania Bureau of State Forests

Open Space Lands

Private Ownership with Conservation Easements

Proposed Parklands

POTENTIAL OWNERS

Ashley Planes Heritage Park

Luzerne County

Nonprofit Partnership

Nonprofit Trails Organization

Local Municipalities

Recreation Center

Luzerne County

Local Municipalities

Mocanaqua Outdoor Center

Private Ownership

Nonprofit Partnership

Luzerne County

Newport Motor Sports Park

Private Ownership

Luzerne County

Nonprofit Partnership

Private Ownership with Trail Easement (Central Valley ATV Trail)

Nonprofit Trails Organization (Central Valley ATV Trail)

Local Municipalities (Central Valley ATV Trail)

Susquehanna River Park

City of Nanticoke

Luzerne County

Nonprofit Partnership

Huber Breaker Park

Commonwealth of Pennsylvania Bureau of State Parks

Luzerne County

Nonprofit Partnership

Plymouth Residential Golf Community

Private Ownership (Residential Development)

Luzerne County (Recreational Development)

Local Municipality (Recreational Development)

Partner Organizations
Commonwealth of Pennsylvania
Pennsylvania Department of Conservation and Natural Resources
Bureau of State Parks

The DCNR Bureau of State Parks manages 116 parks throughout Pennsylvania. The Bureau maintains facilities, manages concessionaires, and ensures visitor safety while preserving the natural, scenic, aesthetic, and historical values of each park. The bureau aims to provide quality recreational experiences and education programs for all ages. Three State Parks are located in Luzerne County: Francis Slocum State Park, Nescopeck State Park, and Ricketts Glen State Park. These parks provide a range of recreational opportunities while conserving undeveloped natural areas.

The Bureau of State Parks could potentially own and operate intense proposed plan components, such as the Newport Motor Sports Park or the Mocanaqua Outdoor Center, as state facilities or these facilities could be leased to concessionaires. DCNR has indicated interest in building ATV trails in Luzerne County; the Newport Motor Sports Park and the associated ATV trails would provide the state such an opportu-

nity. DCNR could also acquire conservation lands along the Penobscot Ridge, the Escarpment Ridge, or Wilkes-Barre Mountain in order to provide passive, non-motorized trail recreation opportunities in the area.

Facilities with significant historic value, such as the proposed Huber Breaker Park or the Ashley Planes Heritage Park could qualify for the State Heritage Park Program. This program identifies places with significant natural, recreational, cultural and historical resources, and which can improve the local economies and the lives of their residents through investment in and interpretation of their heritage. Designation as a State Heritage Park may make these facilities more attractive to the State for purchase.

Bureau of State Forests

The Bureau of State Forests manages 20 forest districts throughout Pennsylvania. Two non-contiguous parcels of the Lackawanna State Forest are located within the County, one lying north of Nanticoke across the Susquehanna and another situated in the eastern portion of the County. These forests are managed primarily for long-term timber production, although they are open for hunting and other recreational activities. The proposed Tilbury Knob Recreation

Area is located adjacent to the Lackawanna State Forest, north of Nanticoke. This parcel could be incorporated into the Lackawanna State Forest and owned and managed by the Bureau of State Forests.

Bureau of Recreation and Conservation

Through its Bureau of Recreation and Conservation, DCNR gives grants to local governments and nonprofit organizations and provides technical assistance to communities to develop recreation facilities, preserve open space, enhance river resources, and develop rail trails. The Bureau of Recreation and Conservation can help implement the open space network through technical assistance and grant programs.

Pennsylvania Game Commission

Much of the open space in Luzerne County is owned by the Pennsylvania Game Commission and managed as State Game Lands. These lands are managed specifically for hunting purposes, but are also used for hiking and other activities. Some Earth Conservancy parcels designated as conservation land could be owned and managed as State Game Lands. Motorized vehicle use is not permitted on these properties.

Pennsylvania Conservation Corps

The Pennsylvania Conservation Corps, administered by the Department of Labor and Industry, provides job skills and motivation for economically disadvantaged adults between the ages of 18 and 25. Since 1984, the Corps has undertaken more than 700 projects throughout Pennsylvania for state and local government and community-based, nonprofit organizations. The Pennsylvania Conservation Corps could provide significant help in constructing open space facilities and trails, as well as assisting in the removal of dumped garbage, appliances, and vehicles strewn on otherwise pristine open spaces throughout the Wyoming Valley.

Local Governments

Luzerne County

Luzerne County currently owns and manages three county park facilities: Moon Lake County Park, a 600-acre park with pool facilities, boating, camping and picnic areas, a trailer camp and a fitness trail; the Tubs Nature Area, a 590-acre park known for its numerous glacial pools; and the Forty Fort Recreation Center located north of Wilkes-Barre on the Susquehanna River. Despite the large size and varied recreational opportunities offered by these parks, Luzerne County residents are underserved by them. Many residents live too far from the facilities to use them regularly and many of the facilities are not large enough to accommodate all users.

