



Greenways Plan

Centre County Planning Office

2002

Nittany and Bald Eagle Greenways Study

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Prepared for:

Centre County Commissioners

H. Scott Conklin, Chairman
Keith Bierly
Connie E. Lucas

Lead Committee

Robert Donaldson, AICP, Director Centre County Planning Office
Robert Jacobs, Centre County Planning Office
Beth Thoma, Centre County Planning Office
Trish Meek, Centre Region Planning Agency
Dennis Hameister, Spring Creek Watershed Commission

Prepared by:

Yost Strodoski Mears
Toole Recreation Planning
Bloss Associates, Inc.

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Nittany and Bald Eagle Greenways Plan

Creating protected corridors of green through the Spring Creek and Lower Bald Eagle Creek watersheds was first envisioned by the County Commissioners as a means of connecting many of the County's great resources. Connecting the headwaters area of Spring Creek with its historic villages and natural resources and Bald Eagle State Park would protect many of the County's most scenic and environmentally sensitive areas, expand opportunities for recreation, and promote economic development. The project would build upon the recently completed Spring Creek Rivers Conservation Plan and provide strategies that could be implemented countywide.

Plan Purpose

The Nittany and Bald Eagle Greenways Plan had six main goals:

1. Protect and enhance the high quality environment of the region in the face of rapid growth in the Metropolitan State College-Bellefonte area of Centre County, Pennsylvania. The plan is to build upon previous studies such as the Spring Creek Rivers Conservation Plan, and other work initiated by the ClearWater Conservancy.
2. Involve the public in the planning process.
3. Provide ways to develop partnerships: among local governments; between local governments and state agencies; among public, private, and non-profit sectors; and with municipal/intermunicipal organizations, departments, and authorities.
4. Identify links between environmental protection and economic prosperity related to the greenway and integrates resource management and economic development in a sustainable growth plan for the area.
5. Address open space preservation and recreation development from the headwaters of Spring Creek and Lower Bald Eagle Creek and their tributaries to Bald Eagle State Park.
6. Review municipal ordinances and county subdivision regulations to determine the need for ordinance updates that assure that development affecting the greenway is compatible with the intent of the greenway plan goals and recommendations.

Planning Process

The planning process was rooted in a strong public participation process, research, and data collection based upon a large volume of work in the project study area, and consensus building for project goals, recommendations, and actions to achieve the vision of a green, connected Nittany and Bald Eagle Valleys. The public participation process included gathering the insights of key stakeholders who served on the Greenway Advisory Committee, working with the Centre County Planning Office and representatives of Centre Region Planning and Spring Creek Watershed Commission, and soliciting the input of the general public. The process included seven tasks: Public Participation, Data Collection and Analysis; Determination of Demand and Potential Use of the Greenway; Identification of Key Organizations and Individuals; Identification of Key Issues, Opportunities and Threats; Greenway Development and Protection Options; and an Implementation Plan.

Findings

The public opinion process found support and a great deal of interest in the development of a comprehensive network of greenways and trails throughout the study area. A network of protected greenways was seen as a viable strategy for the long-term protection of natural resources, while providing corridors for recreation and commuter transportation. The commitment to private property rights and the exploration of partnerships for land conservation are seen as critical components of a successful plan.

Nittany and Bald Eagle Greenways Vision

Nittany and Bald Eagle Greenways Vision

To protect the water quality, scenic, and natural resources of the Lower Bald Eagle and Nittany Valleys and provide a network of access ways for non-motorized transportation and low impact outdoor recreation for people who live, work, or visit here.

Four guiding principles characterize the vision for the Nittany and Bald Eagle Greenways:

1. Incorporate the watershed of the Nittany and Lower Bald Eagle Valleys.
2. Follow natural corridors including the Spring and Bald Eagle Creeks, their tributaries and ridge tops.
3. Include manmade linear features such as railways, roads, utility corridors, and rights-of-way to establish linkages.
4. Connect and protect areas and resources that are of value to the community and distinguish the Nittany and Lower Bald Eagle Valleys as a special place to live, work, or visit. These include the natural, landscape, cultural, and heritage sites; parks; schools; population centers; and places of commerce.

Greenway Structure

From these guiding principles the concept for the Nittany and Bald Eagle Greenways was developed. The concept defines the greenway structure and key components of the system.

Nittany and Bald Eagle Greenways

The Nittany and Bald Eagle Greenways are a network of open space managed for conservation and/or recreation purposes. The network follows natural features of land and water. The greenways serve as links for natural areas, parks, cultural resources, historic areas, community destinations, and population centers. Greenways can serve as wildlife corridors and may or may not be open to the public. Greenways can provide recreation opportunities featuring pathways for alternative transportation, fitness, wellness, and enjoyment. Greenways can be both publicly and privately owned.

Recommendations and Actions

The development of the Nittany and Bald Eagle Greenways will be challenging for Centre County. The project involves both physical development and management initiatives. It requires the further planning investment, organizational development, and creation of partnerships. It will require the commitment of many citizens, agencies, and municipalities to get the word out and lay the groundwork for a network of protected greenway corridors and a complementary network of accessways. The challenges may appear overwhelming but there are many parallel initiatives in Pennsylvania to draw upon and a growing recognition from all fronts of the importance of preserving our green infrastructure. Recommendations and actions steps for the development of the Nittany and Bald Eagle Greenways include:

Management and Operations

- Establish a Greenways Advisory Committee
- Designate a full time professional position dedicated to greenway and open space planning and implementation.
- Establish a County Parks Department.

Financing

- Develop a financial strategy for capital projects that would include greenways and open space.

Operations and Planning

- Provide funding for an additional planning position
- Provide funding for marketing and outreach
- Provide funding to establish a County Parks Department.
- Provide funds for open space preservation, land acquisition, and capital development.

Pilot Greenway Project

- Develop a Greenway Master Plan for the Curtin Village to Bald Eagle State Park Segment of the Bald Eagle Major Corridor.
- Develop pilot project amenities and undertake actions to demonstrate the benefits of Nittany and Bald Eagle Greenways system, trail development, and corridor protection.

Commuter Uses of Trails and Bikeways

- Work with employers to develop an incentive program for commuters to promote bicycling and walking as alternative means of commuting to work.
- Provide facilities that are bicycle and pedestrian friendly to encourage use of trails and bikeways
- Work with municipalities to adopt ordinance provisions that promote use of bicycles and walking for commuting to work
- Work with PennDOT and local municipal road departments to incorporate bicycle and pedestrian friendly facilities when roadway improvements are planned and implemented.

- Benchmark with bicycle-friendly communities especially, communities with colleges and universities to learn what initiatives and facilities have worked elsewhere.

Resource Conservation

- Use land use practices and planning tools to preserve and develop the green infrastructure and update municipal ordinances to include conservation and “greenway-friendly” codes.
- Acquire key tracts of land.
- Encourage stewardship of lands and waters within the greenway corridors.

Trails and Recreation

- Develop trails for recreation, commuting, and access to historic, cultural, recreation, and environmental education destinations.
- Support rail-trail initiatives and municipal trail initiatives.
- Evaluate trail opportunities of existing easements and rights of ways.
- Consider the unique needs of each recreation user group.
- Promote environmental sustainability in the development of trails and recreation facilities.

Nittany and Bald Eagle Greenways Plan

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Chapter 1 - Introduction

Welcome!

Welcome to some of the most important waters and lands in the Commonwealth of Pennsylvania:

- Nationally renowned Spring and Bald Eagle Creeks
 - Nittany and Bald Eagle Valleys of Centre County
 - Bald Eagle State Park
 - Bald Eagle State Forest
 - Rothrock State Forest
 - Scotia Barrens
 - Fisherman's Paradise, an internationally famous trout fishery
 - Lick Run, a Trophy Trout Project
- ...over 28,500 acres of public parklands, forests and game lands*

Welcome to one of the most desirable places in which to live in the United States of America:

- Historic towns of Milesburg, Lemont, Boalsburg, and Bellefonte
- National Kayak Training Center
- Penn State University
- Curtin Village
- Strong economy, low unemployment
- Among top ranked public school systems in the nation
- Museums, galleries, and cultural activities galore

Welcome to the greenway plan for the Nittany and Bald Eagle Greenways, a plan to:

- Provide a network of accessways, with connected trails
- Protect the high quality waters of the Spring Creek Watershed
- Preserve natural, historic, and cultural resources in the corridor
- Create bikeways, greenways, and blue ways
- Establish outdoor recreation opportunities for people of all ages and abilities
- Create partnerships among the government and the private sector, communities and schools, recreationists and conservationists, from Howard to State College
- Produce the greenprint for the Bald Eagle and Nittany Valleys, setting the stage for a greenway network for all of Centre County

Plan Purpose

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2. Involve the public in the planning process.
3. Provide ways to develop partnerships: among local governments; between local governments and state agencies; among public, private, and non-profit sectors; and with municipal/intermunicipal organizations, departments, and authorities.
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Plan Process

The planning process was rooted in a strong public participation process, research, and data collection based upon a large volume of work in the project study area over the past two years, and consensus building for project goals, recommendations, and actions to achieve the vision of a green, connected Nittany and Bald Eagle Valleys. The process included seven tasks: Public Participation, Data Collection and Analysis; Determination of Demand and Potential Use of the Greenway; Identification of Key Organizations and Individuals; Identification of Key Issues, Opportunities and Threats; Greenway Development and Protection Options; and an Implementation Plan.

Task 1: Public Participation

Because of the size and complexity of the project, the Nittany and Bald Eagle Greenways is likely to affect, and benefit, a great many interests. A four-part public participation process directly involved individuals, organizations, institutions, community groups, and citizens in the development of the plan and the decisions that would affect this portion of Centre County. The process included:

- **Lead Committee** - Composed of professional planners representing the Centre County Planning Office and the Centre Regional Planning Agency. They advised the planning team throughout the project.
- **Greenway Advisory Committee** - Included over 60 members representing a variety of interests and expertise in conservation, recreation, local and regional government, education, and citizens. They worked with the planning team serving as a sounding board, providing feedback and ideas, and advising the steps necessary to achieve consensus and obtain community “buy-in” needed to get the plan implemented.

- **Key Person Interviews** - Contacts with over 25 individuals and/or representatives of special interests generated facts opinions, ideas, and concerns to be addressed in the plan and considered in recommendations.
- **Public Meetings** - Including a focus group and a public hearing enabled citizens through their interests in conservation, outdoor recreation, and the study area to get involved in the planning process.

Task 2: Data Collection and Analysis

Previous and on-going studies provided valuable information for developing this plan. Figure 1- 1 presents the extensive studies that were used for information and analysis in this plan. In addition to the studies, information about the project area, lands, facilities, programs services, funding and operations and management were collected in interviews, site visits, and meetings. The Spring Creek Corridor Studies, Phase I and II, which now make up the Spring Creek Rivers Conservation Plan were reviewed and many recommendations of the studies were incorporated into this plan. Other studies provided a general sense of the study area while some provided specific corridor information.

**Figure 1-1
Nittany and Bald Eagle Valleys Plan Project Planning Resources**

1. Spring Creek Corridor Study
2. Spring Creek Study: Phase II
3. Centre Region Comprehensive Plan Update
4. Eastern Inner Loop Project
5. Proposal for Blue and White Pedestrian Trails
6. Public Review Copy, Act 537 Revision
7. The Short Hiker: Small Green Circles
8. A Naturalists Guide for Mountain Bikers. Hikers & Drivers to the Seven Mountains
9. A Status Report on the Efforts of the Spring Creek Watershed Commission, 1996-1999
10. The Preliminary Study of the Prince Gallitzin to Black Moshannon Trail System
11. Centre region Pedestrian/Bicycle Trail Feasibility Study
12. Centre County: Today and Tomorrow
13. Centre County: Existing Land Use, 1995
14. Centre County Fact Book, 1995
15. Centre County Recreational Trails Project
16. Centre County Natural Heritage Inventory
17. Heritage Resources of the Centre Region
18. Directions for the Future: Guidelines for Decision-Making: A Comprehensive Plan for Centre County
19. Historical Reflections of Centre County
20. Maps including Moshannon State Forest, Sproul State Forest, Bald Eagle State Forest, Rothrock State Forest, Greater State College Area Visitors Map, Centre County, Bellefonte and the Intervalley Area.

Task 3: Determination of Demand and Potential Use of the Greenway

This task included the definition of the project service area, which includes 17 municipalities with diverse characteristics ranging from rural to urbanized and bucolic to industrial. About 109,000 people live in the

project service area, 80-percent of the County total population. In this task, the mix of municipalities, land uses, population segments, and potential user groups for both recreation and conservation was assessed. Finding ways of connecting communities, public destinations, and user groups for establishing a network of access ways was a key goal.

Task 4: Identification of Key Organizations and Individuals

Since many individuals and organizations have been involved within the watershed, it was important to identify who the key stakeholders were and how they could become involved in the planning process and in plan implementation. The plan recommendations are rooted in partnerships explored through the public participation process.

Task 5: Identification of Key Issues, Opportunities and Potential Threats

Building upon the work of the Spring Creek Rivers Conservation Plan, the planning team addressed access and protection of environmentally sensitive areas, use and potential user conflicts, coordination with the corridor's state agency goals and mandates; waterway enhancement; fishery protection and access; zoning and land use; and methods for generating long term investment to make the corridor a community asset for generations to come.

Task 6: Greenway Development and Protection Options

The greenway conceptual plan focused on creating a balanced approach to greenway development that both preserved the resources and provided access for outdoor recreation. Development options included bike trails, hiking routes, cultural resources, water access, community destinations, schools, neighborhoods, business districts, and employment centers. Various approaches to the conceptual plan included identifying greenway segments and a pilot project; protection measures such as municipal ordinances, and public access considerations.

Task 7: Implementation Plan

The implementation plan includes a focused set of strategies for establishing the greenway. Recommendations included service area, connections, trail concepts, management and organizational scenarios, and potential funding sources. Priorities outlined a logical sequence for establishing, developing, operating, managing, and funding the Nittany and Bald Eagle Greenway.

Plan Uses

The conceptual plan is Centre County's first project in greenway planning. It sets forth the basis for a future countywide greenway network. The plan can be used for:

- **Decision Making** - Based upon the planning process that incorporated consensus building for the greenway, a common vision for the greenway is in place. All decisions and future greenway planning efforts at the county, regional, and local levels should spring from this plan.
- **Establishing Planning Tools** - The greenway plan outlines the service area and trails. This should guide county and local planning efforts and the development of planning tools to achieve the connections and linkages required for connectivity. It lays the foundation for the next steps in master planning, facility design, and construction.
- **Building Partnerships** - Since the plan addresses the special interests identified in the corridor, it provides a common framework for interests ranging from the very specific to broad support such as a "Friends of the Nittany and Bald Eagle Greenways".

- **Institutionalizing a Support Structure** - Through the outline of tasks, funding, support, partnerships, time commitments, and decisions that need to be accomplished, the plan presents the foundation for establishing an organization management structure needed to grow and sustain the greenway.
- **Generating Financial Support** - A commitment of public, private and non-profit resources is essential in establishing the greenway. Having a plan in place facilitates securing this mix of financial and human resources. Centre County and its municipalities will be more competitive for grant programs because this plan documents need, opportunities, and a sense of urgency.

These uses will help Centre County to fulfill its dual responsibility of both protecting the environment and providing enjoyable outdoor recreation opportunities for the people, who live, work, and visit in the greenway corridor. The plan is meant to be a living document that sets forth a common vision and inspires those involved to seize opportunities to create a green, connected community for all time.

Chapter 2 - Greenway Benefits

Greenways and trails can benefit Centre County. The Nittany and Bald Eagle Greenways bring together environmentalists, recreation groups, government, and the private sector unlike any other community endeavor. The Nittany and Bald Eagle Greenways are good for Centre County. It is good for the environment. It is good for outdoor recreation. It is good for business. It is good for people who live, work, study, and visit here.

Greenways are a priority in Pennsylvania. Over the past five years, Pennsylvania has undertaken a major program to create connections statewide through greenways and trails. The Commonwealth has appropriated significant funding for greenway planning and development as a high priority for generating livable communities. Centre County is advancing one of Pennsylvania's most important goals in this program: to develop a greenway plan.

There is an increasing awareness about the importance of greenways and trails throughout the Commonwealth of Pennsylvania. A statewide survey in 2000 found that four out of five people surveyed said they know what greenways are. More significantly, 93-percent of those surveyed support providing additional greenways in their community¹.

Importance of Articulating Greenway Benefits

Public perception of the value and importance of greenways and trails is always important but is crucial in an era of fiscal austerity and economic downturn. Competition for scarce public and private sector funds is obvious statewide. In Centre County, there is a great deal of public conversation about significant capital projects such as school renovation and transportation improvements. Concern about large public expenditures has emerged throughout the planning process for the Nittany and Bald Eagle Greenways.

Information about the benefits of greenways and trails needs to be made available to key stakeholders including elected officials, government administrators, and the public. The wide range of issues, opportunities, and challenges facing Centre County in the 21st century mandate that advocates make the case for supporting greenways. By articulating the benefits of greenways, advocates and allies in related causes can help to promote, plan, design, develop, and manage greenways. Research over the years in the United States and other countries leaves little doubt about the importance of greenways and trails to the environment, the community, the economy, and to our own lives.

Greenways are a priority in Pennsylvania because they contribute to a higher quality of life through:

- Environmental protection and resource conservation
- Economic development and value to the community
- Personal and social benefits through outdoor recreation

Documenting Benefits in Centre County

One of the goals of the Centre County Planning Office was to document greenway benefits as specifically as possible in Centre County. The planning team interviewed agencies and organizations in the public and private sectors to determine if anyone is monitoring and collecting such information, especially in the area of economic impact. The results of the interviews indicate that the idea of documenting benefits of

¹ Pennsylvania Greenways Partnership Commission. **Pennsylvania Greenways An Action Plan for Creating Connections Executive Summary**. (2001). Pennsylvania Department of Conservation and Natural Resources. 5.

tourism, open space, outdoor recreation facilities, and cultural resources has a great deal of appeal to various organizations involved with tourism, real estate, planning, private non-profit organizations, and conservation groups. However, data collection regarding economic (or other) impact is in its infancy in the Centre County area and anecdotal at best.

The good news is that several organizations are in fact beginning to collect data about the benefits of recreation and tourism in the area. The best examples for Centre County specifically are the Centre County Convention & Visitors Bureau and Centre County Audubon Society. Together, they have launched a three-year program on the economic impact of bird watching in the area. The Convention & Visitors Bureau is also engaged in promoting outdoor recreation and has developed maps of biking paths and birding areas along with children's versions of these maps. The Bureau would like to collect information on participant spending related to outdoor recreation. The Bureau is also collaborating with other organizations, working under the name of North Central Mountains, to promote trails in the area for tourism.

Several organizations such as Pennsylvania Department of Conservation and Natural Resources, Pennsylvania Economy League, Center for Rural Pennsylvania, Rails to Trails Conservancy, and the Pennsylvania Fish and Boat Commission have conducted studies on the economic benefits of tourism and outdoor recreational sports in Pennsylvania. Some reporting has been done on a regional basis but is not county specific. This data can apply to Centre County and is useful until such information is collected and monitored about Centre County itself.

Environmental Benefits of Greenways

Creating a green network of protected corridors can have positive effects on water quality; air quality; habitat, biodiversity, and ecological integrity; and provide significant environmental benefits. The water and land resources of the Nittany and Bald Eagle Valleys are valued for their diverse landscape, high quality streams, abundant wildlife, and picturesque setting. The environmental benefits of greenways and trails can spur protection strategies that build the greenways network while promoting an environmental ethic where people and nature strike a sustainable balance.

Water Quality

Creating green buffers along streams serves as a filtering zone to capture sediment, nutrients, and pollutants from runoff before they reach the stream or groundwater. Riparian buffers, wetlands, and green filter strips absorb these elements and slow surface runoff prior to it reaching a stream. This process reduces stormwater damage, promotes flood mitigation through areas of protected floodplain, and promotes recharge of water aquifers. Floodplain and wetland areas provide storage for floodwaters thus reducing the damage of floodwaters. Riparian forest buffers help to stabilize stream banks and minimize erosion. The shade of riparian forest buffers shade streams and cool their waters to the benefit of aquatic habitats.

Air Quality

Because greenways and trails provide infrastructure for alternate means of transportation the dependency on automobiles is reduced, resulting in less air pollution and noise pollution. Vegetated greenways can also contribute to air quality through the capture of air-borne pollutants.

Habitat, Biodiversity, and Habitat Integrity

Greenways protect critical natural communities of wildlife, plant, and aquatic habitat. Protecting habitat promotes biodiversity, which is the variety of species, genetic makeup, their ecological roles, and their

interrelationships in the natural communities. Greenway corridors are important to sustain wildlife migration, movement, and flyways. Greenways serve to connect fragmented landscapes and promote the health of natural systems through connectivity.

Economic Benefits of Greenways and Trails

Greenways and trails can increase local economic activity, enhance property values, attract and retain businesses, and create jobs. They provide a monetary benefit to private businesses, property owners, individuals, and local government as well as the county and the state. Although the benefits of greenways typically fall into four categories: economic, environmental, personal, and social, the economic benefits tend to be the most compelling to decision-makers. When it comes down to the dollars and sense of undertaking public projects, economic benefits help officials, the public, and potential project partners to view supporting greenways as an investment rather than a cost.

Property Values

Many studies have shown the increase in property values where property is located near parks, greenways, and open space. Property value increases tend to be higher for those properties that are located near greenways that feature open space rather than highly developed facilities. Other important factors include limited vehicular access and effective security and maintenance.²

The effect of open space, parks, and greenways has not been documented in Centre County. Interviews with the Centre County Board of Realtors and real estate agencies found that the value of property in terms of its proximity to parks or open space tends to be buyer specific. For example, homebuyers with children tend to place a higher value on property that is located close to a park than do households without children. Property values are higher closer to Penn State University but there is some speculation that as the area develops given growth trends, properties near open space will have an increased value in the future.

Pantops

Pantops, a housing development in Patton Township, is an example in Centre County of the effect of open space with recreation facilities on property values. Properties adjoining the open space sell at higher values than the properties across the street that do not adjoin the open space.