The County should take a strong leadership role in the acquisition, implementation, and management of the Lower Wyoming Valley Open Space Network. Through owning and managing facilities, such as the proposed Newport Motor Sports Park or the Ashley Planes Heritage Park, the County could dramatically improve its recreational resources. As a County government, the County Department of Parks and Recreation can receive assistance and funding from state and federal agencies for a wide variety of open space programs. The County

can also support other open space initiatives by acting as conduits and advisers to municipalities. In terms of local government agencies, Luzerne County is in the strongest position to acquire and implement key components of the Lower Wyoming Valley Open Space Master Plan.

Municipalities

Many of the municipalities within the Wyoming Valley are small and have limited resources. With an aged population, lack of redevelopment and subsequently smaller tax recipients, they have little capacity to develop large scale open space programs. However, municipalities are directly responsible for land management, local roads, and parks, and they have the advantage of knowing resident's needs and the best way to serve those needs. Local municipalities could own and manage the smaller parks, such as the Susquehanna River Park, with assistance from outside funding. They could also work together as a cooperative to own and manage a larger community-oriented facility such as the proposed Recreation Center. Finally, local municipalities could own the trail easements necessary for the hiking, biking, and ATV trails proposed throughout the Valley.

Private Foundations, Nonprofits, and Volunteer Organizations

Land Conservation Organizations

Land conservation organizations, also known as land trusts or land conservancies, could own and manage critical conservation lands along the Penobscot Ridge and on the Escarpment Ridge. Conservancies, such as the Wildlands Conservancy and the Nature Conservancy, could monitor and protect these lands, as well as guarantee their designation as conservation land in perpetuity. In addition, these organizations are experts in natural resource management, recreation and many land protection methods, and could provide technical assistance in the development of the open space network. Finally, these organizations are able to generate volunteer services and donations that could be used to maintain conservation lands.

Nonprofit 501(c)(3) Organizations

Nonprofit 501(c)(3) organizations can include civic groups, foundations, nonprofit organizations, universities, quasi-public agencies, and other groups. 501(3)(c)s often have more success acquiring and implementing open space systems due to their motivated commitment, greater flexibility, in-depth knowledge of local issues and ability to generate volunteer services. These efforts can complement or reinforce gov-

ernment agencies efforts to implement a plan or they can take the leadership role and tap into government programs for support as necessary. As described in Section 3.1, the formation of the Wyoming Valley Open Space Partnership would be a good way to ensure the implementation process. This organization could oversee all open space efforts and help coordinate programs, funding, and volunteers.

Greater Wilkes-Barre Chamber of Business and Industry

The Greater Wilkes-Barre Chamber of Business and Industry is a local nonprofit organization that is dedicated to promoting the economic well-being of the City of Wilkes-Barre and outlying areas. The Chamber has fully supported the preparation of this Master Plan, and could continue its support of the recommendations of this plan in the following ways. The Chamber could assist the selected lead organization with lobbying the Pennsylvania legislature for funding and technical support of the Open Space Network, including the establishment of both non-motorized and motorized trails throughout the Wyoming Valley. The Chamber could assist the lead organization in obtaining grants from private foundations and public agencies. The Chamber could also encourage its members to support the development and operation of the open space network.

Anthracite Scenic Trails Association

The Anthracite Scenic Trails Association (ASTA) is a nonprofit group of volunteers who promote the acquisition and preservation of abandoned and inactive railroad rights-of-way along the Susquehanna River. These rights-of-way are developed as linear parks that promote alternate forms of transportation and form a trail network. Currently, ASTA is focused on the Back Mountain Trail from Luzerne Borough to Rickett's Glen State Park; however, their long range goal is to establish bikeways and walkways throughout Luzerne County on old railroad beds and levee trails. ASTA could help acquire, implement and manage dozens of rail-trails identified in the Lower Wyoming Valley Open Space Master Plan.

Delaware & Lehigh Canal National Heritage Corridor Commission

As described in Section 1.1, Project Background, the Delaware & Lehigh National Heritage Corridor Commission is currently in the process of establishing the Delaware & Lehigh National Heritage Corridor from Luzerne County to Bucks County in Southeastern Pennsylvania. This Heritage Corridor encompasses the entire Wyoming Valley within the Corridor's "Wyoming Reach." Designation of portions of the Lower Wyoming Valley Open Space Master Plan as part of the corridor will help target

partners and funding towards the development of the Lower Wyoming Valley Open Space Network. In addition, the Delaware & Lehigh National Heritage Corridor Commission is committed to assist the implementation of projects throughout the corridor. They could help facilitate communication between partners to form networks and help coordinate partner programs, financial resources, and public outreach. The Delaware & Lehigh Commission is the greatest private resource for the implementation of the Lower Wyoming Valley Open Space Master Plan within the region. Its efforts on behalf of the partners and the system could facilitate open space development and forge new partnerships.

Volunteer Groups

Community volunteers may help with trail construction and management. Potential sources of volunteer labor in the Wyoming Valley could include local bicyclists, trail groups, historical groups, the Boy Scouts, the Girl Scouts, and civic clubs, such as Kiwanis, Rotary, and Lions Clubs.

A manual for open space volunteers could be developed to guide and regulate volunteer work. The manual would include a description of appropriate volunteer efforts, request forms, waiver and release forms, and a completion form

on which volunteers are asked to summarize their accomplishments. Written guidelines would also be provided for volunteer work in floodplains.

To better organize volunteer activity, an "Adopt-a-Spot" program could be developed. Participants who adopt a segment of trail would be responsible for periodic trash pickup, but could also install landscaping, prune trail-side vegetation, develop wildlife enhancement projects, and install site amenities. "Adopt-a-Spot" volunteers would be allowed to display their names on a small sign along the adopted section of open space.

Academic Institutions

Academic institutions, such as Wilkes University and Kings College, were instrumental in the formation of the Earth Conservancy and continue to be involved with it. As community leaders, these institutions are heavily invested in the quality of life of the area. Students and faculty contribute to both the economics of the region and its environmental quality. Faculty and departments lead scientific and other studies of the area and students often assist in environmental and social volunteer efforts. The resources of these academic institutions should be tapped in the development of the Lower Wyoming Valley Open Space Master Plan.

Both faculty and students could help implement and maintain the trails through volunteer groups and faculty could help design and monitor environmental reclamation and user impacts through studies and classes.

Private Developers

The Lower Wyoming Valley Open Space Master Plan includes components, such as the Mocanaqua Outdoor Center, the Newport Motor Sports Park, and the Plymouth Residential Golf Community, that could generate significant tourism to the area and stimulate the local economy. These components could be owned, developed, and managed by private investors interested in these recreation-oriented business opportunities.

Private Ownership with Land Easement

Many of the trails included within the Lower Wyoming Valley Open Space Master Plan cross properties that are not owned by the Earth Conservancy. In order to ensure a contiguous trail corridor, access across these properties is imperative. Access to the trail corridors can be approached in two ways: first, portions of the trail corridor can be purchased parcel by parcel in order to obtain ownership of the trail; second, trail easements can be obtained to allow for access without ownership.

Earth Conservancy

As discussed earlier, the Earth Conservancy as an organization is not intended to be a steward and manager of open spaces, trails, or recreation areas. However, as a temporary measure, the Earth Conservancy could retain ownership of open space parcels and lease property to partners who would manage open space facilities. These parcels would not be protected in perpetuity; they would only be protected until the dissolution of the Earth Conservancy. Therefore, the Earth Conservancy is not considered a viable long term land owner for the Lower Wyoming Valley Open Space Network.

Off-Site Partners

Easements

Easements enable land to be acquired through a less than full interest in a parcel of land in order to protect a valuable resource. They establish a legally binding contract that describes a mutual understanding of the specific use, treatment and protection that these lands will receive. Property owners who grant easements retain all rights to the property except those which have been granted by the easement. The property owner is responsible for all taxes associated with the property, less the value of the easement granted. Easements are generally restricted to certain portions of property, although in certain cases an easement can be applied to an entire parcel of land. Easements are transferable through title transactions, thus the easement remains in effect in perpetuity. The following types of easements are often associated with open space development:

Conservation Easements

Conservation easements generally establish permanent limits on the use and development of land in order to protect the natural resources of that land. Dedicated conservation easements can qualify for both federal income tax deductions and state tax credits. Tax deductions are allowed by the Federal government for dona-

tions of certain conservation easements. The donations may reduce the donor's taxable income.

Preservation Easements

Preservation easements are intended to protect the historical integrity of a structure or important elements of the landscape by sound management practices. Preservation easements may qualify for the same federal income tax deductions and state tax credits as conservation easements.

Public Access Easements

Right of public access easements provide the general public with the right to access and use a specific parcel of property. Both conservation easements and preservation easements may contain clauses for the right of public access and still be eligible for tax incentives.

Agreements

Management Agreements

Management Agreements can be established between the county, local communities, nonprofits, public or private organizations and landowners who wish to participate in the development of the Open Space Network. The objective of these agreements is to define areas of maintenance and management that are compatible with existing land management activi-

ties, especially where trails intersect with public or private properties and/or rights-of-way. Management agreements spell out specific duties, responsibilities and activities of local communities, nonprofits, government agencies, and public or private organizations that wish to assist with management activities. Generally, management agreements can be amended or terminated at any time by either party with 30 days written notice.

Adopt-a-Greenway Program Agreements

An Adopt-a-Greenway Program should be established to encourage community groups, user groups, families, businesses, school groups, civic clubs and other organizations to join in managing the open space system. The lead organization will need to work closely with the local communities to ensure that all Adopt-a-Greenway Program groups manage and maintain trails in a manner that is consistent with other land use objectives. Written agreements should be developed for each Adopt-a-Greenway entity and a current record of this agreement should be kept on file. Adopt-a-Greenway entities will be assigned a specific section of the Open Space Network, defined by location or milepost. The activities of each organization should be monitored by the lead organization or its designee.

Cross Access Agreements

The lead organization and local communities can use cross access agreements to permit private landowners that have property on both sides of an open space corridor access to use of the corridor in order to facilitate operation and land use activities.