Proximity to open space enhances the visual environment adding to the quality of life. According to the Trust for Public Land, urban land next to a greenbelt was worth \$1,200 more an acre than land 1,000 feet away in Salem, Oregon.³ A study in Boulder, Colorado, found that the total property value for one neighborhood was \$5.4 million (1990 dollars) more than if there had been no greenbelt⁴

A common concern of property owners located near a trail is that the trail will lower their property value. A study of trails in three states, California, Florida, and Iowa showed that trails have very little impact on property values and will in fact often increase the value of property located near a greenway.⁵

² National Park Service. (1990). **Economic impact of protecting rivers, trails and greenway corridors: A resource book**. California: U.S. Department of the Interior, National Park Service.

³ Trust for Public Land. (1994). **Healing America's Cities: Why we must invest in urban parks**. San Francisco, CA: Trust for Public Land National Office.

⁴ National Park Service. (1990) *Ibid.*

⁵ Moore, Roger, et al. (1992). **The Impact of Rail-Trails: A Study of Users and Nearby Property Owners from Three Trails**. U. S. Department of the Interior: National Park Service.

Increased Economic Activity

Economic development is an important aspect of the benefits of greenways. Greenways attract and retain businesses, stimulate spending in the local economy, create jobs, and attract tourists. Higher property values are linked with generating revenues for the local coffers. In the Boulder, Colorado example of higher property values cited above, that difference in property value resulted in an additional half million dollars in property tax revenues annually (1990 dollars)⁶ In addition to higher property values, greenways have the potential to generate spending in the local economy. This is an especially important concept for tourism as greenways with and without trails in Centre County have the potential to attract tourists.

Business Attraction and Retention

Companies that choose to relocate or establish new businesses say that the availability of open space, parks and recreation is very high on their priority list of features to consider.⁷ The Pennsylvania Economy League and the University of Pittsburgh conducted a study on the economic impact of the Allegheny Trail Alliance (ATA) in 1999.⁸ The ATA is a coalition of seven trail organizations that are creating a 200-mile trail network from Pittsburgh to Cumberland, Maryland. The ATA is considered a recreational greenway because it features paths and trails. The study found:

- Echo Star Communications Corporation was attracted to McKeesport because of the existence and proximity of the trail. Echo Star said they wanted to offer employees convenient recreational opportunities. The trail was part of the City's total package to attract Echo Star.
- ATA was a factor in Continental Development Corporations decision to take on the \$300 million commercial and residential development along two miles of the Monongahela waterfront. The development director stated that the trail was a big asset for both residential and retail plans. They committed to using private dollars for trail development because it was part of their marketing strategy.
- An overnight lodge built a trail spur to make it easier for guests to get to the trail.
- Three new bed and breakfast establishments report strong trail influence on their business decisions and attribute 20 to 30 percent of the annual business to the trails.

Tourism and Related Spending

Tourism is big business in Centre County. Most of it is related to Penn State University. However, interviews found that the Centre County Convention & Visitors Bureau is looking beyond the University alone. The Bureau's efforts at mapping trails and birding areas are clearly targeting a broader market.

In 2002, the Centre County Commissioners passed an increase in the hotel tax raising it from 1 percent to 2 ½ percent. Two-thirds of this tax will go to support secondary sports such as volleyball and golf while one third will go to historic and other cultural resource projects. All spending must be consistent with legal guidelines that mandate the revenues from the hotel tax go to stimulate tourism. The 2½ percent tax is expected to yield about \$1.5 million annually. Certainly greenways, trails, and cultural resources are powerful tourism draws and related projects should be considered for support through the hotel tax. Both tourists from other regions and citizens as "tourists-in-their-own-town" would benefit.

Birding – Birding is big business. According to the U.S. Fish and Wildlife Service, nearly 25 million Americans report they travel to watch birds. The birding tourists spend about \$100 to \$130 per day not including travel expenses.⁹ The Centre County Convention & Visitors Bureau and the Centre County

⁶ National Park Service (1990). *Ibid.*

⁷ Crompton, J. and Lamb D. (1993). *A Profile of companies that considered recreation and parks amenities to be important to their (re)location decisions. Trends: Park Practice Program.* 30, 14-18.

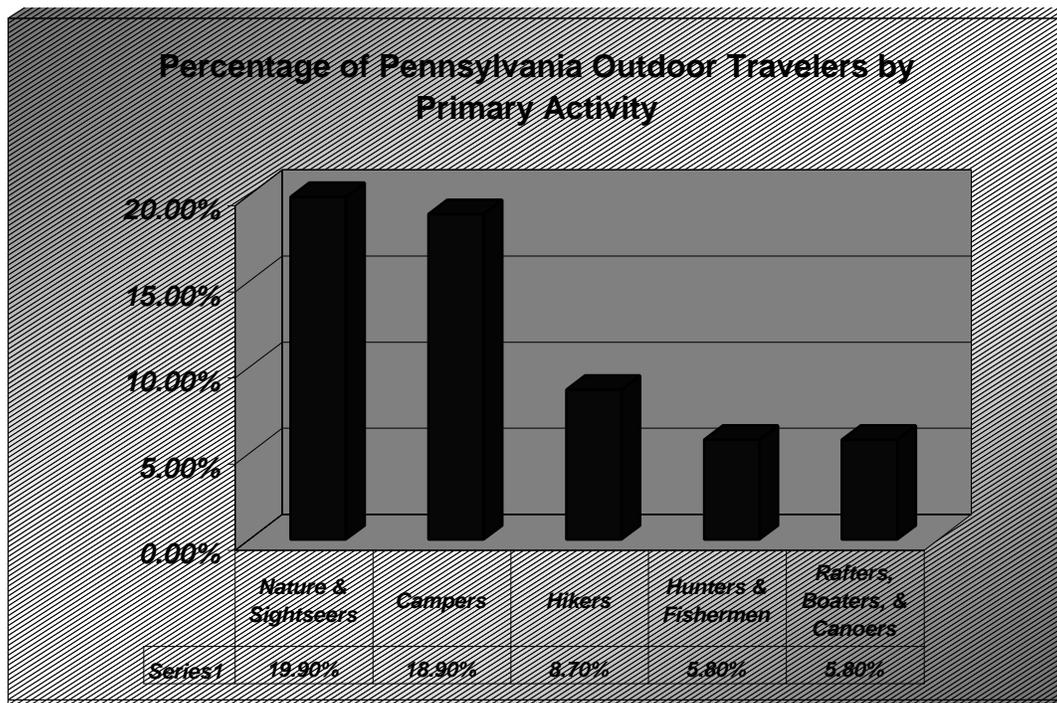
⁸ Weir, Michael; Jensen, Brian; Meyer, Lauren; and Farber, Stephen. (1999). *An Economic Impact Study for the Allegheny Trail Alliance.* Pennsylvania Economy League: Pittsburgh, PA. i-iv.

⁹ Soutwick Associates. (1995). *The economic contributions of birds and waterfowl recreation in the United States.* Alexandria, VA: Soutwick Associates.

Audubon Society are embarking on a data-collecting program to document similar information for this area.

Trails – The ATA Economic Impact Study surveyed trail users at six trailheads to determine local spending. The findings include:

- Mean local spending estimates of \$12.01 to \$15.33 per person per trip.
- Bike and equipment expenditures related to the trail ranged from \$150 to \$220 during the previous two years.
- Total estimated spending in the trail head communities in 1998 was estimated at \$5.4 to \$14.1 million. When the trail is completed, this spending is projected to increase by current users from \$4.3 to \$8 million annually.¹⁰



Source: Shifflet, D.K. and Associates.

Studies by the U.S. Fish and Wildlife Service and the National Park Service show that average expenditures for local trails range from \$3.97 per single use to \$14.88. The shorter trails generate a lower per use expenditure than longer distance trails but use is more frequent so the overall amount spent is higher for shorter trails¹¹. The Pennsylvania Department of Conservation and Natural Resources commissioned a study of the outdoor traveler in Pennsylvania. The study found that hikers spend about \$53 per day, hunters/fishermen \$47 per day, and rafters/canoers/boaters about \$60 per day¹².

Fishing – The Pennsylvania Fish & Boat Commission issues fishing licenses. In 2001, 13,414 fishing licenses were issued in Centre County. Of these, 11,470 were for trout licenses. In 2000, 3,802 boats were registered. The value to Pennsylvania’s economy is about \$1.3 billion annually. No tracking of

¹⁰ Weir, Michael et al. *Ibid.* Summary.

¹¹ Gobster, Paul. (1990). **Illinois Statewide Trail User Study**. Chicago: U.S. Forest Service.

¹² Shifflet, D.K. and Associates. (1996) **Pennsylvania Outdoor Traveler Study**. Harrisburg, PA: Pennsylvania Department of Conservation and Natural Resources.

expenditures for Centre County is available. Some rough estimates can be carved out of the 13,444 licenses. Estimates of an average of 10 fishing outings per fisherman per year and annual fishing impact equates to about \$72 per fishing day per fisherman for a total of about \$9.6 million annually for Centre County. These numbers are crude and would need to be adjusted as more data are collected.

Culture and Heritage Tourism – Heritage tourism is an increasingly important component of Pennsylvania’s tourism. Pennsylvania’s Heritage Tourism Study found considerable cross over between heritage travelers and outdoor recreation travelers.¹³ The attractions in Pennsylvania that had the highest level of interests for heritage travelers included:

- Historic towns and districts
- Battlefields and forts
- Gardens, zoos/arboreta
- Museums and art galleries
- House museums

Heritage tourists spend about \$102 per person per day. They describe what they are looking for as “educational, scenic, and fun”.

Centre County is in the newest study region for Pennsylvania’s Heritage Parks, this one with a theme of lumber. Interviews with the Centre County Historical Society indicate that they track visitation through the Centre Furnace Mansion (7,000 annually) but do not conduct research into economic value. The President of the Society will be a member of the hotel tax community thus underscoring the County Commissioners’ awareness of the importance of heritage in the local economy and as a tourism magnet.

Recreation: Personal and Social Benefits of Greenways

Greenways provide personal and social benefits to individuals of all ages and to the community overall. Trails and the beauty of nature found in greenways provide the most important outdoor recreation facilities in terms of use and participation by Americans. The Spring Creek Rivers Conservation Plan specifically identified the promotion of scenic and recreational opportunities as one of its five goals.

Fitness and Wellness

Greenways and trails provide an important recreational resource for people to use to cultivate healthy lifestyles. The U.S. Surgeon General has stated that communities can help citizens develop active lifestyles by providing attractive and safe places for people to walk and engage in recreation. The percentage of young people who are overweight has more than doubled in the past thirty years. Almost half of young people aged 12-21 and more than one-third of high school students do not participate in vigorous physical activity on a regular basis. The time spent in physical education classes is decreasing in both number of classes and time within the classes.¹⁴ The U.S. Surgeon General identified physical inactivity as an “epidemic”, and the number one public health issue in the United States stating that “being inactive is as risky to one’s health as smoking”.¹⁵ Obesity costs the United States \$238 billion per year in expenses from associated diseases such as diabetes, stroke, and heart disease, not including the

¹³ Shifflet, D.K. and Associates. (1999). **Pennsylvania Heritage Tourism Study**. McLean, VA: D.K. Shifflet and Associates. 2-3.

¹⁴ U.S. Center for Disease Control. (1999) CDC’s Guidelines for School and Community programs Promoting Lifelong Physical Activity. [Http://www.cdc.gov/nccdphp/dash/phactaag.htm](http://www.cdc.gov/nccdphp/dash/phactaag.htm).

¹⁵ Surgeon General. (1996). Physical activity and health. Atlanta, GA: U.S. Public Health service, National Center for Chronic Disease prevention and Health Promotion. [Http://www.cdc.gov/nccdphp/sgp/npai.htm](http://www.cdc.gov/nccdphp/sgp/npai.htm)

cost of treating obesity itself.¹⁶ Obesity levels among America's youth have climbed while physical fitness levels have declined.

The greater the participation in leisure pursuits, the greater the life satisfaction. Recreation helps people live longer - adding up to two years to life expectancy through the moderate expenditure of energy such as walking on a daily basis.¹⁷ The stereotype of a sedentary senior citizen is outdated. Senior adults represent the biggest market for fitness and recreation in the 21st century. Targeting the over-50 crowd is a relatively new market for all providers in both the public and commercial leisure service industries. Improved health, higher educational levels, and financial security show that chronological age is not an indicator of vigor, ability, and interest.

In Pennsylvania, the state is teaming up with hospitals and other health care providers to work collaboratively in providing facilities, programs, and education aimed at getting people to increase their physical activity. There are examples of hospitals statewide, such as Abington Hospital in Montgomery County and Geisinger in Montour County, working with local parks and recreation departments to provide heart healthy recreation programs such as walking clubs on local trails. Trails offer opportunities for close-to-home recreation for walking, jogging, running, hiking, cycling, in-line skating, strollers and baby carriages, and people who want to enjoy the great outdoors.

Family and Community Bonds

Family trends in participation in outdoor recreation such as the most popular activities of walking, hiking, and biking, have captured the attention of the private sector. "Family, Fun and Fitness" is the mantra of commercial recreation enterprise. Outdoor recreation is especially important to families with young children. A Roper poll showed that 65 percent of families with at least one child age seven or younger participate in outdoor recreation at least once a month. Recreation has been found to be the strongest contributing factor in creating strong and supportive families. The togetherness and sharing promote strong healthy relationships and bonds that are essential to mental and social health.¹⁸

It used to be man versus mountain. Now it's women, men, kids, families, grandma, grandpa, and the pets. That's our market. These are people who will spur growth. They like choices. They're smart about how they spend their dollars.
Randy Myers, Director of Marketing, PlanetOutdoors¹⁹

Environmental Education and Stewardship

Participation in non-consumptive appreciative outdoor recreation activities such as hiking is a valuable predictor of environmental support. Participation in outdoor recreation is positively correlated with environmental concern.²⁰ Greenways are wonderful outdoor classrooms in which people of all ages can see and learn about plants, animals, and ecology. The Spring Creek and the Bald Eagle Creek and associated streams are renowned for their water quality and ecological importance. Outdoor recreation participation and environmental education can help achieve the goal of protecting the outstanding qualities of the environment in the watershed.

¹⁶ Fox, Maggie. *Ibid.*

¹⁷ Paffenbarger, R.S. Jr., Hyde., M.A., & Wing, A.L., et al. (1986). *Physical activity and all-cause mortality*. **New England Journal of Medicine**, 314, pp. 605-613.

¹⁸ Couchman, R. (1988, February). *Leisure: A Dynamic of Family Life*. **Visions**, 1,(3).4.

¹⁹ Raymond, Joan. (2000, August) *America's Affinity for the Great Outdoors*. **American Demographics**. 55.

²⁰ Bikales, E.A. & Manning, R.E. (1990). *Outdoor recreation and environmental concern: A further exploration. Proceedings of the 1990 Northeastern Regional Recreation research Symposium*. **General Technical Report NE-145**. Saratoga Springs, NY: U.S. Forest Service. 13-15.

Benefits Summary

Greenways and trails provide attractive landscapes, protect the environment, improve water and air quality, reduce sprawl, and create connections. People value greenways because they add to the quality of life in a community. This translates into higher property values, establishment and retention of businesses, economic development, and environmental stewardship. Previous studies of the Spring Creek watershed and the development of bicycle paths in Centre County have already produced great public support for continued protection of Centre County by creating connections through greenways and trails.

Chapter 3 - Needs Assessment

Introduction

As a public agency, one of the main goals of Centre County government is to serve the citizens. To provide for the requirements of the public regarding the Nittany and Bald Eagle Greenways, the planning process included a needs assessment. Information was gathered directly from the public and then analyzed to determine findings. The findings produced a clear picture of how the greenway could serve the people who live, work, or visit in Centre County. This information will enable the County to work towards fulfilling the expressed needs of the community while protecting the important natural resources in the project area. It will also help to guide service delivery, making the best use of human and financial resources.

Planning Target Area

The Nittany and Bald Eagle Greenways Plan area includes Spring Creek, Buffalo Run, Logan Branch, and their tributaries from the headwaters to their confluence with Bald Eagle Creek at Milesburg and the Bald Eagle Creek from Milesburg to Bald Eagle State Park. Residents of the area make up a rich and varied demographic and have a wide variety of skills, interests, and abilities. In addition, tourism to the area is significant. The interaction of these individuals and groups within the greenway corridors will generate a demand for outdoor recreation and conservation measures.

The character of the study area is diverse with two distinct areas; the Centre Region that is centered on State College Borough and the Inter-Valley Region that stretches from Bellefonte Borough and Benner Townships to Liberty Township. The Centre Region is primarily suburbanized and the Inter-Valley Region is more rural in character with the Boroughs of Milesburg, Bellefonte, and Howard serving as hubs of activity.

The I-99 roadway extension, currently under construction, bisects the greenway study corridors and places yet additional demands on the proposed greenway corridor in terms of increased environmental impacts, fast-paced residential development, and expanded tourism.

The Spring Creek watershed falls entirely within the study corridor. Growth and development of the surrounding urban areas has increased demands on water resources and threatens the high quality streams that characterize the watershed. The Spring Creek Watershed Commission has achieved much in the way of identifying opportunities for protection of Spring Creek and has implemented many complementary initiatives to help meet identified needs, including the support of this greenway plan. Therefore, this greenway study builds upon the original *Spring Creek Corridor Study* developed by the ClearWater Conservancy and the follow-up *Spring Creek Corridor Study-Phase II*. Together these two studies comprise the Spring Creek Rivers Conservation Plan. Both of these studies increased public awareness within the corridor and set the stage for the development of this greenway planning effort that extends the study area from the Spring Creek watershed to Bald Eagle State Park.

Approach to the Needs Assessment

Public participation, demographic studies, and trends analysis were the foundation for the needs assessment. Through the combination of different public outreach methods, the needs assessment represents the community at-large as well as groups with special conservation and/or outdoor recreation

interests and is relevant to the issues, trends, and opportunities of the Nittany and Lower Bald Eagle Valleys.

Public Participation Process

The public participation process had five components: the Lead Committee, Greenway Advisory Committee, key person interviews, a focus group, and a public hearing.

Lead Committee – Planners from the Centre County Planning Office and the Centre Regional Planning Agency and the Chairperson of the Spring Creek Watershed Commission served as the Lead Committee in directing the planning process. The Lead Committee provided critical input and completed the study mapping in GIS.

Greenway Advisory Committee – Agencies, organizations, and individuals with special interests in the greenways; representatives of municipalities in the study area, and citizens participated as the Greenway Advisory Committee. About 60 people were appointed to the committee. They had a wealth of knowledge in diverse specialties such as biology, ecology, resource protection, outdoor recreation, landscape architecture, environmental education, community and transportation planning, recreation, and agency requirements. They served as a sounding board, provided ideas and feedback, and guided the development of the plan and management strategies. The GAC was instrumental in providing suggestions to insure that all aspects of issues were addressed. Three meetings were held with the GAC that were also open to the public.

Key Person Interviews – Over 25 interviews were conducted with key stakeholders for the greenway. Interviews included the Pennsylvania Fish and Boat Commission; Pennsylvania Game Commission; Pennsylvania State Parks; Penn State University: Department of Landscape Architecture and Office of Physical Plant; Center for Watershed Stewardship; Centre Regional Planning Agency; Centre Region Parks and Recreation Department; the Planning Departments of Clinton, Mifflin, and Huntingdon Counties; Bellefonte Historic Railroad; SEDA-COG Joint Rail Authority; Bellefonte Waterfront District initiative representative; Centre Region Bike Coalition; Wildwater Boating Club; Pennsylvania Economy League; Centre County Association of Realtors and local realtors; Centre County Historical Society; Centre County Convention & Visitors Bureau and the North Central Mountains Group; Centre County Audubon Society; Pennsylvania DCNR Tourism; Appalachian Trail Alliance; Center for Rural Pennsylvania; Bellefonte Museum; Boal Mansion; Mount Nittany Conservancy, Rockview State Penitentiary, and appointed and elected officials.

Focus Group – A focus group was held with selected outdoor recreation devotees in the study area. Canoeists, kayakers, hikers, equestrians, birders, and cyclists participated in the focus group and provided insight into the project from a visitor's perspective. The two-way dialogue enabled their specific needs to be explored at length and produced in-depth discussions to help define and clarify issues. In addition to the facts and opinions that emerged, another finding of the work session was the passion the participants have for these activities in Centre County.

Public Hearing – The County will hold a formal public hearing for adoption of the greenway plan. Both the public hearing and public attendance in the GAC meetings enabled the general citizenry to participate in the process and present their needs and concerns.

Public Participation Findings

The findings of the public participation process indicated great support for establishing a greenway network in the Nittany and lower Bald Eagle Valleys. The area boasts natural areas and resource based recreation opportunities that conservationists and outdoor recreation enthusiasts highly value. Important natural resources throughout the study area are vulnerable to development and the impact of growth on the region. Those involved in the planning process advocate that a network of protected greenways would

be a viable strategy for long-term resource protection. Concerns and insight offered in the public participation process included:

- Water quality protection.
- Rapid development of the area.
- Potential growth resulting from the construction of Interstate-99 in the study area could further jeopardize the landscape of the region and connectivity within the greenway.
- Prospective activities for the greenway include: hiking, hunting, fishing, camping, bike touring, fitness walking, non-motorized transit, mountain biking, white water rafting, kayaking, boating, canoeing, birding, wildlife watching, horseback riding, cross country skiing, nature study/environmental education, sightseeing, and visiting historic and cultural locations.

Actions to establish the Nittany and Bald Eagle Greenways identified in the public participation process included:

- Protect and enhance the environmental features and attributes of the area.
- Create a network of greenway corridors with a complementary network of accessways.
- Enhance recreation and commuter opportunities through the development of trails.
- Modify municipal development ordinances to be greenway and trail friendly.
- Undertake public education to address perceptions about greenways, particularly related to security and property rights.
- Document the economic, environmental, community, and personal benefits of the greenway and use as a public education tool through a planned marketing strategy.
- Promote coordination and cooperation between the numerous public agencies, public landowners, and municipalities.
- Delegate authority to an organization with designated professional staff charged with the responsibility to move the greenway study forward.
- Consider funding within the context of all of Centre County's project needs such as transportation improvements, the county comprehensive plan, and potential open space planning.

Tourism Relationship

Heritage tourism and outdoor recreation travel represent a significant portion of the Commonwealth's total visitors. In 2001, Centre County became a part of Pennsylvania's newest heritage park, the Lumber Heritage Region.

Lumber Heritage Region

As Pennsylvania's 11th heritage region, the Lumber Heritage Region covers a 15 county area in north central and northwestern Pennsylvania including Centre County. This heritage park will focus its marketing, interpretive education, historic preservation, and economic development around the evolution of timbering. The region will rely heavily on its natural and recreational resources to draw visitors. Planning for the Lumber Heritage Region is just getting underway.

Tourism is Pennsylvania's second leading industry, next only to agriculture. Eco-tourism and nature based recreation are growing in participation. Documenting the value of tourism in the Centre County economy is becoming important to county organizations with the understanding this is a way to build support for their programs and facilities. For example, the Audubon Society and the Centre County Visitors Bureau have teamed up for a three year effort to track visitation to the area for birding. The North

Central Mountains Group, which includes the Centre County Visitors Bureau, is focusing on outdoor recreation. They are trying to promote trails for tourism.

Measuring both the *economic benefits and the costs of a tourism economy* is crucial for Centre County for planning, decision-making, allocating resources, and balancing the needs of the people who live in the county, attend school here, or visit as tourists. The sheer magnitude of Penn State University tends to drive Centre County. Since the greenway is a project removed from the university, it may have great appeal to the citizens and would be a reasonable use for the hotel tax.

Hotel Tax

Centre County enacted a hotel tax of two and a half (2 ½) percent in 2001. The revenue projection for this tax is \$1.5 million annually in 2001 dollars. The allocation formula earmarks one (1) percent for the Centre County Visitors Bureau and one and a half (1 ½) percent for sports such as golf, volleyball, and others that are not primary university sports. Projects such as greenway development would benefit both the people who live here and visit here. It would serve to enhance the quality of life, preserve the visual character and resources of Centre County so treasured by the citizens, and provide for the type of outdoor recreation opportunities most desired by the residents. Greenways would also be an outdoor recreation and heritage tourism attraction. A five-person committee including two representatives from the Visitors Bureau, two County Commissioners, and one member appointed by the Commissioners, in this case, the Historical Society Director, will determine how to allocate the hotel tax.

Centre County Visitation

The majority of visitation to Centre County is generated through meetings, conventions, and Penn State University. The Centre County Convention & Visitors Bureau concentrates on meetings and conventions. Figures for visitation other than meetings and conventions are not available from the Bureau. The Bureau recognizes the value and importance of outdoor recreation as a draw to visitors. The Bureau has developed maps with hiking paths and birding areas for tourists. The maps are in two formats, one for adults and one for children.

The interviews revealed that information on the economic impact of tourism, outdoor recreation, and resource protection is knowledge that many people, ranging from the Audubon Society to realtors, are interested in having. The Pennsylvania Fish & Boat Commission and Game Commission track the number of licenses sold by county but actual visitation and where visitors for fishing and boating come from are nebulous at best as shown in the box on the following page. No information about consumer spending related to recreation and conservation was uncovered despite extensive interview and research into this question.

Travel in Centre County

Three studies documented travel in the Centre County area principally for outdoor recreation, heritage tourism, and outdoor recreation in rural areas. The Pennsylvania Department of Conservation and Natural Resources (DCNR) commissioned two studies on outdoor travelers and heritage tourists in 1997 and 1999 respectively. The Center for Rural Pennsylvania conducted a study about the impact of outdoor recreation on the economies of rural areas in Pennsylvania in 1998.

Outdoor Traveler Study¹

In 1997, about 14 percent of travel in Pennsylvania was for outdoor recreation and accounted for 23 percent of the total travel dollars spent. The trend is towards increased travel for outdoor recreation at a growth rate of about 2 percent annually. Between 1995 and 1997, Pennsylvania's Outdoor Recreation travelers' expenditures grew at more than double the rate of Pennsylvania total travelers' direct

¹ Shifflet, D.K. and Associates. (1998). **DCNR Outdoor Traveler Study**. Harrisburg: Pennsylvania Department of Conservations and Natural Resources.

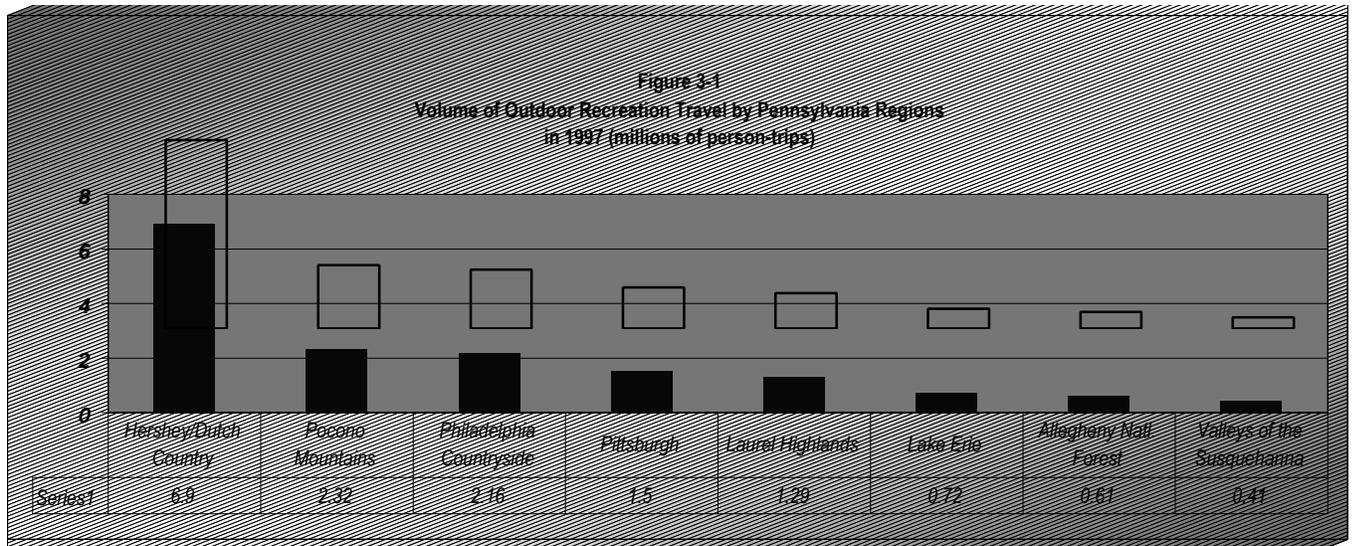
expenditures. Visitors to public lands such as game lands, parks, and forests accounted for about 34 percent of the revenues generated by Outdoor Recreation Travel or about 11.5 percent of all leisure travel in Pennsylvania.

Strong growth in the outdoor recreation market is becoming an increasingly critical component of Pennsylvania's tourism and future economic well-being.

DCNR Outdoor Traveler Study

The study divided the Commonwealth into eight tourism regions. Centre County was in the **Valleys of the Susquehanna Region**. As shown in Figure 3-1, this region had the lowest concentration of outdoor recreation travelers of the eight regions. Other pertinent findings to Centre County through its inclusion in the Valleys of the Susquehanna outdoor recreation tourism region include the following:

- A higher share of travelers age 50 and older and the highest average traveler age of 48.7 years along with Hershey/Dutch Country.
- Over half (53%) of the travel here originated in Pennsylvania. New York was the next highest state of origin at 13 percent.
- A high share of couples travel (40%) and the lowest share of family travel (30%). Also, the highest share of adults traveling alone (13%).
- Shortest average stay length along with the Philadelphia countryside (2.9 days vs. 3.9 in the Pocono Mountains.)
- Third highest representation of outdoor travel on state lands at 41 percent, next to Lake Erie at 41 percent and Allegheny National Forest at 63 percent.
- Outdoor recreation travelers to the Valleys of the Susquehanna region spend about \$49 per day.



Source: Pennsylvania Outdoor Recreation Travelers Study. p5.

Pennsylvania Heritage Tourism Study²

Closely related to outdoor travel is Heritage Tourism. The Pennsylvania Heritage Tourism Study conducted in 1999 found considerable crossover between heritage travelers and outdoor recreation

² Shifflet, D.K. and Associates. (1999). **Pennsylvania Heritage Tourism**, Harrisburg: Pennsylvania Department of Conservation and Natural Resources.

travelers. The main difference was that heritage tourists tended to be older. This study used the same planning regions as the Outdoor Travelers study. It found low recognition among all of the regions except the Lancaster/Dutch Region. The Lumber Heritage Region was designated after the heritage tourism study was conducted. Although recognition of heritage regions was low, satisfaction was high among those who had visited at least one of the regions. About one in four of Pennsylvania's leisure travelers is a heritage tourist.

Heritage tourism is important to Pennsylvania's economy. It is also in a growth mode: from 1996 to 1997, heritage tourism increased 23 percent while spending increased by 15 percent. A typical Pennsylvania heritage tourist is:

- 43.2 years of age.
- Among households with the highest average annual household-income levels.
- Employed in white-collar positions such as professional or managerial.
- Married.
- Traveling as a family or in an adult party of three or more.

Heritage Tourism

The Pennsylvania Heritage Tourism Study defines Heritage Tourism for Pennsylvania as a broadly defined travel market that encapsulates a wide variety of historic, cultural, and outdoors activities. The most popular attractions are Pennsylvania's historic towns/districts, the Liberty Bell, Gettysburg's battlefields, Amish country, and various museums and attractions throughout the state.

Since the Lumber Heritage region was recently established, visitation figures to the area are not yet available. However, the research into the other heritage areas has implications for the Nittany and Bald Eagle Greenways including recommendations to:

- Advertise the heritage activities available to tourists.
- Tie heritage tourism promotion to outdoor recreation travel promotion, as there is a great deal of crossover between the two.
- Focus on the promotion of Centre County's historic towns and districts.
- Promote the fun, educational, and scenic aspects of the County.

Center for Rural Pennsylvania Study on Economic Value of Resource Based Sports

The Center for Rural Pennsylvania conducted a study on the Economic Value and Impacts of Sport Fishing, Hunting and Trapping Activities in Pennsylvania in 1998.³ The study found that the \$9.6 billion that hunters, anglers, and fur takers spent to participate in their activities was more than half of the Commonwealth spent on its total state budget in 1997. The study also found that another economic benefit was employment based on the more than 88,000 jobs created by these sports. Most survey respondents in this study indicated that communities, families, and individuals benefit from the existence and maintenance of wildlife resources.

Fishing, Boating, and Hunting Numbers in Centre County

The Pennsylvania Fish & Boat Commission tracks fishing and boating licenses purchased in Pennsylvania according to the county in which the licenses were purchased. There is no tracking of where people fish or boat after they purchase their license.

³ Shafer, E.L. Dick, (1998) Economic Values and Impact of Sport Fishing, Hunting and Trapping Activities in Pennsylvania, Harrisburg: Center for Rural Pennsylvania.

License	Number in 2001	Number in 1992	Annual Change
Fishing	13,444, including 11,470 trout licenses	13,734	1.5%
Watercraft	3,802	2985	2.6%
Hunting	18,722	18,348	-2.2%

Annually, there are about 18 million fishing trips in Pennsylvania. A study by the U.S. Fish & Wildlife Service determined that the value of these trips translates into \$1.3 billion dollars in the Commonwealth's economy. According to the Pennsylvania Fish & Boat Commission, licensed fisherman make an average of about 10 fishing trips per year. This equates to about \$72 per trip. Based on these very rough figures and projections, the value of fishing for those licensed in Centre County is about \$9.7 million in the economy although exactly where they spend their money is unknown. No information is available on just where fishermen are fishing or who comes into Centre County to fish. These are sketchy figures to give some sense of the economic benefit of fishing.

Outdoor Recreation and Heritage Tourism Opportunities in the Nittany and Bald Eagle Greenways

Primary among the outdoor recreation opportunities of the Nittany and Bald Eagle Greenways are the waters of Spring Creek and amenities of Bald Eagle State Park. Spring Creek draws visitors for fishing, canoeing, kayaking, and nature enjoyment. Bald Eagle State Park is a destination for visitors to camp, swim, hike, picnic, sail, hunt, and enjoy the natural setting. These destinations and others throughout the County will be affected by the new I-99 roadway extension, which will provide increased access and greater visibility for visitors from outside the area. Important tourism opportunities in the Nittany and Bald Eagle Greenways area include:

- Scenic driving corridors, such as Route 550 along Buffalo Run and Brush Valley Road along Mackey Run.
- Canoeing and kayaking on Bald Eagle and Spring Creeks.
- Sunnyside Paddling Park.
- Regional trail connections to the Mid State Trail.
- Fisherman's Paradise and other fishing areas along Spring Creek.
- Historic agricultural community/scenic open spaces.
- Village historic districts.
- Museums such as the Pennsylvania Military Museum and the Bellefonte Museum.
- Historic sites such as Curtin Village and Centre Furnace Mansion.

Projected Use, Trends, and Facts

The greenway network encompasses areas of urban, suburban, village, and rural landscapes. It is accessible to people who live here, students of the Penn State University, tourists and visitors to Bald

Eagle State Park, and visitors of the other attractions of the area. This diversity will bring many users to the greenway and its trails.

It is anticipated that the Nittany and Bald Eagle Greenways will be used during all four seasons of the year by a variety of users to include walkers, joggers, cyclists, in-line skaters, equestrians, paddlers, cross-country skiers, and anglers. Motorized vehicles will not be permitted on the trails within the greenway network except for maintenance and security purposes due to the sensitive natural resources and potential user conflicts. Centre County is currently in the planning stage of developing a motorized recreation trail in the northern portion of the County.

As a public recreation facility, trails must provide opportunities for persons with disabilities by complying with the Americans with Disabilities Act (ADA). The entire length of a trail is not required to meet the requirements of the ADA, but the activity of using a trail should be provided to persons with disabilities and all points of interest along a trail must be accessible to all users. In areas where bicycles will be accommodated the design should meet the criteria established by the American Association of State Highway and Transportation Officials (AASHTO) for development of bicycle facilities.

Greenway Visitor Characteristics, Trends, and Facts

Americans love the great outdoors. Participation in outdoor recreation is on the rise. Although outdoor recreation activities are generally pursued by people who are more educated and affluent than the population as a whole, the highest rates of growth in outdoor recreation participation are in the moderate to low-income groups. Families are another group increasing their outdoor recreational activities. Fully one out of three families with children stated that they participate in outdoor recreation as a family at least once a month according to a Roper Poll in 2001. Clearly many of the communities within the greenway corridor fit this profile of families and educational and income levels of people who are active in the outdoors. Additional insights into greenway visitors are outlined in the following user profiles.

<p><i>Pedestrians/Persons w/Disabilities</i></p> 	<p>Travel Speed - 3 to 7 miles per hour</p> <p>Vertical Clearance - 7 feet</p> <p>Sight and Stopping Distance - 50 feet</p> <p>ADA Requirements - Maximum 5% grade (1:20) w/o handrail, maximum 8% grade (1:12) w/ handrail</p> <p>Trail Width - 5 feet minimum</p> <p>Trail Surface Preference - Compacted aggregate (pedestrians), bituminous (persons w/ disabilities)</p> <p>Support Facilities - Restrooms, benches, drinking fountains, picnic tables, telephones</p>
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Trends and Facts:

- The highest use of trails is for pedestrians. Walking is the chief form of exercise in the United States. The Center For Disease Control and the Surgeon General of the United States have indicated that the single most important thing that communities can do to help improve fitness and wellness is to provide safe, close-to-home facilities for walking and outdoor exercise.

- SCORP (The Pennsylvania State Outdoor Recreation Plan 1991-2003) found that about 50 percent of survey respondents for the plan hike and 54 percent jog in this part of the state with a respective total of 60 activity days for jogging and 13 activity days for hiking per capita. Walking was not identified as a leisure activity choice in this particular state survey. Nevertheless, the National Bicycling and Walking Study shows that four out of five people walk for exercise.
- The National Sporting Goods Association (NSGA) survey of sports participation by people seven years of age and older who participated more than once in a given year show that hiking participation rate has maintained participation throughout the 1990s at over 20 million participants.
- The NSGA survey of participation by people seven years of age and older who participated more than once a year shows that walking for exercise increased by 6.8% from 1999 to 2000.
- According to the Rand Corporation, for every extra mile a person walks, they add 20 minutes to their life and reduce their health care costs by 33 cents.
- A Brown University Medical School Study reports that getting 25 percent of the sedentary Americans (an achievable goal according to the American Medical Association) to walk three times a week would reduce health care costs by seven billion dollars – even if these people were paid \$12 an hour to walk.

Public Concerns Regarding Bicycling and Walking

According to Pennsylvania's Statewide Bicycle & Pedestrian Master Plan, few Pennsylvania communities are walkable or bikeable. Both the planning process for the statewide plan and the planning process for the Nittany and Bald Eagle Greenways found the following concerns about bicycling and walking:

- **Increasing Walking and Bicycling** – More people would walk and bicycle if safe and convenient facilities were available including paved shoulders along roads, bike lanes, signed routes, and sidewalks.
- **Increase Public Awareness** – Educational and aggressive outreach programs are needed to make people aware of non-motorized traffic as well as the rights and responsibilities all types of users have regarding motorized and non-motorized transportation.
- **Integration with Transportation Planning** – non-motorized transportation must be part of the planning process for transportation at all levels of government and regional planning.
- **Making Communities Pedestrian and Bicycle Friendly** – A comprehensive approach to making non-motorized transportation safe and convenient in pedestrian/bicycle friendly communities requires a comprehensive approach including physical improvements for cycling and walking, education, promotion, and providing technical assistance and support for municipalities, community organizations, and others involved with related planning efforts for walking and biking.
- **Leadership** – Government officials at all levels need to step up to the plate and make a commitment to making non-motorized transportation a reality in pedestrian/bicycle friendly communities. Planning needs to extend beyond jurisdictional borders for a true regional approach that facilitates transit through a network of connected trails and community/regional destinations.

In-line Skaters



Travel Speed -	10 to 17 miles per hour
Vertical Clearance -	8 feet
Sight and Stopping Distance -	100 feet
Trail Width -	12 feet w/2.5-foot shoulders, for two-way travel
Trail Surface Preference -	Bituminous
Support Facilities -	Restrooms, benches, drinking fountains, picnic tables, telephones

Trends and Facts:

- The NSGA survey comparison of youth participation documented that in-line skating grew by 469.6% from 1990 to 2000.
- In-line skating has become a form of transportation especially for youth without cars.

Cyclists



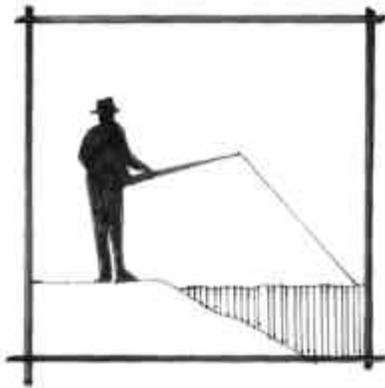
Travel Speed -	20 miles per hour
Vertical Clearance -	8 feet
Sight and Stopping Distance -	150 feet
Trail Width -	10 feet w/ 2 foot shoulders (8 feet minimum)
Trail Surface Preference -	Compacted aggregate of bituminous
Support Facilities -	Restrooms, benches, drinking fountains, picnic tables, telephones, bike racks/lockers

Trends and Facts:

- The second highest use of trails in Pennsylvania is by bicyclists. The Pennsylvania SCORP survey found that 38 percent of the survey respondents in this part of the state bicycle at a rate of about 25 per capita activity days. Centre County is an advanced area in terms of bicycling for both transportation and recreation. Public transit buses are outfitted with bicycle racks to facilitate multi-modal transportation.
- According to the Statewide Bicycle & Pedestrian Master Plan:
 - Between one-fifth and one-half of all work-related commuting trips in State College are made by foot or bicycle.
 - Ten percent of all trips in college towns in Pennsylvania are made by bicycle, with tremendous potential to increase this number.
- An important goal is to enable half of all Pennsylvanians (up from 39% in 1992) to enjoy the natural resources of the state by bicycling as well as to increase the number of out-of-state visitors who will bicycle in Pennsylvania.
- Two targets include doubling the number of people bicycling or walking to public transit stops and making 20 percent of all non-work trips that are three miles or less by foot or bicycle.

- Bicycling and walking are the chief form of transportation for children and households with no car or driver. About one out of every 10 Centre County residents is under the age of 16.
- There are several bicycle clubs in the study area including the PSU Cycling Club (student oriented club with approximately 70 members) and the Centre Region Bike Coalition (an organization promoting bicycling for recreation and transportation in the area.)

Anglers



- | | |
|----------------------|--|
| Vertical Clearance - | 7 feet |
| Area Clearance - | 6-foot of unobstructed shoreline between water edge and obstacle, min. 8' wide pier |
| Support Facilities - | Restrooms, benches, drinking fountains, telephones, parking area, stream access trails |

Trends and Facts:

- The NSGA survey of consumer equipment purchases noted that sales of fishing tackle grew by over five-percent from 1999 and 2000, and the 2001 forecast projects this trend to continue.
- The NSGA survey of sports participation by people seven years of age and older who participated more than once in a given year shows that the fishing participation rate has maintained participation throughout the 1990s at over 40 million participants. Participation increased from 43.6 million in 1998 to 49.3 million in 2000.
- According to the Pennsylvania SCORP, about 29 percent of survey respondents for the state plan indicated that they fish a total of about 7.64 per capita activity days. Four of the top ten most needed recreation facilities for this region are unique to this part of the state, not appearing on the statewide needs list overall. These facilities include: fishing areas, historical sites, environmental education area, and zoos.
- Fishing is important to tourism in this region.

Cross-Country Skiers



- | | |
|-------------------------------|--|
| Travel Speed - | 2 to 8 miles per hour |
| Vertical Clearance - | 7 feet |
| Sight and Stopping Distance - | 50 feet |
| Trail Width - | 7 feet |
| Support Facilities - | Restrooms, benches, drinking fountains, picnic tables, telephones, shelter |

Paddlers



Travel Speed -	2 to 3 miles per hour
Vertical Clearance -	5 feet
Minimum Water Depth -	8 inches to 1 foot
Support Facilities -	Restrooms, benches, drinking fountains, picnic tables, telephones, parking w/ adequate turning radius for trailers, stabilized launch area

Trends and Facts:

- The NSGA survey of participation by people seven years of age and older who participated more than once a year shows that canoeing decreased by 15.1% from 1999 to 2000 while kayaking/rafting increased by 5.2%.
- The National Kayak Slalom Training Center #9 located on Spring Creek in Bellefonte at the Sunnyside Paddling Park is the only year-round training site for kayaking in the U.S.
- There are three organizations that provide kayaking programming on Spring Creek: the Mach I SRS Team (junior Olympic slalom training program with 65 members), Penn State Outing Club (primarily serving Penn State students), Wildwater Boating Club (family oriented boating group).