Cross access agreements are typically based on case law of the United States and specific experiences from other trail systems throughout the United States. Adjacent landowners generally have the right of access at any time. However, this access cannot block the right-of-way for trail users, other than for temporary measures such as permitting livestock to cross, or transporting equipment. Adjacent landowners are responsible for acts or omissions which would cause injury to a third party using the trail. If a landowner must move products, materials, livestock or equipment across the trail on a regular basis, appropriate signage should be installed to warn users of the trail to yield for such activities.

Crossing of abandoned or active rail lines, utility corridors and/or roads and highways will require the execution of agreements with companies, local, state or federal agencies and organizations that own the rights-of-way. These crossings must provide clearly controlled, recognized,

and defined intersections in which the user will be warned of the location. In accordance with the American Association of State Highway Transportation Officials (AASHTO) and the Manual on Uniform Traffic Control Devices (MUTCD), the crossing should be signed with appropriate regulatory, warning and information signs. In cases of large highways, these intersections may be above or below grade to reduce the risk of accidents.

Operating, maintaining and managing the Lower Wyoming Valley Open Space Network will require a coordinated effort among local communities, open space partners and private sector organizations and individuals. The following text defines the key aspects of open space system management, including multiple use management, trail signage, trail user rules and regulations, facility and trail maintenance, safety and security, and risk management and liability.

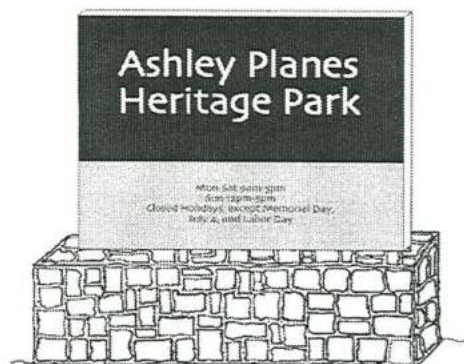
Multiple Use Management

Conflict between different types of trail users is one of the most important concerns in terms of trail development. As more trail facilities are created throughout the nation, more users are gaining access to a variety of trail resources. However, demand for trail resources is currently higher than the amount of on-the-ground resource available. Additionally, several user groups have grown exponentially within the past decade, including mountain biking, rollerblading and all-terrain motorized vehicles. The increase in trail usage is creating conflicts among users for the limited publicly managed rights-of-way available for trails.

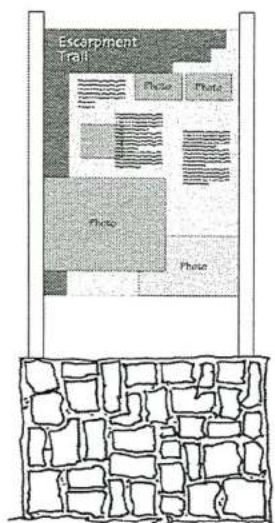
The National Recreational Trails Advisory Committee of the US Department of Transportation commissioned a study of the conflicts among users in 1994. The result of this study was a report entitled "Conflicts On Multiple Use Trails: A Synthesis of the Literature and State of the Practice." This report, the first of its kind in the nation, defines the problems associated with multi-use conflict and the solutions that are currently being implemented to resolve the problems. Listed below is a summary of the top twelve findings published in the report.

1. *Recognize Conflict as Goal Interference* - do not treat conflict as inherent incompatibility among different trail activities, but as goal interference attributed to another's behavior.
2. *Provide Adequate Trail Opportunities* - offer adequate trail mileage and provide opportunities for a variety of trail experiences. This will help reduce congestion and allow users to choose the conditions that are best suited to the experiences they desire.
3. *Minimize Number of Contacts in Problem Areas* - Each contact among trail users (as well as contact with evidence of others) has the potential to result in conflict. So, as a general rule, reduce the number of user contacts whenever possible, especially in congested areas and at trailheads. Disperse use and provide separate trails where necessary.

3.4 Open Space Operations & Maintenance



Major Entry Sign



Information Sign

4. *Involve Users as Early as Possible* - Identify the present and likely future users of each trail and involve them in the planning and design process to avoid and resolve conflicts before they occur.
5. *Understand User Needs* - Determine the motivations, preferred experiences, typical behavior, ideal setting, and other needs of the future users of each trail to anticipate and manage conflicts.
6. *Identify the Actual Sources of Conflict* - Help users to identify the specific causes of any conflicts they are experiencing. In other words, get beyond emotions and stereotypes as quickly as possible, and get to the root of problems that exist.
7. *Work with Affected Users* - Work with all parties involved to reach mutually agreeable solutions to specific issues. Users who are not involved as part of the solution are more likely to be part of the problem now and in the future.
8. *Promote Trail Etiquette* - Minimize the possibility that any particular trail contact will result in conflict by actively and aggressively promoting responsible trail behavior through interesting and understandable educational materials (Roggenbuck and Ham 1986).
9. *Encourage Positive Interaction Among Different Users* - Trail users are usually not as different from one another as they believe. Providing positive interactions both on and off the trail will help break down barriers and stereotypes, and build understanding, good will, and cooperation. This can be accomplished through a variety of strategies such as sponsoring "user swaps," joint trail-building or maintenance projects, filming trail-sharing videos, and forming "trail advisory" councils.
10. *Favor "Light-Handed Management"* - Use the least invasive approach that will achieve area objectives to provide the user freedom of choice and protect the natural environment.
11. *Plan and Act Locally* - Whenever possible, address issues regarding multiple-use trails at the local level. This allows greater sensitivity to local needs and provides better flexibility for addressing difficult issues on a case-by-case basis. Local action also facilitates involvement of the people who will be most affected by the decisions and most able to assist in their successful implementation.
12. *Monitor Progress* - Monitor the ongoing effectiveness of the decisions made and programs implemented. Conscious, deliberate monitoring is the only way to determine if conflicts are indeed being reduced and what changes in programs might be needed.

Trail Signage

As described in Section 3.1 as a first step implementation measure, one of the most important facility developments required for the Lower Wyoming Valley Open Space Network is a comprehensive signage system. Signage provides identity, important information about the trail, direction of travel, and educational information. The signage system for the Lower Wyoming Valley Open Space Network should be similar in character and form to the system used by the D&L Canal National Heritage Corridor. Primary trail signs will include:

- Entry Signs
- Information Signs
- Interpretive Signs
- Directional Signs
- Bollards

Trail signs will be manufactured out of stone and wood, and may also contain aluminum faceplates. All signs will be constructed using a vernacular design that matches the character and heritage of the Wyoming Valley.

Entry Signs

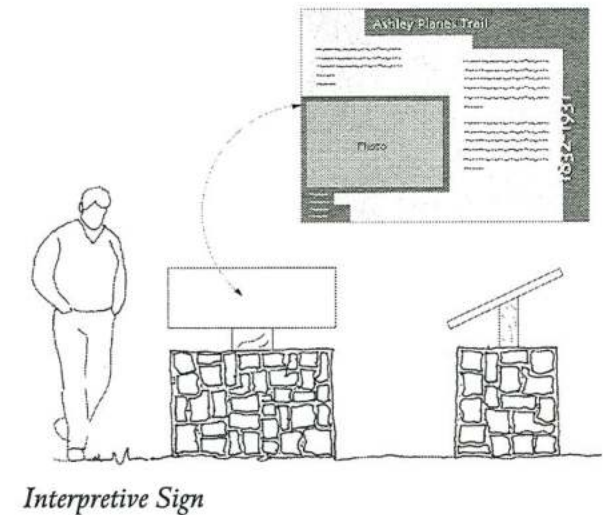
Entry signs will be provided at major and minor entry points to the major trail segments. Each entry sign will feature a context map of the trail system with its current position marked. Rules governing trail use will be posted for both motorized and non-motorized users. A list of prohibited uses will also be provided. Finally, a rating will be posted for each section of the trail that defines the degree of accessibility and difficulty for segments, based on user type.

Information Signs

Each information sign will be unique to specific locations, providing important information about a particular site or segment of trail. Information signs can also be used to provide updated information about a particular segment of trail. They are typically installed at trail heads, intersecting trails, overlook areas, rest stops, picnic areas and other gathering places.

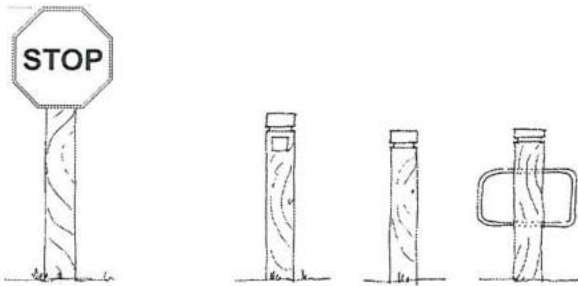
Interpretive Signs

The Open Space Network will provide many opportunities for interpretation of the surrounding landscape. Interpretive signs can be installed at key points along the trail to provide valuable and interesting information to trail users. Typically, these signs will be found at overlooks and important landscape features, such as aban-





Directional Sign



Regulatory Sign, Bollards, and Bike Rack

doned mining areas and areas where unique environmental resources are located.

Directional Signs

Directional signs offer important information to trail users as to the location of, and distance or travel time to, destinations. Typically, directional signs are placed at the beginning of trail segments, at trail intersections and at key points along the trail.

Bollards

Trail bollards are often used to mark the location of a trail, provide information regarding trail direction, or prohibit access to a trail by a user group. Bollards are typically simple in design, normally 4 inches square and about 4 feet high. They can include a small graphic plate attached to the upper portion that contains a symbol or directional arrow.

Rules and Regulations

Right of Public Access and Use of Trail Lands Policy

The general public should have free access to and use of all open space lands that are owned by the local communities, or on land that local communities have secured the right of public access and use. All access and use should be governed by existing local community policies and new local community Trail Ordinances. Permitted use of trails can include hiking, bicycling, running, wheelchair riding, skateboarding, rollerblading, mountain biking, ATV riding, and other uses that are determined to be compatible by local communities. Trails should be operated like other parks within local communities, typically open for public use from sunrise to sunset, 365 days a year, except as specifically designated.