Mountain Bicyclist

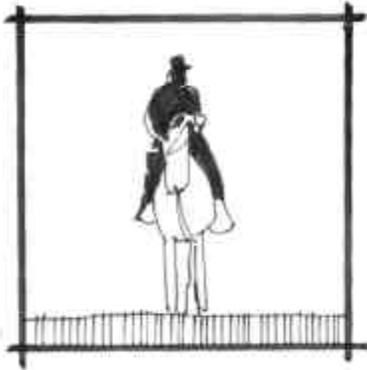


Travel Speed -	8 to 15 miles per hour
Vertical Clearance -	10 feet
Sight and Stopping Distance -	150 feet
Trail Width -	5 foot
Trail Surface Preference -	Stable native soil or compacted aggregate
Support Facilities -	Restrooms, benches, drinking fountains, picnic tables, telephones, bike racks/lockers

Trends and Facts:

- Mountain biking is a growing sport that is represented by several advocacy groups including the International Mountain Bicycling Association that includes 32,000 individuals throughout each of the 50 United States and other countries.
- Beginning February 1, 2003 mountain bikers will be prohibited from riding on State Game Commission Lands from the last Saturday in September to the third Saturday in January and after 1 p.m. from the second Saturday in April to the last Saturday in May, except on designated routes.

Equestrians



Travel Speed -	5 to 15 miles per hour
Vertical Clearance -	12 feet
Sight and Stopping Distance -	100 feet
Trail Width -	4 feet (tread) with 8 feet clear
Trail Surface Preference -	Grass
Support Facilities -	Restrooms, benches, drinking fountains, picnic tables, telephones, hitching posts, mounting blocks

Trends and Facts:

- According to the Pennsylvania Department of Agriculture, Centre County ranks 16th among Pennsylvania's 67 counties in terms of total equine expenditures.
- Although the total non-commercial equine outnumbers commercial equine by 22 percent in the state, expenditures for commercial equine are about 50 percent higher than for non-commercial.
- Centre County has about 3,800 total equine, equating to about 2,100 non-commercial equine.
- According to the Department of Agriculture's survey, over half of equine owners consider their equine activities extremely important to their overall recreation.
- The majority of equine owners spend less than six hour a week, one out of five spend up to 10 hours weekly, and about 10 percent spend up to 15 hours a week on equine-related recreation.
- Urbanization is resulting in the loss of open space that serves equine related recreation. The equine industry is very supportive of agricultural preservation.
- While there is a pervasive public perception that equestrian-related recreation is reserved for upper income levels, research shows that a small percentage are in the upper income brackets and the majority are in the middle income levels and lower middle income levels.
- Beginning February 1, 2003 equestrians will be prohibited from riding on State Game Commission Lands from the last Saturday in September to the third Saturday in January and after 1 p.m. from the second Saturday in April to the last Saturday in May, except on designated routes.

All Terrain Vehicles



Travel Speed -	Average 35 to 55 miles per hour. Max speed 70 mph
Vertical Clearance -	10 feet
Sight and Stopping Distance -	300 feet
Trail Width -	5 feet (2 wheeled vehicles) 7 feet (3- or 4- wheeled vehicles)
Trail Surface Preference -	Stable native soil
Support Facilities -	Restrooms, benches, drinking fountains, telephones, parking w/ adequate turning radius for trailers

Trends and Facts:

- ATV sales have increased in the last 5 years.
- Areas to ride are dwindling.
- In 2001 DCNR enacted a new law to require all ATVs to be registered with DCNR unless used for farm or business purposes. The law purpose is to reduce ATV riding in unauthorized areas by increasing fines, facilitating identification, and providing additional riding opportunities through grants for trail development and facilities on private lands.
- Beginning February 1, 2003 ATVs will be prohibited from riding on State Game Commission Lands from the last Saturday in September to the third Saturday in January and after 1 p.m. from the second Saturday in April to the last Saturday in May, except on designated routes.

Demographics

Major demographic trends from the 2000 census about Pennsylvania include the following:

Population Growth – Pennsylvania’s population growth in the 1990s was three percent, while Centre County had 10 percent growth in the past decade. Out migration has been a trend for the past fifty years with more Pennsylvanians leaving the state than new people migrating in. Overall population in the cities and boroughs is declining while suburban growth is on the rise as seen in population increases in townships. This pattern is evident in Centre County. The population in State College and Howard Boroughs decreased. Bellefonte Borough increased by only .6 percent. Five townships had population increases that equaled 80 percent of the county’s total population growth. These five townships, Ferguson, College, Patton, Halfmoon, and Spring, are located within the Nittany and Bald Eagle Greenways corridor.

Economic Growth – Pennsylvania’s economic expansion in the 1990s was limited. The Commonwealth ranked 48th among the 50 states in economic growth.

Cultural Diversity – Pennsylvania is a rural state. The rural communities continued to be largely Caucasian, native-born Pennsylvanians. Cultural diversification is occurring largely in Philadelphia, Pittsburgh, Harrisburg, York, and Lancaster.

Family Structure – One of the most marked changes in Pennsylvania’s population in recent years has been the alteration of the family structure. Households have experienced a decline in married couples and households with children. Households with single people, single heads of households, and single parents have increased.

Graying of Pennsylvania – Pennsylvanians are getting older and living longer. At 16 percent, the proportion of Pennsylvanians over the age of 65 is the second highest in the nation, just after Florida with 18.5 percent. Between now and 2010, the proportion of elderly Pennsylvanians will remain stable. After 2010, the proportion of elderly in our population will increase substantially. **This is the major demographic trend that communities in Pennsylvania, including Centre County, will address over the next fifty years.** Centre County is fast becoming a retirement mecca as shown in the population growth in the older age groups. The small town/college town appeal of the area is attractive. Centre County’s aging characteristics are skewed because of the large population of students attending Penn State University. Nearly half of the population (48.2 percent) of State College Borough is 20 to 24 years of age while the County over all has about 5 percent in the age cohort including all municipalities except for State College.

Different Generations - Different Views of the World

Longer lives have produced several generations with different views of the world: Traditionalists, Baby Boomers, Gen X, and Gen Y. Their formative experiences have molded specific preferences and beliefs among these different age groups. Each group has its own attitudes, sensibilities, hot buttons and cultural expectations. Clarifying the needs and desires of all generations is essential in public service. Finding out how to reach and involve different generations of people in everything from programs and services to funding in parks and recreation in a positive manner is complex. For example one generation alone, Gen Y, has three segments adults, teens, and children.

Implications for Greenway Development

Planning and developing greenways, especially when trails are included, has been controversial in many communities. To achieve success, both public education and the development of partnerships are key factors. The NIMBY (Not In My Back Yard) and BANANA (Build Absolutely Nothing Anytime Near Anything) phenomena frequently emerge in trail planning and construction. In order to undertake a public outreach and education program and establish partnerships, understanding project proponents and opponents is essential. Figure 3-2 presents information about various generations along with implications to assist Centre County planners in devising outreach strategies.

Figure 3-2

Generations and Implications

Traditionalists – *Born before 1946*. Affected by the Great Depression. Hard work. Self-sacrifice. Respect for authority and institutions. Earned their material comforts the good old-fashioned way. **Reaching this group:** Stress they have the right to enjoy the fruits of their labor. Stress frugality. Carry endorsements of well-known people with the wisdom of experience.

Baby Boomers – *Born 1946 – 1960*. Born into prosperity and affluence. “Permissive” upbringing. Feel special and privileged. Challenge authority. Champion the unconventional. Focused on self-fulfillment. Strong sense of entitlement and self-worth. **Reaching this group:** Stress family and family activity. Supply products and services that make boomers feel like young, active winners.

Gen X – *Born 1960-1980*. Lived with social and economic obstacles that are harder than those faced by Traditionalists and did not exist for Boomers. Technology and media opened them to wider choices in lifestyle than previous generations. Sophisticated and savvy about the world. Skeptical. **Reaching this group:** Use candor, humor, and pragmatic approaches.

Gen Y (Echo Boomers) – *Born 1980-2000*. Group so large and complex that it is viewed as three distinct groups: adulthood, teens and tweens. Multi-cultural diversity. Broader definition of family. Affected by violence and scandal: Columbine, Kosovo, terrorism, and political scandals. More watchful and careful about their personal safety. Mistrustful of the media. Information Age influence: shorter attention spans, boredom, and over-stimulation. **Reaching this group:** Use technology: videos, computers, WEB. Capitalize on hope and optimism. Inclusive multi-cultural programs and services. Participative planning enabling people to be heard through pulling together.

Sources: Paul, Pamela. September 2001. *Getting Inside Gen Y, American Demographics*, Volume 23(9) pp 42-49. Smith, J. Walker and Clurman, Ann. 1997. *Rocking the Ages: the Yankelovich Report on Generational Marketing*. (New York, NY: Harper Business).

Centre County Population Facts and Figures

Centre County’s growth from 1990 to 2000 was three times faster than the state as a whole and is third in growth rate next to Pike and Monroe Counties. Table 3-2 presents the population changes in Pennsylvania, Centre County and the 17 municipalities within the Nittany and Bald Eagle Greenways.

Table 3-2			
Municipal Populations of Municipalities in Nittany and Bald Eagle Greenways - 1990-2000			
Jurisdiction	2000	1990	% Change
Pennsylvania	12,281,054	11,881,643	3.4
Centre County	135,758	123,786	9.7
Halfmoon	2,357	1,469	60.4
Ferguson	14,063	9,368	50.1
Marion	978	730	34.0
College	8,489	6,709	26.5
Walker	3,299	2,801	17.8
Patton	11,420	9,971	14.5
Spring	6,117	5,344	14.5
Harris	4,657	4,167	11.8
Potter	3,339	3,020	10.6
Boggs	2,834	2,686	5.5
Liberty	1,830	1,747	4.8
Milesburg	1,187	1,144	3.8
Benner	5,217	5,085	2.6
Bellefonte	6,395	6,358	.6
State College	38,420	38,923	-1.3
Howard Borough	699	749	-6.7
Howard Township	924	1,004	-8.0

The top five fastest growing municipalities in the greenway area are shown in Table 3-3. These growth rates are among the highest in the state between 1990 and 2000.

Table 3-3	
Top Five Fastest Growing Municipalities in Greenways Study Area	
Municipality	Growth Rate - 1990-2000 (%)
Halfmoon	60.4
Ferguson	50.1
Marion	34.0
College	26.5
Walker	17.8

Table 3-4 presents the top five municipalities out of the 36 in Centre County that added the most people in 1990-2000. The actual population growth in Ferguson, College, Patton, Halfmoon, and Spring Townships totaled 9,585. The Centre County population increased by 11,972 in the 1990s. These five communities shown in Table 3-4 represent 14 percent of the municipalities but 80 percent of the growth

in the County. They are all in the greenway area thus illustrating the development pressure in the Nittany and Bald Eagle Greenways corridor.

Table 3-4 Top Five Municipalities in Greenway According to Additional Population - 1990-2000	
Jurisdiction	Population Added 1990-2000
Centre County	11,972
Municipality	
Ferguson	4,695
College	1,780
Patton	1,449
Halfmoon	888
Spring	773
TOTAL (top five municipalities)	9,585

Income

Income is directly related to lifestyle and recreational pursuits. Higher levels of affluence are associated with higher levels of participation, varied interests and a willingness to pay for services. Penn State University with its large student population housed in the municipalities near the University influences income and poverty levels. As expected, students with limited income contribute to the relatively high level of poverty and low household incomes in this area.

Table 3-5 Income and Poverty Levels				
Municipality	Median Household	Median Family Income	Per Capita Income	% of Individuals in Poverty
Pennsylvania	40,106	49,184	20,880	11.0
Centre County	36,165	50,557	18,020	18.8
Halfmoon	62,198	67,222	23,596	3.8
Ferguson	46,703	62,461	22,724	14.0
Marion	41,985	46,691	15,153	4.3
Walker	48,835	54,613	19,130	6.1
Patton	41,993	61,503	22,860	18.1
Boggs	40,168	43,886	16,030	7.7
Liberty	31,667	36,875	15,814	8.9
Milesburg	35,508	37,885	16,255	11.1
Benner	42,083	47,800	17,665	2.2
Bellefonte	33,216	42,378	18,659	13.5
State College	21,186	54,949	12,155	46.9
Howard Borough	42,981	47,885	18,549	1.2
Howard Township	39,375	43,068	16,175	5.5

Education

Educational attainment is the strongest indicator of an individual's income potential, attitudes and spending habits. The trend nationally is toward higher levels of education. Overall Centre County has a high level of educational attainment than the state as a whole. The County has more than double the proportion of the population with professional degrees compared with the state. The closer to Penn State University, the higher the educational levels in Centre County. Nine of the municipalities in the Nittany and Lower Bald Eagle Valleys have higher levels than the state while only four have lower levels.

Jurisdiction	High School Graduates or Higher %	Bachelor's Degree or Higher %	Professional Degree %
Pennsylvania	81.9	22.4	8.4
Centre County	86.2	36.3	17.5
Halfmoon	95.0	40.0	15.2
Ferguson	95.0	56.0	29.0
Marion	81.1	12.3	1.5
Walker	87.9	15.1	5.8
Patton	94.5	59.6	29.9
Boggs	77.4	7.8	1.5
Liberty	76.0	8.0	3.2
Milesburg	82.9	11.8	3.7
Benner	71.8	12.5	5.0
Bellefonte	84.5	24.2	7.2
State College	95.9	69.2	40.4
Howard Borough	94.1	14.1	5.3
Howard Township	78.1	10.8	3.3

Age, Race, and Household Characteristics in Centre Country

Table 3-7 presents information about municipalities in Centre County regarding age, race, and household characteristics. Centre County continues to be a relatively homogeneous community despite cultural diversification in certain pockets in the County. While the actual numbers of races other than Caucasian are low, the important point is the trend towards increasing diversification. The Borough of State College and Benner Township have the highest proportion of diverse races with 16 percent and 12 percent respectively. Rockview State Correction Institution prison population affect the Benner Township percentage.

Table 3-7 Nittany and Bald Eagle Greenways Service Area General Demographic Characteristics of Age, Race, Household Type and Home Occupancy by Municipality																	
	Age (%)										Race				Households		
	Under 5	5-9	10-14	15-19	20-24	25-34	35-44	45-59	60-74	75+	White	Black	Hispanic	Asian	Family	Owner	Renter
Pennsylvania	5.9	6.7	7.0	6.9	6.1	12.7	15.9	18.9	12.1	7.7	85.4	100	3.2	1.8	67.2	71.3	28.7
Centre County	4.6	5.1	5.2	10.0	19.8	13.4	13.1	15.0	8.9	4.8	91.4	2.6	1.7	4.0	57.8	60.2	39.8
Bellefonte	6.3	6.0	5.6	5.4	7.3	16.9	14.0	16.4	12.7	9.4	97.2	.9	.6	.5	57.3	49.5	50.5
Benner	2.7	3.9	4.2	4.1	8.3	20.7	24.0	20.6	8.7	2.9	76.1	19.8	3.5	.5	70.4	89.6	10.4
Boggs	5.5	6.7	7.5	7.3	5.4	13.2	15.1	22.7	11.8	5.0	98.7	.2	.5	0	76.8	82.6	17.4
College	4.8	6.1	6.3	14.7	5.8	10.5	15.5	17.4	11.1	7.7	94.2	1.6	1.2	2.7	66.8	76.4	23.6
Ferguson	6.1	6.4	6.4	5.2	15.3	15.2	14.9	1.4	9.2	4.1	87.9	2.4	1.8	7.4	62.4	59.6	40.4
Half Moon	8.1	10.9	9.5	7.6	3.0	11.6	24.2	19.0	4.2	1.9	99.2	.3	.5	.1	86.1	91.4	8.6
Harris	5.5	7.7	9.9	7.2	2.7	9.7	18.1	22.7	12.5	4.0	95.3	1.3	1.2	1.6	77.4	82.0	18.0
Howard Borough	5.6	6.0	7.0	6.3	5.6	11.4	19.5	19.3	13.6	5.7	99.7	0	.4	0	74.5	74.1	25.9
Howard Township	5.4	5.3	7.6	8.1	4.4	13.0	18.6	20.9	13.1	3.6	99.0	.5	.6	0	80.2	84.9	15.1
Liberty	6.3	6.8	7.2	6.1	4.8	13.1	16.1	20.7	12.9	6.1	99.1	0	.2	.1	74.0	87.8	12.2
Marion	11.3	9.5	7.0	5.0	5.1	15.4	17.4	18.0	7.9	3.4	99.4	.1	.2	0	83.5	89.4	10.6
Milesburg	6.3	6.7	6.7	6.2	4.7	15.6	15.2	19.7	11.7	7.1	99.2	.2	.6	0	70.2	70.8	29.2
Patton	4.9	5.3	5.6	5.5	22.3	16.5	14.2	15.7	7.9	1.9	89.2	3.5	2.2	4.5	51.6	52.9	47.1
Potter	6.1	7.8	7.6	6.8	3.9	11.6	17.3	21.9	12.9	4.1	98.7	.4	.4	.2	75.2	88.2	11.8
Spring	5.8	7.0	7.4	6.2	4.5	14.7	18.0	19.2	11.2	6.0	98.6	.2	.5	.2	70.3	76.5	23.5
State College	1.8	1.4	1.5	18.4	48.2	11.3	4.9	5.6	3.6	3.3	84.3	3.7	3.0	8.8	27.5	22.8	77.2
Walker	6.0	7.6	8.0	5.9	4.9	12.6	16.8	21.0	12.5	4.6	99.1	.1	.4	.2	80.7	89.5	10.5

Source: Penn State Data Center. <http://pasdc.hbg.psu.edu/pascd/centermunicipality/Centre/Centre-RPTO.htm>

Older and Younger Age Groups

Table 3-8 presents trends in population changes for the age groups of under 18 and 65 and older

Table 3-8 Nittany and Bald Eagle Greenways Area Population Changes 1990-2000 - Age Groups 18 and Under and 65 and Older									
	18 and Under %			65 and Older %			Median Age		
	1990	2000	Change	1990	2000	Change	1990	2000	Change (Yrs)
Pennsylvania		23.8			15.6			38.8	
Centre County	18.2	28.0	53.8	8.9	10.4	16.8		28.7	
Bellefonte	20.3	31.8	56.6	18.1	18.1	0	35.6	36.8	+1.2
Benner	15.7	13.5	-14.5	5.2	7.9	5.2	31.7	37.6	+5.9
Boggs	26.4	24.0	1	10.9	11.8	6.4	33	38.0	+5.0
College	23.9	21.1	11.7	13.5	14.9	10.4	34.4	36.2	+1.8
Ferguson	23.9	22.8	4.6	7.3	9.7	32.9	31.9	31.8	-0.1
Halfmoon	32.9	33.9	3	4.1	4.5	9.7	30.5	34.6	+4.1
Harris	26.0	28.4	9.2	8.1	11.8	45.7	34.2	39.5	+5.3
Howard Borough	27.2	22.7	1.8	10.5	14.9	41.9	32.7	39.2	+6.5
Howard Township	27.4	23.4	-14.6	9.2	10.4	13.0	33.0	38.3	+5.3
Liberty	27.1	24.0	-11.4	11.3	13.9	23.0	32.8	38.3	+5.5
Marion	30.1	30.8	2.3	6.8	8.4	23.5	30.6	33.5	+2.9
Milesburg	22.6	24.5	8.4	13.5	12.7	-5.9	36.3	37.8	+0.5
Patton	21.9	19.1	-12.8	4.9	6.6	34.7	28.9	28.2	-0.7
Potter	24.8	26.0	4.8	9.8	11.7	19.3	34.5	38.8	+4.3
Spring	24.2	24.5	1.2	12.1	12.7	4.9	33.2	37.6	+4.4
State College	6.3	5.8	-7.9	4.7	5.8	23.4	21.7	21.8	+0.1
Walker	26.0	25.4	-2.3	11.0	11.3	2.7	35.1	37.7	+2.6

Table 3-8 shows the trend towards more people in the older age groups. In the past decade, the median age increased in every municipality except Patton and Ferguson Townships, with a range of .5 to 5.9 year median age increase. Growth in the youngest age groups was most significant in Bellefonte with a 56.6 percent Increase in people under 18 years of age. College and Harris Townships also saw about double-digit growth in the group. Benner, Howard Township, Liberty, Patton, and State College saw substantial decreases. In contrast 16 out of 17 municipalities in the study area saw growth in the over 65-age cohort, ranging from the highest growth rate in Harris at 45.7 percent to the lowest in Bellefonte which remained the same.

Conclusions

The investigation into needs and demands for a comprehensive greenway and bikeway network in the Nittany and Lower Bald Eagle Valleys revealed considerable support for the concept and generated many ideas, potential opportunities, and issues that should be considered within the planning process. The findings are summarized below.

- The water resources of the study area are of primary concern to residents. The role of a greenway network in the protection of these resources is generally recognized and viewed as a positive outcome of greenway development.
- Outdoor recreation is important to the area from a variety of perspectives including enjoyment by the general population, health and wellness, and tourism that provides positive economic investment.
- A wide variety of user groups would benefit from the development of a greenway and bikeway network. The accommodation of multiple users must be considered in tandem with the protection of the natural resources of the Nittany and Lower Bald Eagle Valleys.
- Water recreation, fishing, kayaking, and canoeing are popular activities in the Nittany and Lower Bald Eagle Valleys.
- There is significant population growth in the study area although much of the area outside of State College Borough and Bellefonte Borough can be characterized as rural.
- The extensive land holdings in public ownership provide the initial framework for the creation of a comprehensive greenway network.
- The concept and benefits of greenways are not fully understood by the public at large.
- Getting the word out is important. The public participation process identified the importance of involving the municipalities and citizens early in the process.
- The growing aging population in Pennsylvania will desire recreation opportunities that they can participate in for pleasure, fitness, and wellness.
- Land preservation efforts need to deal with the issue of private property rights.

Chapter 4 - Greenway & Open Space Framework

Introduction

In addition to collecting public input, greenway planning involves a comprehensive exploration of resources to assess linear features and destination/origination points that may contribute to greenway development and open space preservation. These resources can be natural or manmade, occurring in a localized area or expanding regionally. A comprehensive inventory and analysis of existing resources provides the framework for a greenway network within the Nittany and Lower Bald Eagle Valleys.

The resources of the Nittany and lower Bald Eagle Valleys were explored via available GIS data obtained from the County and other data repositories, USGS and roadway mapping, pertinent document review, and field reconnaissance. Linear resources were identified and analyzed for their potential as part of a network of greenways. Destination/origination points, also known as hubs and nodes, were assessed for their potential to link to the greenway network. The Resource Map on page 4-3 identifies the resources that were mapped during the inventory and analysis of the study area.

Natural Resources

Stream valleys and ridge tops are natural linear features that contribute to greenway development. The ridge and valley terrain and the stream corridors of Spring Creek and the Lower Bald Eagle Creek along with their tributaries create a network of linear resources that interconnect and span the study area. The Resource Map identifies the significant natural resources of the study area that were identified in the resource inventory and analysis phase.

Stream Corridors

There are two major stream corridors in the study area: Spring Creek and Lower Bald Eagle Creek. Spring Creek is classified as a High Quality, Cold Water Fishery from its source to PA Route 550, from PA Route 550 to the mouth it is classified as a Cold Water Fishery stream. Lower Bald Eagle Creek is classified as a Trout Stocking stream in the area between the confluence of Spring Creek and Nittany Creek and a Warm Water Fishery from Nittany Creek to the mouth. The High Quality designation by Pennsylvania Department of Environmental Protection provides special protections of the water resource.

Spring Creek is a valued water resource for its high quality water, associated water aquifers, trout fishing opportunities, and scenic beauty. It is a renowned trout-fishing stream that draws anglers from well beyond the area to fish in its limestone-cooled waters. All of Spring Creek is a catch and release stream. Portions of the creek can be canoed and kayaking is popular on the creek year-round.

The Lower Bald Eagle Creek is valued for its recreational opportunities such as canoeing and fishing. Foster Joseph Sayers Dam impounds Bald Eagle Creek just east of Howard Borough. The dam creates a 1,730-acre lake for flood control and recreation use that is within Bald Eagle State Park.

Other significant stream corridors of the Nittany and lower Bald Eagle Valleys include:

Tributaries to Spring Creek

- Logan Branch – Cold Water Fishery
- Buffalo Run – High Quality, Cold Water Fishery (source to T-942 bridge near Coleville), Cold Water Fishery (T-942 bridge near Coleville to mouth)

- Galbraith Gap Run – High Quality, Cold Water Fishery
- Cedar Run – Cold Water Fishery
- Marklers Gap Run – High Quality, Cold Water Fishery
- McBrides Run – High Quality, Cold Water Fishery
- Slab Cabin Run – High Quality, Cold Water Fishery (source to PA 26), Cold Water Fishery (PA 26 to mouth)

Tributaries to the lower Bald Eagle Creek

- Spring Creek
- Antis Run – Cold Water Fishery
- Nittany Creek – Cold Water Fishery
- Bullit Run – Cold Water Fishery
- Greens Run – Cold Water Fishery
- Lick Run – Cold Water Fishery
- Hunters Run – Cold Water Fishery
- Marsh Creek – Cold Water Fishery
- Beech Creek – Cold Water Fishery

Stream corridors contain wetlands, floodplains, and riparian forest buffers, which are important natural areas that serve valuable functions in the landscape. Floodplains carry floodwaters and provide valuable habitat for wildlife. Wetlands and riparian forest buffers trap sediment and pollutants and provide critical wildlife habitat. Federal and State regulations and municipal ordinance provisions protect wetlands and floodplains associated with stream corridors. These protected open spaces contribute to greenway corridors.

There are three Pennsylvania Fish and Boat Commission hatcheries in Centre County: Benner Spring Culture Station on Spring Creek, Bellefonte Fish Culture Station (Fisherman’s Paradise) on Spring Creek, and Pleasant Gap Fish Culture Station on Logan Branch. These hatcheries produce 5.2 million adult trout for stocking local streams.

Ridge Tops

The Nittany and Bald Eagle Valleys are part of the Ridge and Valley Province consisting of ridges that rise steeply from the mainly cleared valley floor.¹ The ridge tops of the study area are Bald Eagle Mountain, Nittany Mountain, and Tussey Mountain. The ridges provide critical green links throughout the study area. Serving as the backdrop for just about every view in the region, these forested ridges are critical features in the visual landscape and contribute to the sense of open space and “green” surroundings that are so important to residents and visitors alike. Only a small portion of these ridge areas are currently protected. The Mount Nittany Conservancy protects a relatively small portion of Nittany Mountain, over 800 acres known as Mount Nittany. The portion of Tussey Mountain within the study area is within the Rothrock State Forest. In 2000 approximately 2,600 acres of land of the Bald Eagle Mountain ridge, east of Milesburg were donated to the Pennsylvania State Game Lands. Other lands of the Bald Eagle Mountain in the study area are in private ownership.

A Valued Resource

The ridge tops of Centre County are important for their scenic beauty, wildlife habitat, and water as well as for recreational opportunities. The ridge provides the headwaters for Spring Creek. They protect the

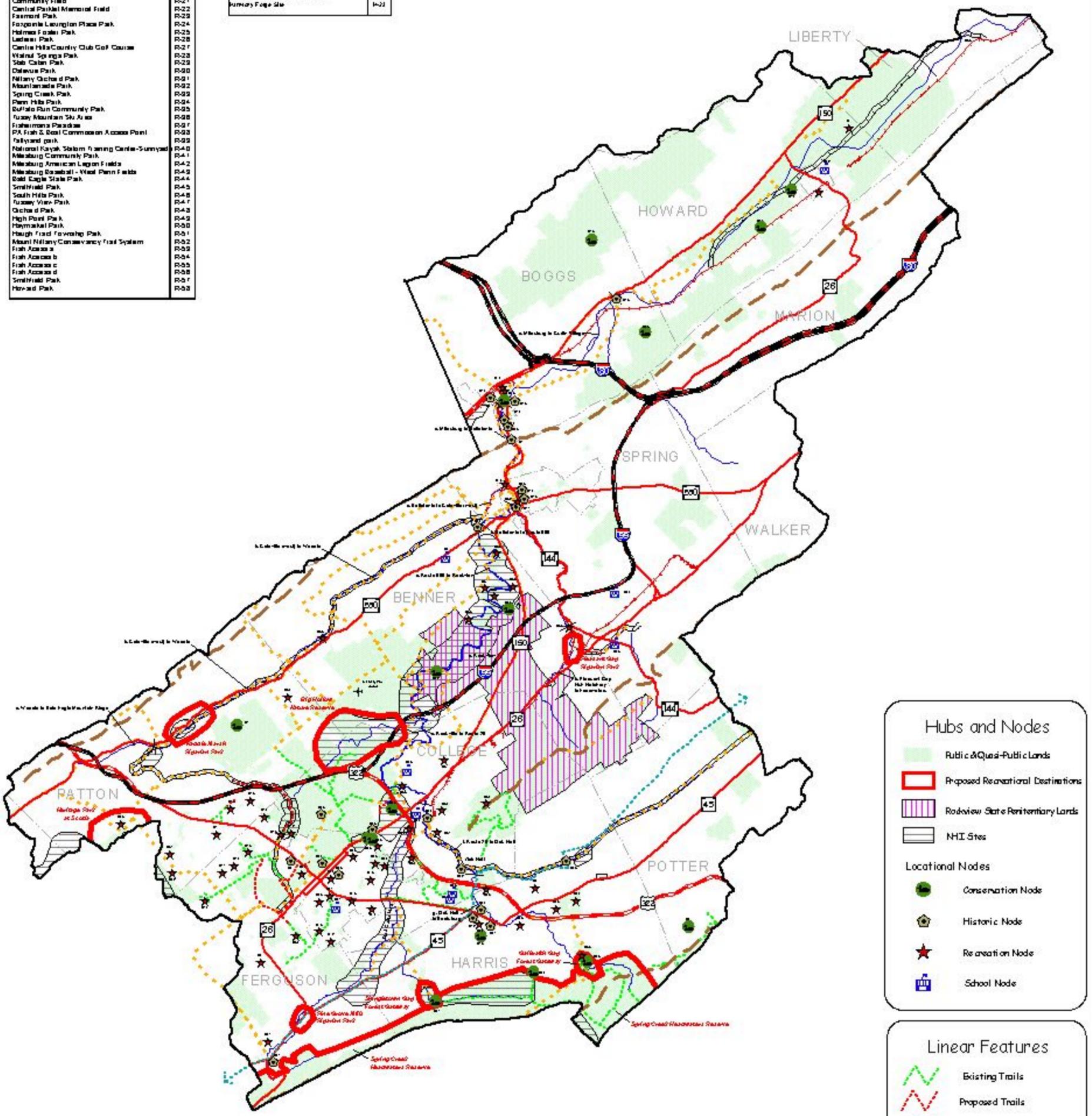
¹ Western Pennsylvania Conservancy, Centre County Natural Heritage Inventory, 1991.

Recreation Nodes	
Name	Label
Woolf Field Park	R01
Blue Spring Park	R02
Country Place Park	R03
Raywood Park	R04
Military View Park	R05
Faach Memorial Park	R06
Elba County Club	R07
Gaytable Park	R08
Patterson Farming Woodlands	R09
Greenleaf Toyook Park	R10
Horseshoe Park	R11
Park Hills Park	R12
Judek Memorial Park	R13
Green Hollow Park	R14
Woodyside Park	R15
Delwood Park	R16
Suburban Park	R17
Overlook Heights	R18
Sunset Park	R19
Blue and White Golf Course	R20
Community Field	R21
Central Park Memorial Field	R22
Farmstead Park	R23
Ferguson Livingston Place Park	R24
Holmes Foster Park	R25
Ladwell Park	R26
Centre Hills Country Club Golf Course	R27
Walden Springs Park	R28
State Cabin Park	R29
Daleview Park	R30
Military Circle Park	R31
Mountainside Park	R32
Spring Creek Park	R33
Penn Hills Park	R34
Buffalo Run Community Park	R35
Fuzzy Mountain Ski Area	R36
Fisherman's Paradise	R37
PA Fish & Boat Commission Access Point	R38
Fallowfield Park	R39
National Kayak Slalom Training Centre-Sunbury	R40
Milburg Community Park	R41
Milburg American Legion Fields	R42
Milburg Baseball - West Penn Fields	R43
Bald Eagle State Park	R44
Smithfield Park	R45
South Hills Park	R46
Fuzzy View Park	R47
Circle of Park	R48
High Point Park	R49
Haystack Park	R50
Hugh Frad Farming Park	R51
Mount Nittany Conservancy Field System	R52
Fish Access a	R53
Fish Access b	R54
Fish Access c	R55
Fish Access d	R56
Smithfield Park	R57
Howard Park	R58

Historic Nodes	
Name	Label
Rocky Mountain District	H-01
Pennsylvania Military Museum	H-02
Green Hill Historic District	H-03
College Heights Historic District	H-04
College Heights Historic District	H-05
College Heights Historic District	H-06
College Heights Historic District	H-07
College Heights Historic District	H-08
College Heights Historic District	H-09
College Heights Historic District	H-10
College Heights Historic District	H-11
College Heights Historic District	H-12
College Heights Historic District	H-13
College Heights Historic District	H-14
College Heights Historic District	H-15
College Heights Historic District	H-16
College Heights Historic District	H-17
College Heights Historic District	H-18
College Heights Historic District	H-19
College Heights Historic District	H-20
College Heights Historic District	H-21
College Heights Historic District	H-22
College Heights Historic District	H-23

Conservation Nodes	
Name	Label
Shingleton Gap	C01
Bald Knob	C02
Colburn Gap	C03
Spring Creek Headwaters	C04
Thompson Meadow - Spring (NHI site)	C05
Milbrook Marsh Nature Centre	C06
Spring Creek Canyon	C07
Bald Eagle Ridge - reserved lands	C08
Seneca Spring Helichery	C09
College Hill	C10
PA Game Commission Preserve Lands	C11
Army Corp of Engineers Wetland Area	C12
State Game Lands P02	C13
State Game Lands P17B	C14
State Game Lands P17C	C15
State Game Lands P17D	C16
Thompson Woods	C17

School Nodes	
Name	Label
State College Area High School	S-01
Lawson Elementary School	S-02
Howards Elementary School	S-03
Seneca Elementary School	S-04
Spring Creek Elementary School	S-05
Howards Elementary School	S-06
Central PA Institute of Science & Technology	S-07
Platinum Gap Elementary School	S-08
Howards Elementary	S-09



Hubs and Nodes

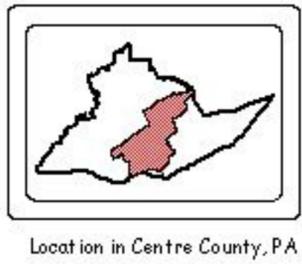
- Public & Quasi-Public Lands
- Proposed Recreational Destinations
- Roadview - State Penitentiary Lands
- NHI Sites

Locational Nodes

- Conservation Node
- Historic Node
- Recreation Node
- School Node

Linear Features

- Existing Trails
- Proposed Trails
- BicyclePA - Route 6
- Trail Opportunities
- Abandoned Rail Corridors
- Stream Corridors
- Ridgelines
- Active Rail Lines
- Limited Access Highway



Resource Map

Nittany and Bald Eagle Greenway

Centre County, Pennsylvania

Prepared for: Centre County Office of Planning

Sources: Centre County GIS, The ClearWater Conservancy, DEP, PennDOT, and USGS.

Prepared by:
Yost, Stodolski, Means with
BLOSS Associates and
Toole Recreation Planning

November 2002

drinking water for the communities in the ridge and provide fresh water fish habitat. The interior forests of the ridge supply some of the best wildlife habitat in the region.

Statewide Significance and Beyond

The Bald Eagle Ridge has been designated by Audubon Pennsylvania as an important bird area for Pennsylvania. Bird counts indicate that the Bald Eagle Ridge is a very significant flyway. While further projects and studies of this ridge are underway, the Bald Eagle Ridge may prove to be as important as the Kittatinny Ridge in eastern Pennsylvania that has achieved the status of global significance. The Blue Mountain-Kittatinny Ridge Project is a collaborative effort of over 25 organizations such as the Sierra Club, Nature Conservancy, and others under the leadership of Audubon Pennsylvania to focus attention and foster stewardship of these ridges. The next ridge that this group plans to focus on will be the Bald Eagle Ridge. It would be important for Centre County to participate in and support this effort to both conserve the Bald Eagle Ridge as well as to advance potential legislative initiatives that would authorize funds for conservation efforts. Legislation to provide funding for the preservation of forests and ridges in other areas has already been proposed including the Highlands that traverse northern and central New Jersey down through southeastern Pennsylvania.

Other Natural Resource Sites of Significance

Centre County is the home to abundant significant and unique natural resources. The rapid growth of the County and the associated loss of open land to development threaten these natural resources. The Centre County Natural Heritage Inventory (NHI) identified significant plant, animal, and natural communities of the County as the first step towards their protection. There are numerous NHI sites within the Nittany and Lower Bald Eagle Valleys and the most significant sites that warrant protection are noted below.

- Millbrook Marsh: The Millbrook Marsh site contains an example of calcareous marsh, a rare plant community. Protection of this site is a priority. The majority of this NHI site is protected by the 62-acre Millbrook Marsh Nature Center and a conservation easement is being explored for the section of the site that is not currently protected.
- Scotia Barrens: The Scotia Barrens contain unique and rare scrub oak-pitch pine community, which support animal species of special concern. The majority of this site is protected by State Game Lands #176.
- Thompson Meadow Spring: This site supports an endangered species of animal that is dependent on the high water quality of the spring. This land is owned by Penn State.
- Spring Creek Valley: This area is located between PA Route 550 and the southern Benner Township boundary. There are significant natural communities and many plant species of concerns located on the cliffs and summits of the valley. The valley also provides special habitat for rare animal populations. Much of the lands of the Spring Creek Valley are owned by the Commonwealth of Pennsylvania and under the control of the Rockview State Correctional Institution.
- Big Hollow Road: The area of this unimproved road and adjacent ravine are home to a natural community of rare plants. The majority of the lands of this NHI site are owned by Penn State.
- Linden Hall Park: This small site is home to a rare plant species. This site is privately owned and not currently protected.

Natural Resource Findings

Existing natural resources in the study area create a tapestry of “green” areas. The streams and ridge tops interconnect to provide a landscape that is rich in scenic beauty, provides abundant wildlife habitat, and contains resources that are critical for both man and nature. Many of these resources are not protected from human influences. Much of the lands that contain the streams and ridge tops are in private

ownership and as such are not protected from development, logging, and other influences of human activities. Identifying these natural resources and incorporating them into a comprehensive system of greenways will promote their protection and preservation.

Manmade Resources

Scenic roads, canals, abandoned rail lines, and existing trails are manmade linear features that contribute to greenway development. The Nittany and Lower Bald Eagle Valleys have many of these manmade linear features as identified below.

Existing Trails, Bikeways, and Rail Lines

There are several existing trails, bikeways, bike lanes, and rail lines in the study area that provide opportunities for recreation, nature study, and alternative transportation. The trails were evaluated and located on the Resource Map as part of the greenway planning process. Trails, bikeways, and rail lines include:

Trails

Midstate Trail – The Midstate Trail is a primitive hiking trail that traverses the Ridge and Valley Region of Pennsylvania. The trail follows the Tussey Mountain ridge just south of the study area.

Rothrock State Forest Trails – There are numerous trails and logging roads in Rothrock State Forest that are enjoyed by hikers for day hikes or to connect to the cross region Mid-State Trail. Significant to this study are the Galbraith Gap Trail and the Shingletown Gap Trail. These trails serve as access points to Rothrock State Forest and are popular day hike trails. Shingletown Gap Trail is located on lands of the State College Water Authority. Other trails include Musser Trail, Kettle Trail, John Wert Path, Pine Swamp Trail, Jackson Trail, and Tussey Mountain Trail.

Mount Nittany Conservancy Trail System – This trail system on Nittany Mountain provides nearby hiking opportunities and views of the Pennsylvania State University campus and Rockview State Correctional Institution. The system consists of two loop trails: the White Loop (4 miles) and the Blue Loop (6 miles).

Bikeways

The Centre Region has been on the forefront of bicycle facility planning and development and is well underway to creating connected communities throughout the region. The bikeways and designated on-road bike lanes connect neighborhoods, parks, and schools.

Research Park Bikeway – This bikeway in College Township extends from the Fox Hollow Road Bike Lane to the Penn State Research Park.

South Atherton Street Bikeway – This bike way parallels Atherton Street from Boalsburg and the Pennsylvania Military Museum north to University Drive.

College Township Bikeway (Mt. Nittany Expressway Bikeway) – This system of trails is 1.8 miles. It connects Spring Creek Park, Millbrook Marsh Nature Center, Slab Cabin Park, and Dalevue Park, ultimately connecting with the South Atherton Street Bikeway.

Brandywine Drive Bikeway – This bikeway extends from Brandywine Drive to Warner Boulevard in Boalsburg and provides off road access to Mount Nittany Middle School and Panorama Elementary School.

Orchard Park Bikeway – This bikeway in State College Borough extends from Community Field to Orchard Park and links to Welch Pool and State College High School North and South campus.

CATO/Stonebridge Bikeway – This bikeway in Ferguson Township extends from Blue Course Drive to CATO Industrial Park.

Blue Course Drive Bikeway – This bikeway parallels Blue Course Drive from the Haymarket to Glenview neighborhoods.

Tudek/Circleville Bikeway – This path in Ferguson Township extends from Aaron Drive through Tudek Park, adjacent to Circleville Road to State Game Lands #176. A second spur extends from Circleville Road through the Penn State Golf Course to PA Business Route 322.

McKee Street/Clinton Avenue Bikeway – This bikeway connects Overlook Heights Park to Sunset Park in State College and Patton Township. The proposed Bellefonte Central Rail Trail will connect to this existing bikeway.

Vairo Boulevard/Aaron Drive Bikeway – This bikeway traverses Suburban Park in Ferguson Township

Henderson Mall Bikeway – Henderson Mall Bikeway includes on and off road segments between Park Avenue and East College Avenue in the University Park campus.

University Drive Bikeway – This bikeway parallels University Drive between Curtin Road and East College Avenue and provides access to Penn State University athletic facilities.

Designated On-Road Bike Lanes

Porter Road/Curtin Road Bike Lane – This bike lane links the University Drive Bikeway to the Fox Hollow Road Bike Lane.

Orchard Road Bike Lane – This bike lane connects to the Park Avenue Bike Lane and will eventually connect to the College Township Bikeway at Millbrook Marsh Nature Center.

Park Avenue Bike Lane – This bike lane connects the Orchard Road Bike Lane with the Fox Hollow Road Bike Lane.

Fox Hollow Road Bike Lane – This bike lane extends from Park Avenue to Toftrees.

Rail Line Corridors

There are numerous rail line corridors throughout Centre County, most of which were established to serve the iron ore industry. Listed below are three rail lines that are located within the study area.

Bellefonte Central Railroad – The Bellefonte Central Railroad originally ran between Strubles and Bellefonte. The original purpose of the line was shipping iron ore from the Barrens to the Bellefonte Furnace. Spurs to State College and Pine Grove Mills were extended for passenger service. The railroad was abandoned in 1984 and reverted to private ownership. Many planning documents have noted the recreation potential of this trail to link two main population centers in Centre County: Bellefonte and State College. The *1996 Feasibility Study – Centre Region Pedestrian/Bicycle Trail* evaluated the development of a recreation trail on or near a 3.5-mile portion of the former railroad right-of-way. Efforts are currently underway to develop a 1.3-mile portion of the railroad bed from the McKee Street/Clinton Avenue Bike Path near Sunset Park, through the Penn State Arboretum, to just beyond the Mount Nittany Expressway. This effort has been named the Bellefonte Central Rail Trail. The rail trail could ultimately link State College and Bellefonte with a 15-mile recreation trail. The rail trail corridor goes through the Toftrees area where the route contains a sewer right-of-way and continues parallel to Buffalo Run to connect to other areas in Benner and Spring Township. The Bellefonte Central Rail Trail project received funding in 2002 from the Department of Conservation and Natural Resources and PennDOT Transportation Enhancements program for construction of a portion of the rail trail.