Non-Motorized Trail Ordinance

As described earlier, multi-use conflict is a national problem for community and regional open space and trail systems. Typically, conflicts are caused by overuse of a trail; however, other factors may be problematic including poorly designed and engineered trail alignments, inappropriate user behavior, or inadequate facility capacity. The most effective conflict resolution plan is a well conceived safety program that provides the individual user with a Code of Con-

duct for the trail, referred to as a Trail Ordinance. Several communities across the United States have adopted progressive trail ordinances to govern public use and keep trails safe for all users. The following Rules and Regulations are recommended for the trails of the Lower Wyoming Valley Open Space Network. These rules should be displayed both on brochures and information signs throughout the open space system.

- 1) **Be Courteous:** All trail users, including bicyclist, joggers, walkers, wheelchairs, skateboarders and skaters, should be respectful of other users and adjacent landowners.
- 2) **Keep Right:** Always stay to the right as you use the trail, or stay in the lane that has been designated for your user group.
- 3) **Pass on the Left:** Pass others going in your direction on their left. Look ahead and behind to make sure that your lane is clear before you pull out and around the other user.
- 4) **Give Audible Signal When Passing:** All users should give a clear warning signal before passing with a voice, bell or soft horn.
- 5) **Be Predictable:** Travel in a consistent and predictable manner. Always look behind before changing position on the trail.
- 6) **Control Your Bicycle:** Lack of attention, even for a second, can cause disaster - always stay alert! Maintain a safe and legal speed at all times.
- 7) **Do not Block the Trail:** When in a group, use no more than half the trail, so as not to block the flow of other users.
- 8) **Yield when Entering or Crossing Trails.**
- 9) **Use Lights at Night:** (where permitted) When using the Trail after dawn or before dusk be equipped with proper light.
- 10) **Do not Use this Trail Under the Influence of Alcohol or Drugs.**
- 11) **Clean-up Your Litter:** Pack out what you bring in and clean up after your pets.
- 12) **Keep Pets on Leashes:** All pets must be kept on secure and tethered leashes.
- 13) **Prohibition on Camp Fires:** Fires, for any purpose, are prohibited within the Trails System. Any person caught lighting a fire for any purpose will be prosecuted to the fullest extent of the law.

Motorized Trail Ordinance

Motorized trail users should be encouraged to respect the rights and needs of other trail users, especially other non-motorized users. The following offers a model trail ordinance for posting on motorized and non-motorized trail segments.

- 1) **Respect the rights of all users to enjoy the beauty of the outdoors and respect public and private property.**
- 2) **Park considerately, taking no more spaces than needed, without blocking other vehicles and without impeding access to trails.**

- 3) Keep to the right when meeting another user and yield the right-of-way to traffic moving downhill.
- 4) Slow down and use caution when approaching or overtaking another trail user.
- 5) Respect designated areas, trail use signs, and established trails.
- 6) When stopping, do not block the trail.
- 7) Do not disturb wildlife and avoid areas posted for the protection of feeding wildlife.
- 8) Pack out trash and litter.
- 9) Determine your destination objective and travel speed by your equipment, ability, the terrain, the weather, and the traffic on the trail.
- 10) Volunteer assistance in case of an emergency.

Facility and Trail Maintenance

The open space network should be maintained in a condition that promotes safety and security for users and adjacent property owners. The property should also be maintained in a manner that enables the network to fulfill multiple functions (i.e. passive recreation, alternative transportation, stormwater management and habitat for wildlife). Property that is owned or managed by other entities should be managed and maintained in accordance with the policies of that public body responsible for the affected parcel.

Maintenance Costs

Projected maintenance costs for open space components, including trails, conservation lands, and proposed parkland can vary widely and are dependent on many factors. Projected annual maintenance costs are determined based on average costs of existing facilities similar in nature to those proposed in the plan. For Trails, national average trail maintenance costs are used. For Conservation Lands and Proposed Parklands, existing annual maintenance costs of similar facilities in the Wyoming Valley are used. The following list describes those parks used to develop average per acre maintenance costs.

Kirby Park

Annual Maintenance Cost: \$50,000

Total Acres: 52

Total Cost per acre: \$960

Similar Parks in Plan:

Huber Breaker Park,
Susquehanna River Park

Moon Lake Park & Seven Tubs Nature Area
(combined)

Annual Maintenance Cost: \$50,000

Total Acres: 1252

Total Cost per acre: \$40

Similar Parks in Plan:

Ashley Planes Heritage Park,
Moconoqua Outdoor Center

Debris removal & vegetation management (6 x/year)	\$350
Drainage maintenance (2 x/year)	\$250
Trash removal (10 x/year)	\$600
Minor repairs to trail furniture and safety features	\$500
Maintenance Supplies	\$300
Equipment Fuel & Repairs	\$600

TOTAL Annual Cost/Mile: \$2,600Forty Fort/Luzerne County Sports Complex

Annual Maintenance Cost: \$75,000

Total Acres: 91

Total Cost per acre: \$825

Similar Parks in Plan:

Recreation Center

These costs are estimates received from each park's operating authority and are for materials and supplies only.