Penn Central Railroad between Lemont and Lewisburg – This former Penn Central railroad line was also known as the Lewisburg, Centre, and Spruce Creek Railroad. It was abandoned in 1975 and the right-of-

way reverted to adjacent landowners. Efforts are underway to explore the possibility of creating a rail-trail corridor for recreation uses.

Nittany and Bald Eagle Railroad – the SEDA-COG Joint Rail Authority currently owns this active railroad. The rail line extends through the County somewhat parallel to Bald Eagle Creek. An active spur of this railroad extends to Bellefonte and beyond to Pleasant Gap and Lemont. The Bellefonte Historic Railroad Society also uses this track for excursion railroad tours.

The Bellefonte Historic Railroad runs tourist excursion tours operating from the Bellefonte Station in Tallyrand Park. Excursion tours run from Bellefonte, along Logan Branch to Pleasant Gap, through Rockview State Correction Institution to Dale Summit near the Nittany Mall. In the past the Bellefonte Historic Railroad has operated a tour that traveled from Bellefonte through Milesburg to Curtin Village. This route was discontinued due to conflicts with Norfolk Southern Railroad’s use of the rail line through the Bald Eagle Valley.

The option of developing a trail with rail facility along this railroad right-of-way was explored with the SEDA-COG Joint Rail Authority. The Authority has set criteria for the development of a trail with rail, see Appendix A. The physical limitations of the railroad right-of-way in the study area do not allow the trail development criteria to be met.

Manmade Resource Findings

The manmade linear resources found in the Nittany and Lower Bald Eagle Valley area contribute to the development of a comprehensive greenway network. The existing trails and bikeways are recreation resources that residents and visitors enjoy. The hiking trails provide recreation opportunities in a natural setting and bikeways provide safe alternative transportation routes to community locales. These facilities enhance the livability of the communities in which they are located. Railroad rights-of-way, when abandoned, present opportunities for the development of trails for transportation and alternative transportation.

Recreation and Community Resources

Greenways connect community places and open spaces. Historic and cultural sites, schools, parks, and nature preserves linked together through a comprehensive greenway system become the spines of our communities. Green corridors developed with trails, which connect schools, parks, and residential areas promote safe transportation alternatives to traditional roadway networks. Historic sites, parks, and nature preserves offer destinations that attract visitors from beyond the immediate area. Linking community places together with greenways furthers the tourist appeal of exploring a destination and contributes to the economic base of the region.

Public Lands, Recreation Lands, and Parks

Centre County and the Nittany and Lower Bald Eagle Valley areas are fortunate to have significant public and private lands that create a patchwork of protected open spaces. These lands protect natural resources; provide spaces for recreation, and offer locations to enjoy the scenic beauty of the Nittany and Bald Eagle Valleys. Bald Eagle State Park, portions of Rothrock State Forest, and two State Game Lands are located in the study area. Numerous municipally owned parks and open space preserves are located throughout the area.

State Parks:

- Bald Eagle State Park: 5,900-acre park which includes the 1,730-acre Foster Joseph Sayer lake. The parkland is owned by the Army Corp of Engineers and leased to the Pennsylvania Department of Conservation and Natural Resources.

State Forests and State Game Lands:

- Rothrock State Forest: 79,468-acres located in Huntingdon, Mifflin, and Centre Counties
- State Game Land 92: 4,267-acres located north of Bald Eagle State Park
- State Game Land 176: 1,013-acres located west of State College
- Bald Eagle Ridge: 2,600-acres of recently acquired State Game Lands located east of Milesburg
- Pennsylvania State Game Commission Wildlife Area under lease from U.S. Army Corps of Engineers at Bald Eagle State Park
- Pennsylvania State Game Commission – Howard Nursery at Bald Eagle State Park

Pennsylvania Fish and Boat Commission Lands:

- Fisherman’s Paradise – Bellefonte Fish Culture Station: The Fisherman’s Paradise site is located south of Bellefonte Borough along Spring Creek. The site includes the hatchery, conference and training center, public fishing areas, and aquatic habitat demonstrations areas.
- Pleasant Gap Fish Culture Station: located on Logan Branch.
- Benner Spring Fish Culture Station: This fish hatchery is located along Spring Creek on lands leased from Rockview State Correction Institution.
- PA Fish and Boat Commission access areas: three on Spring Creek just north of Rockview State Correction Institution, one on Logan Branch.

Municipal Parks and Open Space – Location:

The municipal parks and open spaces listed below are significant destination points within the proposed greenway network. The list does not include each municipal park or open space parcel in the study area but is a partial list of municipal recreation destinations in the study area. Refer to Appendix B for an expanded listing of parks in the Nittany and Lower Bald Eagle Valleys.

- Slab Cabin Park – College Township: Slab Cabin, a tributary to Spring Creek runs through this park.
- Millbrook Marsh Nature Center – College Township: This 62-acre site contains a significant calcareous marsh and farmstead. The park provides environmental education opportunities and areas for enjoying nature and the site’s natural resources. Millbrook Marsh Nature Center is linked to nearby Spring Creek Park via the College Township Bikeway.
- Spring Creek Park – College Township: Community park that is traversed by Spring Creek.
- Tallyrand Park – Bellefonte Borough: This Borough park is home to Big Spring, one of the largest natural springs in the State as well as the Bellefonte Historic Railroad. Spring Creek flows through the park.
- Milesburg Community Park – Milesburg Borough: This park is located at the confluence of Spring Creek and Bald Eagle Creek.
- Milesburg Baseball League, West Penn Fields – Milesburg Borough: These fields are located adjacent to Bald Eagle Creek.
- Buffalo Run Community Park – Benner Township: This community park is located along Buffalo Run.

- Patton Township Woodlands – Patton Township: This wooded site is located along Circleville Road and provides access to the Barrens and State Game Lands #176.
- Sunnyside Paddling Park – Bellefonte Borough: The Sunnyside Paddling Park is located on Spring Creek in Bellefonte north of Lamb Street in the Sunnyside area. The Pennsylvania Fish and Boat Commission provide use of the stream through a memorandum-of-understanding with the Penn State Outing Club. The course is the only year-round area for kayaking training in the region

Golf Courses:

- Elk’s Country Club Golf Course: private course
- Centre Hills Country Club and Golf Course: private course
- PSU Golf Courses: open to the public
- Toftrees Golf Course: open to the public

Other Public Lands:

- U.S. Army Corps of Engineers – lands of Foster Joseph Sayers Dam breast and area below the dam
- Rockview State Correctional Institution – 6,597 acres located primarily in Benner and Spring Townships
- Penn State Arboretum – This 395 acre arboretum is in the planning stage. The proposed arboretum will be a unique facility for teaching, research, and outreach, with the mission of finding solutions, through interdisciplinary scholarship, to the challenge of maintaining healthy and appealing landscapes in the presence of a growing human population. It will include themes such as gardening, conservation, environmentally compatible uses of landscapes and the restoration of degraded forest and fields. The facility will be located south of the Mount Nittany Expressway between Big Hollow Road, Curtin Street, Park Avenue, and Vairo Boulevard. The site is contiguous to Suburban Park and Sunset Park and will link to the Vairo Boulevard /Aaron Drive Bikeway and the McKee Street/Clinton Avenue Bikeway.

Schools and Universities

There are numerous schools and lands of Penn State University located throughout the study area. These institutions own significant land parcels that are semi-protected through institutional use. Greenways that link schools with other community facilities provide corridors for travel between these locations as well as landscapes for learning. Greenways provide green corridors for exploration of environmental education curriculum and nature study. Schools in the study area include:

- Penn State University
- State College Area High School
- Lemont Elementary School
- Houserville Elementary School
- Benner Elementary School
- Grays woods Elementary School
- Corl Street Elementary School
- Easterly Parkway Elementary School
- Bald Eagle High School
- Howard Elementary School
- Wingate Elementary School

- Bellefonte High School
- Panorama Elementary School
- Mount Nittany Middle School
- Pleasant Gap Elementary School
- Park Forest Elementary School
- Park Forest Middle School
- Radio Park School
- Matternville School
- Central PA Institute of Science and Technology

Historic and Cultural Resources

Centre County and the 17 municipalities that make up the Spring Creek and Lower Bald Eagle Creek watersheds are rich in history with buildings and areas that reflect on the past way of life and industry of the area. Historic and cultural sites can be connected to a greenway system to promote interpretation and celebration of the past. Iron-ore furnaces, gristmills, historic buildings and villages, and museums can be incorporated into greenways, creating corridors for learning and providing opportunities to connect to our heritage and strengthen our sense of place. Publicly accessible historic and cultural sites include:

- Centre Furnace Mansion: Home of the Centre County Historical Society
- Pennsylvania Military Museum
- Penn State Arboretum
- Roopsburg Mill
- Bellefonte Railroad Museum
- Bellefonte Museum
- Centre County Library and Historical Museum
- McCoys Dam
- Curtin Village and Eagle Iron Works
- Milesburg Train Station
- Milesburg Historical Society and Museum
- Boal Mansion
- Milesburg Canal Remnants

Many villages and areas have designated historic districts that promote the preservation of the historic character and buildings. Historic districts in the study area include:

- Boalsburg Historic District
- Linden Hall Historic District
- College Heights Historic District
- Lemont Historic District
- Oak Hall Historic District
- Bellefonte Historic District
- Pine Grove Mills Historic District
- Penn State University Historic District

Recreation and Community Resource Findings

Many of the identified public lands, parks, recreation lands, schools, and historic sites identified in the study area are located along Spring Creek and the Lower Bald Eagle Creek corridors. These protected green spaces are the beginning of a regional greenway network that spans the valleys. Each of these community and recreation resources is a destination within the comprehensive greenway system. Linking these resources by way of protected greenway corridors will enhance the system, promote its use, and expand its benefit to residents and visitors alike.

Regional Greenway Connections

Greenways and trails extend regionally as they typically align with natural and manmade linear resources such as streams and railroad lines. Planning efforts for the Nittany and Bald Eagle Greenways have identified several major regional linking opportunities. These include links to:

- Mid-State Trail – An existing trail system in the Rothrock State Forest makes connections to the Mid-State Trail. The Tussey Mountain Ridge Link also provides connection to the Mid-State Trail.
- Blanchard and Clinton County – Linkage to Blanchard and Clinton County could be accomplished by extending the Bald Eagle Creek Major Corridor to the east.
- Bald Eagle Creek Greenway Extension – Bald Eagle Creek extends in a westerly direction beyond the study area boundary. The Bald Eagle Creek major corridor could be extended in this direction to make regional connections.

An additional linking opportunity is the Prince Gallitzin to Black Moshannon trail system. This multi-use trail, still in the planning phase, would link Prince Gallitzin State Park, in Cambria County, with Black Moshannon State Park in Centre County. This proposed greenway is within linking distance to the Nittany and Bald Eagle Greenway and is an important corridor to be considered for linking opportunities. A review of the 1998 *Preliminary Study of the Prince Gallitzin to Black Moshannon Trail System* is included in the *Prior Studies* section of this report.

Each county adjacent to the study area was contacted to identify greenway and trail projects that have the potential to connect to the Nittany and Bald Eagle Greenways.

Clinton County

Clinton County has no trail or greenway initiatives that connect to the Nittany and Bald Eagle Valleys. Clinton County does not have a greenway plan for the County.

Mifflin County

Mifflin County has no trail or greenway initiatives that connect to Centre County. Mifflin County does not have a county-wide greenway plan.

Huntingdon County

Huntingdon County has addressed greenways as part of their County Comprehensive Plan. Huntingdon County has no trail or greenway initiatives that connect to Centre County. The Huntingdon County Planning Department noted the importance of protecting and preserving the ridge between the counties that lies primarily within Rothrock State Forest.

Challenges of the Nittany and Bald Eagle Greenways Development

There are many challenges in the development of greenways in the Nittany and Lower Bald Eagle Valleys. Some of these challenges are typically found with any greenway project while others are specific to the Nittany and Bald Eagle Greenways. Typical challenges involve gaining landowner buy-in and cooperation, overcoming physical barriers such as road and stream crossings, and determining realistic strategies for the long-term management and maintenance of the corridor.

Greenways are easiest to establish in areas with little development where there are large tracts of land under single ownership or multiple contiguous parcels of undeveloped land. The study area contains large holdings of public land as well as large and small parcels in private ownership. This study and the efforts of the Centre County Planning Office, the ClearWater Conservancy, and others will be critical in setting the stage for landowner acceptance of the Nittany and Bald Eagle Greenways concept. Through landowner and public education initiatives and open dialogue, the concerns of landowners can be addressed. The physical limitations to continuous public access along designated corridors within the Nittany and Bald Eagle Greenways can be accomplished through engineering solutions. Bridges can be built to connect a trail across a roadway or rail line. The natural functions of greenways are not as adaptable. Greenways as wildlife corridors and preserves for habitat protection are limited by the presence of transportation routes that bisect and interrupt the continuity of the corridor and the presence of land developed for manmade purposes.

Challenges unique to the Nittany and Bald Eagle Greenways include but are not limited to access to lands of Rockview State Correctional Institution, hunting activities within Bald Eagle State Park, and the physical constraints of the land between Bellefonte and Milesburg.

Rockview State Correctional Institution

Rockview State Correctional Institution (RSCI) is located south of Bellefonte encompassing a portion of the Spring Creek corridor. Approximately three linear miles of Spring Creek, the area known as Spring Creek Canyon, is within the RSCI lands. RSCI has in the past been a working facility where prisoners labor in the fields and orchard. This presents public safety and prison security concerns for permitting public access to the Spring Creek corridor within the RSCI lands. The Pennsylvania Fish and Boat Commission owns land in the area of RSCI for fishing access and the Benner Spring Hatchery is located on lands of RSCI. The Benner Spring Hatchery is accessible to the public via Shiloh Road and fishing is permitted in the area of the hatchery and east for approximately 1,200 feet along the creek. Fisherman's Paradise, a hatchery and facility of the Pennsylvania Fish and Boat Commission is located east of RSCI. Other lands of the Pennsylvania Fish and Boat Commission connect Fisherman's Paradise to the RSCI. These lands are accessible to the public for fishing but access is prohibited at the eastern RSCI property line. The Pennsylvania Fish and Boat Commission has a memorandum of understanding with RSCI for access onto RSCI lands for fishing. The memorandum of understanding does not guarantee ongoing access.

Hunting at Bald Eagle State Park

Bald Eagle State Park encompasses 5,900 acres and was developed primarily for flood control. The park offers many recreation opportunities including swimming, boating, picnicking, fishing, hiking, camping, and hunting. Hunting is popular in the park and is permitted throughout the park except in the camping, boat access, swimming, and picnicking areas. Hunting of pheasant, ruffed grouse, and woodcock is popular in the park. The designation of a greenway corridor in the park with a recreation trail presents a conflict with hunting activities.

Land Constraints between Bellefonte and Milesburg

The land between Bellefonte and Milesburg along Spring Creek is constrained by a variety of elements. The topography of the Bald Eagle Mountain ridge is steep adjacent to the water gap for Spring Creek. Open, flat land is encumbered by wetland associated with the creek, the right-of-way of the active railroad, and PA Route 144. Although much of the land in this corridor is publicly held, development of a trail for recreation and alternative transportation will be a challenge due to the existing conditions.

Land Constraints between Bellefonte and Pleasant Gap

The land between Bellefonte and Pleasant Gap along Logan Branch is constrained by a variety of elements: the topography of the Logan Branch hollow, the relative locations of PA Route 144 and Logan Branch, an active rail line, and the existing land uses found within the corridor. This land is primarily in private ownership.

Land Conservation & Protection Tools for the Greenway & Open Space Network

Acquisition and development of the proposed interconnected greenway and open space system, given the project size and scope, will require an array of strategies and tools that can be used by municipalities, organizations, and individuals. Some of the most suitable strategies/tools for consideration and use are described below. They are grouped under four general categories: Land Use Regulations, Open Space and Natural Areas Acquisition, Conservation Options for Private Landowners, and Conservation Easements.

Land Use Regulations

Regulating the use of land through the use of provisions as provided for in the Pennsylvania Municipalities Code (MPC) is critical to the preservation of green infrastructure required for the greenway network and should be used to the maximum extent possible to build and develop the greenway and open space network. Table 4-1, at the end of this chapter, illustrates the status of current County and municipal planning controls. Also a preliminary review of ordinance provisions of municipalities within the greenway corridor having existing regulatory provisions aimed at protecting open space, which could serve to help promote the development of greenways is summarized. While a number of specific codes of municipalities in the corridor have some provisions aimed at promoting conservation, natural area preservation, and the protection of open space, none appear to do so in a way that is both comprehensive and coordinated as to ultimately provide the proper tools to best realize these intentions, and result in the creation of a local green infrastructure complementary to greenway development.

Some activities and events that have been conducted and implemented in the County to encourage changing land use codes to promote conservation of open space include the following:

In the mid-1990s the Centre Region Planning Commission sponsored a presentation by Randall Arendt and the Natural Lands Trust and hosted an early workshop of Growing Greener principals via a conservation planning workshop for municipal officials in the region. Model regulations were developed for the Centre Region based on these principles. Patton and Harris Townships have derived some of their provisions from this model for agricultural preservation in the agricultural districts (require 50% open space).

In College Township riparian buffer requirements were adopted for a “gateway district” along the Spring Creek corridor. Also Potter Township has a stream overlay district with some riparian buffer considerations.

College, Ferguson and Harris Townships all have adopted “mandatory dedication ordinances that have been effective due to the amount of growth being experienced in these municipalities. While each has their own version of “fee-in –lieu” and a “parkland dedication” requirement, in general with all the development activity experienced in these municipalities there has been some success. Patton Township passed a referendum to have money set aside to purchase land for open space and recreation purposes.

Conservation easements have been acquired through private organizations and municipal action. Private conservancies within the corridor are contributing to the preservation of important open space areas and the ClearWater Conservancy is working on several easement opportunities. The Mount Nittany Conservancy and the Lions Paw Conservancy hold conservation easements on approximately 700 acres on the face of Mount Nittany.

To date the County has acquired agricultural protection easements on twenty-five farms countywide. Over 64 farms are on the waiting list comprising close to 8,000 acres. The County has contributed \$80,000 toward the farmland program this year and is expected to increase this by \$10-20,000 next year. There is also some thought being given to a bond issue to support the program. Approximately \$30,000 per year is contributed to the program from “clean and green” roll-backs (Act 319). This fact highlights the intense development pressure within the county and the urgency needed to preserve farmland. Individual townships are also contributing to the program. Spring Township gives anywhere from \$7,500 to \$20,000 annually. Potter Township chipped in this year with \$20,000 and may contribute close to \$40,000 next year for up to three farms. Potter Township has had the most agricultural security areas (ASA) added to it in the last year (from 6,000 acres two years ago to over 11,000 acres today). The County has a whole has approximately 82,000 acres in ASA (approximately 22,600 acres are within the study area). Agricultural easements have been secured on approximately 2,000 acres of farmland in Spring, Marion, Potter, and Ferguson Townships.

Ferguson Township has had an Agricultural protection zone that limits development to one unit on fifty acres. Walker Township recently signed off on a petition to create an agricultural protection zone that would limit development on a sliding scale. Halfmoon Township passed a referendum based on Act 153 and uses these dollars for long-term leases of farmland (sets aside property for continued farming).

While current efforts provide a good start and indicate a community’s interest in conservation, a comprehensive approach to open space preservation and greenway development is generally lacking. Thus we offer the following options and strategies that may be utilized by municipalities in the corridor to help achieve the overall desired vision for the system.

Several land use regulation techniques that can be used to achieve these ends are outlined below²:

Conservation Subdivision Design

This is a tool appropriate for municipalities that seek to retain and preserve the best features of their communities while accommodating growth and development through the development process. It is particularly appropriate to municipalities that are or will be experiencing growth and development pressure and want a tool that helps realize their community’s guidelines and goals as part of the development process. If a municipality adopts the *Growing Greener* codes, developers can be the leading conservationists each time they build a subdivision. Subdivisions are designed around the central organizing principal of open space rather than of streets and drains. Under this technique, subdivisions are required to dedicate a significant portion of their unconstrained land to permanent open space uses. House lots are sited on the remaining parts of the property, where they have views of and access to the open space. The open space is typically owned and managed (according to an approved management

² Information sources used in this outline/discussion include: “Land Use in Pennsylvania: Practices and Tools”, Governor’s Center for Local Government Services, 2000; “Local Government Handbook #6, *Landscapes* - Community Planning Handbook – Volumes 1&2, A Toolbox for Managing Change in Chester County”, Chester County Planning Commission, May 1997, March 1999; “Growing Greener – Putting Conservation into Local Codes and Ordinances”, Randall Arendt, Natural Lands Trust, 1999.

plan) by a homeowner association. Other possible owners include land trusts, the municipality, or individuals with large “conservancy lots”, which are a form of non-common open space.

To do this properly, developers need to:

- (a) Conduct a site analysis plan with the help of a landscape architect as well as the municipal engineer;
- (b) Officials need to walk the property with the plan in hand to see where these features are and to select which features are worthy of preservation and which can be sacrificed to development.
- (c) Then the developer needs to follow the a simple four step design process:
 1. Identifying Conservation Areas (layout open space features)
 2. Locating the House Sites (position houses around those special features)
 3. Aligning Streets and Trails (then decide where the streets & lot lines should be situated)
 4. Drawing in the Lot Lines.

Benefits: This technique preserves large open space areas while allowing full density development. When done, the open space in each new subdivision will ultimately join together to form interconnected systems of conservation lands.

Implementation: This technique can be implemented through a municipality’s zoning ordinance. The number of dwellings permitted is based on the net acreage of buildable land and the underlying density in the zoning district. Easements are then placed on the open space to ensure that it will not be further subdivided or developed. The best way to ensure that land is protected in a coordinated fashion to preserve open space networks is to apply this subdivision design approach consistently throughout a given zoning district.

Overlay Zoning Districts

An overlay zoning district may recognize unique features, either natural or man-made, requiring special attention, or may facilitate development of a special character. An overlay zoning district applies regulations to an area in addition to and superseding the requirements of the underlying zoning district(s). Riparian buffers, wetlands, and unique natural areas are resources that could be protected with overlay zones.

Benefits: Overlay zoning allows regulations to be tailored to specific conditions. They may allow development that preserves land values and minimizes environmental degradation. Administration is the same as any zoning district.