Trail maintenance costs can also vary based on the type of trail and the level of maintenance. The majority of trails proposed in this plan are unpaved hiking and mountain biking trails. Typical per mile annual maintenance costs for such trails are as follows:

It may be possible to lower the cost of trail maintenance through the development of adopt-a-trail and other volunteer programs. Volunteers have been proven effective in performing some of the routine maintenance activities listed above.

Conservation Land costs would be similar to maintenance costs of State Gamelands. These are approximately \$3.60/acre annually.

Maintenance costs for each of the primary plan components are illustrated on the following pages. These costs are estimates and include only materials and supplies. They are to be used for master planning purposes only. Real costs can vary widely and are dependent on several factors, including what is specifically programmed at each facility.

Trails Network

MAINTENANCE COSTS

Escarpment Trail

8.9 miles @ \$2,600 per mile = \$23,140 annually

Penobscot Ridge Trail

14.5 miles @ \$2,600 per mile = \$37,700 annually

Wilkes-Barre Mountain Trail

6.7 miles @ \$2,600 per mile = \$17,420 annually

Conyngham Cross-Valley Trail

4.3 miles @ \$2,600 per mile = \$11,180 annually

Newport Cross Valley Trail

6.5 miles @ \$2,600 per mile = \$16,900 annually

Hanover Cross Valley Trail

7.0 miles @ \$2,600 per mile = \$18,200 annually

River Trail

0.7 miles @ \$2,600 per mile = \$1,820 annually (*extension of existing trail*)

Wyoming Valley Scenic Drive

Annual reprinting of 1,000 brochures is estimated at \$1,000 annually.

Conservation Lands

MAINTENANCE COSTS

Penobscot Ridge Mountain Bike Area

1110 acres @ \$3.60 per acre = \$4,000 annually

Penobscot Ridge Retreat Area

1557 acres @ \$3.60 per acre = \$5,600 annually

Tilbury Knob Recreation Area

457 acres @ \$3.60 per acre = \$1,650 annually

(These costs include labor, equipment, and materials.)

Proposed Parklands

MAINTENANCE COSTS

Ashley Planes Heritage Park

395 acres @ \$40 per acre = \$18,800 annually

Recreation Center

22 acres @ \$825 per acre = \$18,150 annually

Moconagua Outdoor Center

16 acres @ \$40 per acre = \$640 annually

Susquehanna River Park

13 acres @ \$960 per acre = \$12,480 annually

Huber Breaker Park

33 acres @ \$960 per acre = \$31,680 annually

Plymouth Residential/Golf Community

Annual maintenance costs would be determined by the private developer/owner of the facility and are dependent on the exact type of facility developed.

Newport Motor Sports Park

Annual maintenance costs would be determined by the private concessionaire of the facility and are dependent on the exact type of facility developed.

Security and Safety

Safety is a duty and obligation of all public facilities. In order to provide a standard of care that offers reasonable and ordinary safety measures, the lead management organization and the local communities should cooperatively develop and implement a Safety and Security Program for the network. This program should consist of well defined safety and security policies; the identification of trail management, law enforcement, emergency and fire protection agencies; the proper posting, notification and education of the trail user policies; and a system that offers timely response to the public for issue or problems that are related to safety and security. The safety and security of the open space system will need to be coordinated with local law enforcement officials, local neighborhood watch associations, and other partners in the open space network.

Important components of the safety and security program include:

- 1) Working with local community police to establish an Open Space Safety and Security Committee that can meet monthly to discuss management of the network.
- 2) Preparing an Open Space Safety Manual to distribute to management agencies and to post at all major trail heads.

- 3) Posting User Rules and Regulations at all public access points to trails.
- 4) Working with the management partners to develop Trail Emergency Procedures.
- 5) Inspecting facilities monthly with a Safety Checklist.
- 6) Preparing a User Response Form for complaints and complements to be provided at all trail heads.
- 7) Working with management partners to develop a system to analyze reported accidents.
- 8) Conducting a regular Maintenance and Inspection Program, and sharing the results of these investigations with all management partners.
- 9) Coordinating with other Public Information Programs to provide information about events and activities for local community residents.
- 10) Continually evaluating open space program objectives.

Emergency Response Plan

In order to effectively patrol the open space network and respond to the potential for fire, floods and other natural or human-caused disasters, local communities and management partners should adopt an open space emergency response plan. This plan defines a cooperative law enforcement strategy for open space and trails based on services required and those that are typically provided by police, sheriff, fire and

EMS agencies. Specifically, all trails should be provided with an address system that denotes specific locations along the length of a trail corridor. A site plan that illustrates points of access to each trail corridor should be produced and kept on file in local communities. Each trail should be designed to permit access for law enforcement, fire and EMS. Typically, intergovernmental agreements are executed for this. A system of cellular-type emergency phones should be located in remote sections of the system, providing users with access to the area 911 Emergency System.