Implementation: In general, the provisions of a zoning district must apply uniformly to each class of uses or structures within each district. However, Section 605 of the MPC authorizes additional classifications, potentially through the use of overlay zoning, for:

- Making transitional provisions at and near boundaries of districts;
- Regulating nonconforming uses and structures;
- Regulating, restricting, or prohibiting uses and structures at, along or near:
 - Major thoroughfares, their intersections and interchanges, transportation arteries, and rail or transit terminals
 - Natural or artificial bodies of water, boat docks, and related facilities
 - Places of relatively steep slope or grade, or other areas of hazardous geological or topographic features
 - Public buildings and public grounds
 - Aircraft, helicopter, rocket, and spacecraft facilities
 - Places having unique historical, architectural, or patriotic interest or value

- Floodplain areas, agricultural areas, sanitary landfills, and other places having special character or use affecting and affected by their surroundings;
- Encouraging innovation and the promotion of flexibility, economy, and ingenuity in development, including subdivisions and land developments, and for the purpose of authorizing increases in the permissible density of population or intensity of a particular use based upon expressed standards and criteria set forth in the zoning ordinance; and
- Regulating transferable development rights on a voluntary basis.

Riparian Buffers

A riparian buffer is an area of vegetation maintained adjacent to a stream or other body of water. It is managed to protect the integrity of the stream channel or shoreline and to reduce the impact of upland sources of pollution by trapping, filtering, and converting sediments, nutrients, and chemicals, and to supply food cover and thermal protection to fish and other wildlife.

Buffers can be either forested or herbaceous. While forested buffers may be preferable, buffers that are vegetated with grasses alone provide some of the same water quality benefits as forested ones. However, they do not contribute much benefit to the aquatic ecosystem, which requires shading, leaves, and woody debris.

Benefits: Riparian buffers protect water quality by filtering sediments and nutrients, providing cooling, shading, and dissolved oxygen, stabilizing stream banks, and regulating stormwater flow. They also provide wildlife habitat by supplying food, cover, and breeding and nesting habitat close to water. As with other protection and restoration efforts, every riparian buffer does some good, but ideally adjacent landowners throughout the watershed implement them. The most significant loss of riparian forests occurring today is through the conversion of agricultural and forest land to urban and suburban development. Through municipal ordinances that require retention of riparian buffers, vegetation can be preserved in those areas where they are needed most to protect water quality and habitat from the impacts of development.

Implementation: Municipalities can enact ordinances to require riparian buffers to be maintained as part of the development process. The conservation subdivision design outlined above contains a more comprehensive approach; however, its focus is largely on residential development. The preservation of riparian buffers is critical to all development proposals. Also, education and technical assistance for landowners is essential to increase their understanding and support for riparian forest buffers. An important existing tool to support this is "Pennsylvania Stream ReLeaf Plan, A Plan for Restoring and Conserving Buffers Along Pennsylvania Streams," published by the Pennsylvania Department of Environmental Protection.

Transferable Development Rights (TDRs) & Purchase of Development Rights (PDRs)

TDRs are a zoning tool that allows conservation and development to coexist within a municipality. Growth is directed to preferred locations through the sale and purchase of development rights. Development rights are established for a given piece of land and can be separated from the title of that property. These rights can then be transferred in fee simple to another location within a parcel of land (in the case of "PDRs") or to another location within a municipality where development is desirable and planned for.

PDRs operate in a similar manner. However, with PDRs, an entity buys the right to develop land from the landowner. The landowner retains the use of the land and receives tax benefits. The municipality can pass a bond issue to buy the rights and "bank" them. A developer may purchase the development rights from the municipality when he wishes to develop an area with high density. The municipal bond financing that was entered into to purchase the right is paid off over the years by the purchase of the development rights as development occurs.

Benefits: The value of each development right is controlled by the open market, not the municipality. TDRs are an equitable option for preserving open space and agricultural lands by compensating the owner of preserved land, while guiding the growth of development through the allowance of increased density where existing infrastructure can support it.

PDRs give immediate return to the landowner. It compensates the landowners for reduction in development potential and facilitates the goals of the development district concept. PDRs also streamline the timeline for development since private sales and negotiations for development rights are not necessary to go forward with high-density development. It allows the municipality to guide growth since it owns all the development rights.

Implementation: In Pennsylvania, TDR programs can only be used within a single municipality, or among municipalities with a joint ordinance. While the MPC authorizes the development of a system for transferring development rights, it does not provide a procedure for how the transfer is to occur. It is up to each municipality implementing TDR to set up a mechanism to accomplish the transfer. The easier it is to accomplish the transfer the more likely it is that the program will be successful.

Mandatory Dedication

Under Pennsylvania law (MPC) municipalities are authorized to require developers to dedicate public open space within proposed developments. The dedication of land, a fee-in-lieu of the land, the development of recreation facilities, or a combination of any of these may be acceptable if the developer and municipality agree to the same.

Benefits: This technique can be used in natural landscapes to protect open areas and natural features for passive recreational uses. It can also be used to rehabilitate existing recreational facilities. Other advantages include:

- Provides for the recreational needs of residents through the development process;
- Reduces burden on existing residents to pay increased taxes for new resident's needs;
- Fee-in-lieu funds can be used as a match to other grant sources; and
- The municipal fee structure can be structured to favor monetary instead of land donations; however, fee-in-lieu cannot be required.

Implementation: Mandatory dedication/fee-in-lieu requirements are contained in the municipal subdivision and land development ordinance (SALDO). The ordinance must contain definite standards for determining the proportion of a development to be dedicated and/or a fee to be paid-in-lieu. As a precondition, a municipal open space or recreation plan is required and should include the rationale and formula for determining the fee. The acceptance of lands and facilities not recommended by the plan limits the defensibility of the mandatory dedication/fee-in-lieu ordinance. The requirements are incorporated in the SALDO as a condition to final approval. The technique cannot, however, be used to solve existing recreational deficits. Any fees collected in lieu must be deposited in a separate designated account and be utilized for specified recreational uses within three years or they are refundable to the developer. The land or facilities must be "accessible" to the development and the location and facilities must bear a "reasonable relationship" to use by the development's residents.

Official Map

The official map is both a map and a land use ordinance. It is a tool that identifies public lands and allows a municipality to identify and reserve private land for future public use. It legally establishes the location of existing and proposed streets, waterways, parks, and other facilities within a municipality. An official map may focus on one type of improvement, such as streets or parkland, but usually includes a variety of public facilities or lands.

The official map also notifies landowners and developers about the location of future improvements. It also may establish a fixed time that land is reserved for public use. However, the reservation of private property identified on the map for future public use lapses one year after the date that the owner of the land files written notice of an intention to develop. At that time, the municipality must acquire the land to preclude its development.

Benefits: This technique allows a municipality to reserve private land for future public use. The official map lets developers know the community's long-range goals for roads, public facilities, and open space and implements elements of the municipality's comprehensive plan. Incorporating references to the official map in local zoning and subdivision and land use ordinances ensures that the official map will be taken into consideration by developers. The official map reserves important lands without immediate purchase. Improvements identified on the map also provide positive support for grant applications by illustrating a historical commitment to specific projects.

Implementation: Under the MPC, an official map is a land use ordinance and is adopted like any other land use ordinance. The governing body must adopt the official map by municipal ordinance, following public notice and a public hearing. The Municipal Planning Organization – as well as adjacent municipalities where planned facilities continue into their jurisdiction – must also review the map. After adoption, a copy of the official map must be recorded at the County Recorder of Deeds.

The official map may be amended if necessary. Also, subdivision plats containing streets, parks, or other land to be dedicated as public are considered amendments to the official map.

Open Space and Natural Areas Acquisition

The acquisition of land by a municipality or any governmental or public agency for the purpose of preservation of open space and natural areas is a practice being used more and more frequently as communities struggle to balance and direct growth and effectuate sound land use through the direct preservation and protection of open space. The purchase can be of (a) fee simple title or of (b) conservation easements and is usually done by a governmental or public agency or a non-profit land trust organization. Land acquisition can be made at every level of government.

Benefits: While the purchase of fee simple title is one of the most effective techniques, it is also the most costly. In general, due to funding limitations, this technique should be targeted toward key strategic tracts of land. It also requires that the purchasing entity itself or through some designated vehicle manage and maintain the land. In order to leverage funding dollars to the maximum benefit, conservation easements should be sought as a first option whenever appropriate.

Acquisition of fee simple title or a conservation easement on land provides a more permanent long-term protection of open space and natural areas than through other methods such as zoning or subdivision requirements. Acquisition provides a means to enable nonprofit groups in partnership with communities to protect open space and natural areas at minimal or no cost and little administrative burden to local governments.

Implementation: Pennsylvania's Department of Conservation and Natural Resources has two sources of funding to help communities and non-profit groups implement acquisition of open space and natural areas projects. However, since demand for these funds exceeds available money, communities may need to consider the full array of techniques described herein to protect and conserve the greenway and open space network.

Conservation Options for Private Landowners

Stewardship offers many opportunities for private landowners. Land may be acquired to protect and develop the proposed interconnected greenway and open space system in a number of ways.³ Centre County respects and is committed to supporting private property rights.

Land Donation

Land donation is the donation of land to a municipality, agency, or some other non-profit entity by a private individual or corporation for a conservation purpose. Donating a remainder interest and retaining a reserved life estate is another way to give land.

Benefits/Limitations: Land donation provides a lasting legacy to the donor. An outright donation releases the donor from the responsibility of managing the land and can provide substantial income tax deductions and estate tax benefits if it is for preservation or conservation. In general, land donation provides permanent protection without public expenditure.

Bargain Sale of Land

Land is purchased for less than its fair market value. It combines income-producing benefit of sale with tax-reducing benefit of donation.

Benefits/Limitations: The difference in purchase price and the fair market value is considered a charitable gift for tax purposes.

Option to Buy

Obtaining an option to buy is an agreement with a landowner to purchase or have the right of first refusal to purchase a specific tract of land.

Benefits/Limitations: While the option secures the right for future purchase, it does not necessarily set a price or determine when or if the property would be sold.

Access and Use Agreements

Access and use agreements are between the greenway operating/managing entity and private landowners. They specify how a piece or portion of a landowner's property may be used for the greenway.

Benefits/Limitations: The landowner may permit a trail through a section of property but still use the property for some other compatible use. Obligations by the greenway operating/managing entity can be outlined and accept and forbid specific activities. Also, a landowner who opens land up for recreational use without charging a fee is protected from liability by the Pennsylvania Recreational Use of Land and Water Act of 1994 (Pa. Stst. Ann Tit. 68 Sections 477-1 to 477-8) and supporting case law. The landowner may also be indemnified under the greenway organization's insurance program.⁴

Conservation Easements

Conservation easements are a legally enforceable agreement between a landowner and an agency or non-profit organization that places a restriction on the use or activities on a specific property that supports conservation goals and objectives for the greenway. In general, this is less expensive than fee simple purchase of land. The landowner retains rights not surrendered in the easement agreement and the provisions of the easement are valid and enforceable in perpetuity. Public access may be restricted and a method of enforcement is necessary.

³ For more information about the tools and tax benefits of land conservation see "[Conservation Options: A Landowner's Guide](#)," published by the Land Trust Alliance.

⁴ [Creating Connections – The Pennsylvania Greenways and Trails How-To Manual](#), Pennsylvania Greenways Partnership, 1998.

Two specific conservation easements situations are outlined in “Land Use in Pennsylvania: Practices and Tools”, Governor’s Center for Local Government Services, 2000. They are:

Agricultural Conservation Easements

Conservation easements permanently protect farms from development. Landowners voluntarily sell conservation easements to a government entity or private conservation organization or land trust. The agency or organization usually pays the difference between the value of the land for agricultural use and the value of the land for its “highest and best use” which is generally residential or commercial development. A deed of conservation is recorded in the county recorder of deeds office.

Benefits: Conservation easements permanently preserve land for agricultural use. Purchase of easements by municipalities on their own can be done more selectively and expeditiously, as they do not have to conform to the county or State guidelines.

Implementation: County Agricultural Land Preservation Boards have primary responsibility for developing application procedures. They also establish the priority order for easement purchases based on a numerical ranking system. The ranking system is modeled upon state regulations that require consideration of soil quality, conservation practices, development pressures in the County, and the location of other permanently preserved farmland and open space.

Forestland Conservation Easements

Conservation easements on working forests are a market-driven tool used to preserve open space, like those used to protect working farmland. Easements can be used to protect forests for present and future economic benefit, with subsequent attendant benefits such as wildlife habitat, watershed protection, outdoor recreation, and soil conservation.

Benefits: As open space diminishes while development advances, economically valuable forestland is lost. Timber is one of the top five sectors in Pennsylvania’s economy, and its continued availability is dependant upon the existence and preservation of open space and forests. The benefits are economic as well as environmental. Side benefits of easements include lower property taxes for landowners.

Implementation: Some non-profit organizations such as conservancies and land trusts provide financial support for purchasing easements from landowners; they also accept tax-deductible donations of easements from landowners. The U. S. Forest Service’s Forest Legacy Initiative provides funding to state governments to help purchase easements on private forestland.

Conclusions

Implementation will require a strong commitment on the part of state and local agencies, the county, involved municipalities, and non-profit organizations such as the ClearWater Conservancy. Municipal codes need to be reviewed and amended to facilitate the creation of the greenway and to reflect community goals and values for the greenway. A concerted awareness and educational campaign needs to promote stewardship among the many private landowners within the corridor. It is particularly important to deal effectively with the issue of private property rights. Concern about the “taking” of land emerged in the public participation process. While Centre County is committed to supporting private property rights, conveying this commitment to the public and concerned landowners is crucial. To insure consistency of the message and to represent the greenway coalition/partnership in sensitive land negotiations, an “acquisition manager” should be assigned/hired in this capacity to support the effort.

Greenway Study Implications: Open Space

The Nittany and Lower Bald Eagle Valleys are pristine and stunning landscapes that provide a visual, natural, and culturally rich environment. These resources are threatened by rapid and intense development. Unless a concerted effort is made to maintain this area the essence of these resources will be lost. One key mechanism for stewardship is the development of a regional greenway system that knits together and sustains these precious resources. The common theme that came out of the public involvement process, and that is mirrored in the inventory and analysis of resources, is that of the protection, preservation, and utilization of these resources for the greater good. It is a paramount concern that can be realized at least in part by the preservation of the valley's green infrastructure and the creation of a greenway network complementary to the protection and appropriate use of natural resources.

To achieve this greenway "system" it is critical that an organization (watershed group) takes the lead with as much support from the county and other stakeholder groups as can be mustered. Also, to be successful the greenway system has to be part and parcel of a diverse frontal attack aimed at preserving the many natural and cultural resources contained within the corridor. The open space framework within which the greenway system connects should be expanded through as many means as possible. The physical ties and trails system can then expand as appropriate to provide access through the greenway system for enjoyment, awareness, and safe alternative transportation.

Table 4-1

County and Municipal Planning Controls

County Region	Municipality	Adopted Comprehensive Plan	Planning Commission	Subdivision Ordinance	County Subdivision Ordinance Applies	Zoning Ordinance	Zoning Hearing Board	Building Permit	Federal Flood Insurance	Ag Security Area	Storm-Water Ordinance	Mandatory Dedication Ordinance	Miscellaneous Open Space & Conservation Considerations
Centre	State College Borough	X	X	X		X	X	X	X		X		
Centre	College Township	X	X	X		X	X	X	X	X	X	X	Riparian buffer requirements adopted for “gateway district” along Spring Creek corridor; “Bike Path” defined as a minimum eight foot wide paved path intended to furnish bicycle and pedestrian access
Centre	Ferguson Township	X	X	X		X	X	X	X	X	X	X	
Centre	Halfmoon Township	X	X	X		X	X	X	X	X	X		
Centre	Harris Township	X	X	X		X	X	X	X	X	X	X	
Centre	Patton Township	X	X	X		X	X	X	X	X	X		50% Open Land set aside within a development meeting rural preservation design standards; passed referendum to have money set aside to purchase land for open space and recreation purposes
Inter-Valley	Bellefonte Borough	X	X	X		X	X	X	X		X		Stream Valley and Forest Districts impose limitations aimed at conservation
Inter-Valley	Howard Borough	X	X		X	X	X	X	X				
Inter-Valley	Milesburg Borough	X	X		X	X	X	X	X				
Inter-Valley	Benner Township	X	X		X	X	X	X	X	X	X		Stream Valley and Forest Districts impose limitations aimed at conservation
Inter-Valley	Boggs Township	X	X	X		X	X	X	X		X		Forest Preservation District encourages the conservation of land in those areas where topography and land features do not readily support most types of development due to environmental constraints and lack of infrastructure
Inter-Valley	Howard Township	X			X			X	X				
Inter-Valley	Liberty Township	X	X	X		X	X	X	X		X		
Inter-Valley	Marion Township	X	X		X	X	X	X	X	X			
Inter-Valley	Spring Township	X	X	X		X	X	X	X	X	X		Stream Valley and Forest Districts impose limitations aimed at conservation
Inter-Valley	Walker Township	X	X		X	X	X	X	X	X			
Penns Valley	Potter Township	X	X		X	X	X	X	X	X			

Chapter 5 – The Greenways Plan

Introduction

The inventory and analysis phase identified and mapped natural and manmade resources and community resources that contribute to the Nittany and Bald Eagle Greenways. Through consideration of these resources, greenway opportunities and challenges were identified and a vision and structure was developed for the Nittany and Bald Eagle Greenways.

Nittany and Bald Eagle Greenways Vision

Vision

To protect the water quality, scenic, and natural resources of the Lower Bald Eagle and Nittany Valleys and provide a network of access ways for non-motorized transportation and low impact outdoor recreation for people who live, work, or visit here.

Four guiding principles characterize the vision for the Nittany and Bald Eagle Greenways:

1. Incorporate the watershed of the Nittany and Lower Bald Eagle Valleys.
2. Follow natural corridors including the Spring and Bald Eagle Creeks, their tributaries and ridge tops.
3. Include manmade linear features such as railways, roads, utility corridors, and rights-of-way to establish linkages.
4. Connect and protect areas and resources that are of value to the community and distinguish the Nittany and Lower Bald Eagle Valleys as a special place to live, work, or visit. These include the natural, landscape, cultural, and heritage sites; parks; schools; population centers; and places of commerce.

Greenway Structure

From these guiding principles the concept for the Nittany and Bald Eagle Greenways was developed. The concept defines the greenway structure and key components of the system.

Nittany and Bald Eagle Greenways

The Nittany and Bald Eagle Greenways are a network of open space managed for conservation and/or recreation purposes. The network follows natural features of land and water. The greenways serve as links for natural areas, parks, cultural resources, historic areas, community destinations, and population centers. Greenways can serve as wildlife corridors and may or may not be open to the public. Greenways can provide recreation opportunities featuring pathways for alternative transportation, fitness, wellness, and enjoyment. Greenways can be both publicly and privately owned.

A greenway system is composed of linear components and origin and destination points. Linear components of the Nittany and Bald Eagle Greenways include major and minor corridors, links, and spurs. Destination and origin points include hubs and nodes. The greenway network provides connectivity among all of these features. The key components of the greenway structure are defined below.

Major Corridors

A major corridor is the principal corridor in a greenway. It has major regional significance and serves as the organizing unit for a greenway network. Minor corridors and links connect to the major corridor. The major corridors of the Nittany and Bald Eagle Greenways network are Spring Creek between Boalsburg and the confluence with Bald Eagle Creek and lower Bald Eagle Creek from Milesburg to Bald Eagle State Park.

Minor Corridor

A minor corridor is a secondary corridor in a greenway. Minor corridors extend the greenway network regionally through significant tributary stream corridors. The minor corridors of the Nittany and Bald Eagle Greenways include Buffalo Run and Logan Branch. Both of these stream corridors are significant within the greenway network. Buffalo Run has extensive wetlands located near Waddle. The Logan Branch corridor offers a high water quality stream and scenery that reveals the heritage of the area.

Link

A link is a connecting corridor from the major and minor corridors to a destination point in the greenway. Links can include stream corridors, hiking and biking paths, wildlife corridors, ridge tops, or water trails. Links can be further defined by their function within the network. A single greenway link can have multiple functions within a greenway network. Six functional categories of links are defined for the Nittany and Bald Eagle Greenways:

Conservation Link: These links include ecosystems with significant plant and animal habitat and migration corridors.

Education Link: These corridors connect with historic and cultural resource locales for interpreting our heritage.

Recreation Link: These links provide opportunities for recreation such as walking, hiking, biking, canoeing, kayaking, mountain biking, cross country skiing, and horseback riding.

Transportation Links: Transportation links furnish pathways for non-motorized transportation to connect people and community destinations.

Water Quality Link: These corridors contain buffer areas for watercourse and floodplain protection and flood control.

Tourism Link: These corridors provide opportunities for economic develop and tourism.

Eleven links have been identified in the Nittany and Bald Eagle Greenways that connect to the major and minor corridors. Greenways links include:

- Tussey Mountain Ridge Link
- Spring Creek/Galbraith Gap Link
- Slab Cabin Link
- Roaring Run Link
- Cedar Run Link
- Nittany Mountain Ridge Link

- Bellefonte Central Railroad Link
- Big Hollow Link
- Mackey Run Link
- Bald Eagle Mountain Ridge Link
- Bald Eagle/Blanchard Link

Spur

Spurs are corridors planned and developed by municipalities that link origin and destination points to the greenway network. Many of these destinations are schools, parks, or other community places that are not located near natural or manmade corridors. Trails should be developed to link these destinations to the greenway network. Each community in the Nittany and Lower Bald Eagle Valleys should develop a plan to extend the greenway network locally throughout their municipality through their own initiatives. The Nittany and Bald Eagle Greenways can be the organizing element and catalyst to stimulate local efforts to expand the network.

Hubs

Hubs are the major population centers in a greenway network. They contain all-encompassing elements that help to define a community including commerce areas, residential areas, schools, parks, churches, service areas, and transportation centers. Hubs serve as both major destination and origination points for greenway visitors. The Nittany and Bald Eagle Greenways network has two hubs: Bellefonte and State College.