The emergency response plan should also define the agencies that should respond to 911 calls, and provide easy to understand routing plans and access points for emergency vehicles. Local hospitals should be notified of these routes so that they may also be familiar with the size

Risk Management and Liability

Risk Management Plan

The purpose of a Risk Management Plan is to increase safety for the users and reduce the potential for accidents to occur within the system or on lands adjacent to the system. While it is impossible to guarantee that all risk will be eliminated by a Risk Management Plan, implementation of a plan is a critical step to reduce liability and improve safety. A Risk Management Plan establishes a methodology for management that is based on current tort liability and case law in the United States related to the development, operation and management of public use open space and trail lands and facilities.

The ultimate responsibility for managing the open space network, as defined within this Plan, rests with the local communities and open space partners. The Risk Management Plan has three major goals:

- 1) **Risk Identification:** determining where risk (threat to safety or potential loss) exists within the corridor.
- 2) **Risk Evaluation:** conducting appropriate examination of areas defined as a risk and determining the factors that contribute to risk.

3) **Risk Treatment:** defining and implementing an appropriate solution to the area of risk in accordance with one of the four following options:

- a) risk avoidance: prohibiting use of a risk area.
- b) risk reduction: limit use of area and repair risk area immediately.
- c) risk retention: obtain waivers from all potential users of the risk area.
- d) risk transfer: transfer risk area (property) to an agency better suited to manage the area.

The following sixteen step plan should be implemented by the local communities and open space partners to establish a Risk Management Plan for the Lower Wyoming Valley Open Space Network.

- 1) Develop a policy statement on risk management.
- 2) Conduct a needs assessment for the open space network.
- 3) Determine goals and objectives for risk management - what is acceptable and not acceptable management levels.
- 4) Develop specifications for site and facility development.
- 5) Establish a clear and concise program for risk management.
- 6) Define supervision and responsibility for risk management.

7) Define appropriate rules and regulations that govern the use of the trail system.

8) Conduct routine/systematic inspections and investigations of the trail system.

9) Develop an accident reporting and analysis system.

10) Establish procedures for handling emergencies.

11) Develop appropriate releases, waivers and agreements for use and management.

12) Identify best methods for insuring against risk.

13) Develop a comprehensive in-service training program for employees of local communities.

14) Implement a public relations program that can effectively describe the risk management program and activities.

15) Conduct periodic reviews of the Risk Management Plan by outside agents to ensure that the Plan is up to date.

16) Maintain good legal and insurance representation.

Liability

The design, development, management, and operation of the Lower Wyoming Valley Open Space Network must be carefully and accurately executed in order to provide a resource that protects the health and welfare of the public. Liability may occur when a facility has been under-designed to handle its intended volume of use; when management of the facility is poor; or when unexpected accidents occur because the trail manager failed to recognize the possibilities of a potentially hazardous situation. To reduce the possibility and exposure to liability, local communities and the open space partners:

- 1) A thorough Maintenance Program that provides the appropriate duty or level of care to users;
- 2) A Risk Management Plan that appropriately covers all aspects of the network, and as necessary adjacent landowners;
- 3) A comprehensive working knowledge of public use laws and recent case history applicable in Pennsylvania.

Local communities within the Wyoming Valley have municipal insurance programs. The lead management organization will need to obtain appropriate umbrella coverage for liability. These policies should be adequate to protect open space developers and managers from financial loss that might occur through the de-

velopment and operation of the Valley Open Space Network. Trails are no greater liability to a local community than other park and recreation resources. Local communities should review current policies and check coverages to be certain that all aspects of their policies are up to date.

Reasonable care should be exercised in the design and construction of all open space facilities to reduce hazardous, public nuisance and life threatening situations. Recreational Use Statutes in Pennsylvania can reduce the exposure that adjacent landowners might expect to realize from the proximity of trails to private property. In fact, it is very difficult to find any case law in the United States where an adjacent property owner has been sued because a trail user strayed onto the adjacent private property and fell victim to an accident that was caused by the adjacent landowner. Some landowners have claimed that their insurance rates will go up because of the presence of a trail abutting their property. Once again, there is no case history among insurance companies to support this claim — provided the landowner has not gone out of their way to create an attractive nuisance and lure trail users onto their property.

It is also important that a fee not be charged to use any portion of the open space system, because typically this may impact the way in which the recreational use statutes in Pennsylvania apply to the use of the system. A voluntary donation applied to the open space system will generally not affect the recreational use statute. Some Plan Components, such as the Newport ATV Park, are exceptions.

Public Transportation

Some of the open space components detailed within this plan are accessible via public transportation. The Luzerne County Transportation Authority (LCTA) offers bus service between Public Square in Wilkes-Barre and surrounding municipalities. Wanamie is the southernmost point of LCTA service.

Open space components accessible by LCTA service are: The Escarpment Trail (future trailhead near Nanticoke), the Penobscot Ridge Mountain Bike Area (entry area near Wanamie), the Recreation Center adjacent to Sugar Notch, the Huber Breaker Park in Ashley, and the Susquehanna River Park in Nanticoke. These are served by LCTA Routes 13, 14, and 15; which connect municipalities in the lower Valley with downtown Wilkes-Barre. A short extension of LCTA Route 22 could provide service to the proposed Tilbury Knob Recreation Area and the Plymouth Residential Golf Community.