Nodes

Nodes are destination and origination points that are smaller in scale than hubs and are significant focal locations within the greenway network. Nodes can be categorized according to their function. Node categories within the Nittany and Bald Eagle Greenways include:

Community Node: A community node is a community with limited services including neighborhood schools, parks, churches, and support services such as food service or gas stations. Boalsburg, Lemont, Park Forest Village, Milesburg, and Howard are examples of nodes.

Heritage Node: A heritage node has historic or cultural significance. Examples of heritage nodes include Curtin Village, The Pennsylvania Military Museum, and Centre Furnace Mansion.

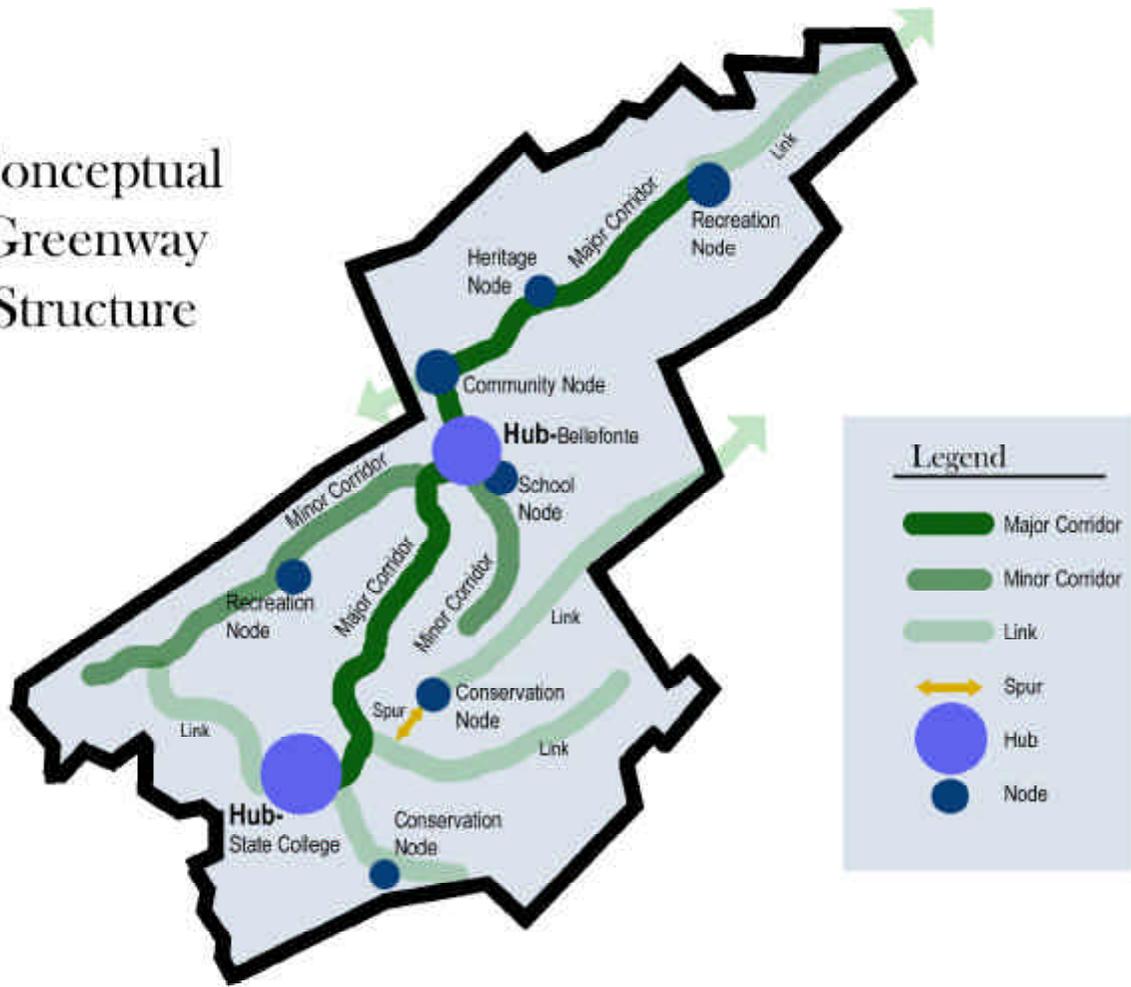
Recreation Node: A recreation node features public parks and facilities that attract visitors for recreational use. Examples of recreation nodes include Bald Eagle State Park, the Pennsylvania Fish and Boat Commission fish access points, and community parks.

Conservation Node: Conservation nodes have elements related to nature and the environment including scenic views, significant or unusual geology, important habitat areas, ground water re-charge areas, water bodies, and the Centre County Natural Heritage Inventory sites.

School Node: School nodes are locations of public and private schools.

The elements of the greenway structure are conceptually illustrated on the next page.

Conceptual Greenway Structure



The Nittany and Bald Eagle Greenways

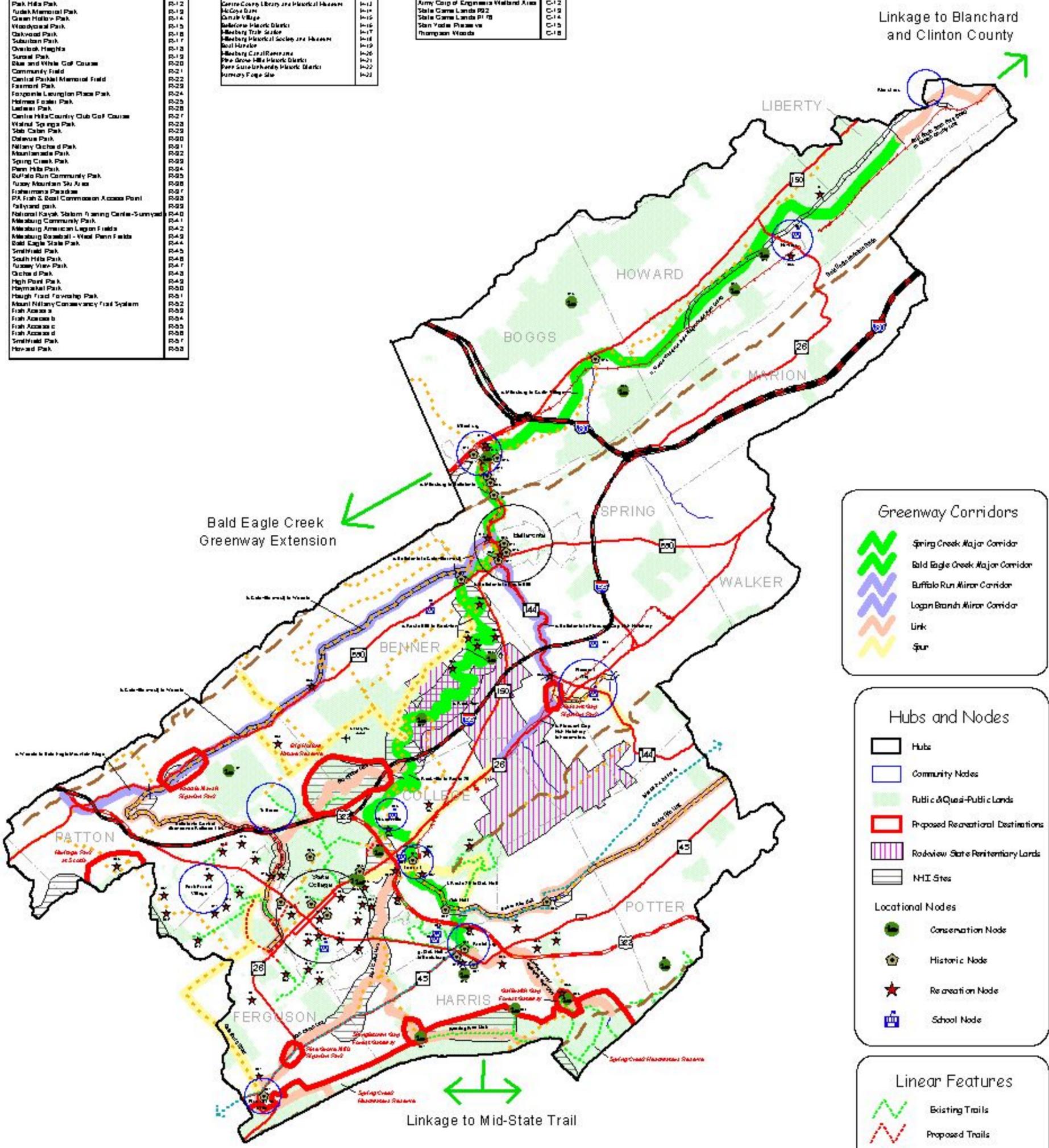
The greenway system is described in Table 5-1. The corridors and links of the Nittany and Bald Eagle Greenways have been divided into geographic segments and illustrated on the Recommended Greenway Map. The map is described in the accompany matrix which provides pertinent information regarding the greenway segment length, nodes within each segment, the function of the greenway segment, and comments regarding the development of the greenway.

Recreation Nodes	
Name	Label
Woolfield Park	R01
Blue Spring Park	R02
County Place Park	R03
Raywood Park	R04
Military View Park	R05
Faach Memorial Park	R06
Elba County Club	R07
Gaytable Park	R08
Patterson Farming Woodlands	R09
Greenway Toyook Park	R10
Horseshoe Park	R11
Park Hill Park	R12
Judek Memorial Park	R13
Green Hollow Park	R14
Woodysdale Park	R15
Delwood Park	R16
Suburban Park	R17
Overlook Heights	R18
Sunset Park	R19
Blue and White Golf Course	R20
Community Field	R21
Central Park Memorial Field	R22
Farmers Park	R23
Ferguson Levington Place Park	R24
Holmes Foster Park	R25
Ladew Park	R26
Centre Hills Country Club Golf Course	R27
Walden Springs Park	R28
State Cabin Park	R29
Dalevue Park	R30
Military Circle Park	R31
Mountainside Park	R32
Spring Creek Park	R33
Penn Hills Park	R34
Buffalo Run Community Park	R35
Fuzzy Mountain Ski Area	R36
Fisherman's Paradise	R37
PA Fish & Boat Commission Access Point	R38
Follyard Park	R39
National Kayak Slalom Training Centre-Sunrise	R40
Melaburg Community Park	R41
Melaburg American Legion Fields	R42
Melaburg Baseball - West Penn Fields	R43
Bald Eagle State Park	R44
Smithfield Park	R45
South Hills Park	R46
Fuzzy View Park	R47
Circle of Park	R48
High Point Park	R49
Haymarket Park	R50
Hughes Farm Farming Park	R51
Mount Nittany Conservancy Field System	R52
Fish Access a	R53
Fish Access b	R54
Fish Access c	R55
Fish Access d	R56
Smithfield Park	R57
Howard Park	R58

Historic Nodes	
Name	Label
Rocky Mountain District	H-01
Pennsylvania Military Museum	H-02
Blue Hill Historic District	H-03
College Heights Historic District	H-04
College Four Historic District	H-05
Centre Farm Historic District and Historic Society	H-06
Lancaster Historic District	H-07
Penn State Historic District	H-08
Old Mill Historic District	H-09
Rocky Mountain	H-10
Rocky Mountain	H-11
Rocky Mountain	H-12
Centre County Library and Historic Museum	H-13
McCoy Dam	H-14
Centre Village	H-15
Rocky Mountain Historic District	H-16
Rocky Mountain Historic District	H-17
Rocky Mountain Historic District and Museum	H-18
Rocky Mountain	H-19
Rocky Mountain	H-20
Rocky Mountain	H-21
Rocky Mountain	H-22

Conservation Nodes	
Name	Label
Shingleton Gap	C-01
Bald Knob	C-02
Colburn Gap	C-03
Spring Creek Headwaters	C-04
Thompson Meadow - Spring (NHI site)	C-05
Melaburg Marsh Nature Centre	C-06
Spring Creek Canyon	C-07
Bald Eagle Ridge - reserved lands	C-08
Centre Spring Helichery	C-09
Centre Hill	C-10
PA Game Commission Preserve Lands	C-11
Army Corp of Engineers Wetland Area	C-12
State Game Lands P-2	C-13
State Game Lands P-17B	C-14
State Game Lands P-18	C-15
State Game Lands P-19	C-16
Thompson Woods	C-17

School Nodes	
Name	Label
State College Area High School	S-01
Lancaster Elementary School	S-02
Howard Elementary School	S-03
Spring School	S-04
Marion Elementary School	S-05
Centre Hill Elementary School	S-06
Centre Hill Elementary School	S-07
Science Technology	S-08
Platinum Gap Elementary School	S-09
Howard Elementary	S-10



Greenway Corridors

- Spring Creek Major Corridor
- Bald Eagle Creek Major Corridor
- Buffalo Run Mirror Corridor
- Logan Branch Mirror Corridor
- Link
- Spur

Hubs and Nodes

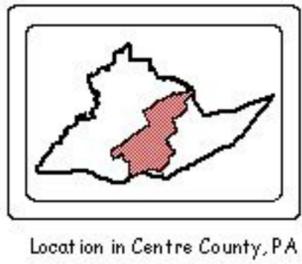
- Hubs
- Community Nodes
- Public & Quasi-Public Lands
- Proposed Recreational Destinations
- Roadview State Penitentiary Lands
- NHI Sites

Locational Nodes

- Conservation Node
- Historic Node
- Recreation Node
- School Node

Linear Features

- Existing Trails
- Proposed Trails
- BicyclePA - Route 6
- Trail Opportunities
- Abandoned Rail Corridors
- Stream Corridors
- Ridgelines
- Active Rail Lines
- Limited Access Highway



Recommended Greenway Map

Nittany and Bald Eagle Greenway

Centre County, Pennsylvania

Prepared for: Centre County Office of Planning

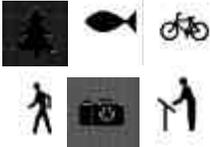
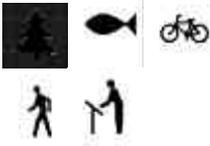
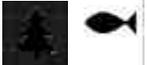
Sources: Centre County GIS, The ClearWater Conservancy, DEP, PennDOT, and USGS.

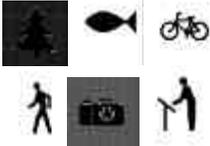
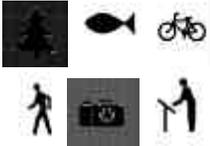
Prepared by:
Yost, Stodolski, Means with
BLOSS Associates and
Toole Recreation Planning

November 2002

Table 5 - 1

Nittany and Bald Eagle Greenways Corridor and Link Description

Greenway Corridors and Links	Approximate Length (mi.)	Municipalities	Nodes	Corridor/Link Function	Comments
Spring Creek Major Corridor - SC					
a. Milesburg to Bellefonte	2.6 miles	Milesburg, Boggs, Spring, Bellefonte	HN – Milesburg Canal HN – Harmony Forge HN – McCoys Dam HN – Centre County Library and Historical Museum HN – Bellefonte Museum HN – Bellefonte Historic District HN - Bellefonte Railroad Museum RN – Tallyrand Park RN – National Kayak Slalom Training Course RN – Milesburg Historical Society and Museum RN – Milesburg Community Park CN – Eagles Nest		Physical configuration of corridor is constrained by railroad, creek, and wetlands in this segment – alternative accessways include using the Rt. 144 r-o-w, boardwalks through wetlands areas, re-route over mountain
b. Bellefonte to Rt. 550	1.1 miles	Bellefonte, Spring, Benner	RN – Spring Township Nature Park RN – Renolds Avenue Park CN – Match Factory HN – Roopsburg Mill SN – Benner Elementary School		Tie greenway to Bellefonte Waterfront Improvement Plan initiatives Use Slaughterhouse Rd. r-o-w and lands of Spring Township Nature Park
c. Rt. 550 to Rockview	2.7 miles	Benner	RN – Fisherman’s Paradise RN – Fish Access (4)		Use sewer easements and lands of PA Fish and Boat Commission
d. Rockview	3.4 miles	Benner	CN - Benner Spring Hatchery CN – Spring Creek Canyon RN – Fish Access		Use Barnes Lane as alternative route around sensitive resources of the Spring Creek canyon and Rockview State Correctional Institution lands Tie greenway plan to plan for the Spring Creek Canyon Nature Reserve

e. Rockview to Rt. 26	3.3 miles	Benner, College	RN – Spring Creek Park RN – Penn Hills Park CN – Millbrook Marsh Nature Center SN – Houserville Elementary		Link to Houserville Community Node
<ul style="list-style-type: none"> ▪ Big Hollow Link - Bellefonte Central Rail Road Link 	3.2 miles	Benner, College	HN – PSU Arboretum HN – College Heights Historic District RN – Sunset Park RN – Tudek Memorial Park RN – Blue and White Golf Course RN – Oakwood Park RN – Overlook Heights		Protect environmental resources of ravine
<ul style="list-style-type: none"> ▪ Slab Cabin Link - Roaring Run Link - Tussey Mountain Ridge Link 	8.4 miles	College, State College, Harris, Ferguson	CH – Pine Grove Mills CN – Millbrook Marsh Nature Center RN – Slab Cabin Park RN – Lederer Park RN – Walnut Spring Park RN – Tusseyview Park CN – Thompson Meadows Spring RN – Dalevue Park RN – Centre Hills Country Club Golf Course RN – Westfield Park RN – Mountainside Park RN – Nittany Orchard Park RN – Oak Grove Park CN – Shingletown Gap CN – Bald Knob RN – Shingletown Gap Trails		Develop spur to State College Tussey Mountain Ridge Link connects to the Mid-State Trail Protect area as headwaters to Spring Creek
f. Rt. 26 to Oak Hall	2.0 miles	College	SN – Lemont Elementary School HN – Lemont Historic District HN – Oak Hall Historic District RN – Mount Nittany Conservancy Trail System and Preserve RN – Mountainside Park RN – Nittany Orchard Park		Tie to College Township bikeway Develop spur to State College Spur to Mount Nittany Conservancy Trail System Use future Puddintown Rd. bikeway to link to PSU and State College
g. Oak Hall to Boalsburg	1.1 miles	College, Harris	SN – Mount Nittany Middle School SN – Panorama School HN – PA Military Museum HN – Boal Mansion RN – Nittany View Park RN – Blue Spring Park		Link to existing bikeway/trail system

<ul style="list-style-type: none"> ▪ Cedar Run Link 	6.3 miles	College, Harris, Potter	HN – Linden Hall Historic District RN – Linden Hall Park RN – Kaywood Park		Connects to Centre Hal Protect environmental resources of Linden Hall Park
<ul style="list-style-type: none"> ▪ Spring Creek/Galbraith Gap Link - Tussey Mountain Ridge Link 	3.9 miles	Harris	RN – Fasick Memorial Park RN – Elks Country Club RN – Tussey Mountain Ski Area RN – Country Place Park HN – Boalsburg Historic District CN – Galbraith Gap		Tussey Mountain Ridge Link connects to the Mid-State Trail Protect area as headwater to Spring Creek
Bald Eagle Creek Major Corridor – BE					
a. Milesburg to Curtin Village	3.3 miles	Milesburg, Boggs	HN – Curtin Village HN – Milesburg Historical Society and Museum HN – Milesburg Trail Station RN – Milesburg Community Park RN – West Penn Baseball Fields RN – Milesburg American Legion Fields CN – Bald Eagle Ridge Preserve lands		Use Iddings St. r-o-w, sewer easement, and ACOE wetlands Link under Rt. I-80 Spur west to Bald Eagle Area School lands Spur green corridor to the State Game Commission land on the Bald Eagle ridge
b. Curtin Village to Bald Eagle State Park (east)	7.9 miles	Boggs, Howard, Liberty	HN – Curtin Village RN – Bald Eagle State Park RN – Howard Park CN – State Game Commission Preserve Lands CN – Army Corps of Engineers Wetlands Area CN – Howard State Nursery CN – Bald Eagle Ridge lands CH – Howard Borough		Use existing roads and old Rt. 220 Tie to existing trails in BEBP The causeway to Howard is constrained by configuration – alternative access through cantilever trail or route access from Blanchard
c. Bald Eagle State Park (east) to Clinton County	2.6 miles	Liberty	RN – Bald Eagle State Park RN – Howard Park		Army Corps of Engineers Sayers Dam land limits public access – alternative accessways use local roads and Marsh Creek corridor to link to Bald Eagle Creek
Buffalo Run Minor Corridor – BR					
a. Bellefonte to Coleville (west)	1.0 miles	Bellefonte, Spring			Accessway constrained by active portion of the Bellefonte Central Railroad and quarry.

b. Coleville (west) to Waddle	7.9 miles	Benner, Patton	RN - Buffalo Run Community Park RN – Smithfield Park SN – Benner Elementary School	     	Use Bellefonte Central Railroad Protect the scenic corridor Connect to the proposed Waddle Marsh Riparian Park
▪ Bellefont Central Railroad Link (Buffalo Run to State College)	5.9 miles	Patton, College, State College	RN – Overlook Heights Park RN – Sunset Park CH – Toftrees	  	Connect to State College Link via bike routes to the Scotia Barrens and the proposed Heritage Park Link via on-road bike route (Old Gatesburg Rd and Nixon Rd) to Pine Grove Mills
c. Waddle to Bald Eagle Mountain Ridge	1.7 miles	Patton		   	
▪ Bald Eagle Mountain Ridge Link	-	Patton	HN – McCoys Dam	  	
Logan Branch Minor Corridor - LB					
a. Bellefonte to Pleasant Gap Fish Hatchery	2.9 miles	Bellefonte, Spring, Benner	RN – Fishing Access D CN – Pleasant Gap Fish Hatchery SN – Central PA Institute of Science and Technology	     	Physical configuration of corridor is constrained by railroad, creek, and adjacent uses in this segment – alternatives accessways include using the Rt. 144 r-o-w.
b. Pleasant Gap Fish Hatchery to headwaters	2.5 miles	Benner, College	CN – Pleasant Gap Fish Hatchery	  	Spur to Pleasant Gap on abandoned rail corridor Protect the scenic corridor
▪ Mackey Run Link - Nittany Mountain Ridge Link	1.4 miles	Benner	RN – Mount Nittany Conservancy Trail System	 	Link within lands of Rockview – no public access

HN – Historic Node CN – Conservation Node RN – Recreation Node SN – School Node CH – Community Hub

Greenway Function – Conservation -  Education -  Recreation -  Transportation -  Water Quality -  Tourism - 

The planning process further evaluated each corridor and link segment of the Nittany and Bald Eagle Greenways to prioritize their protection. Criteria were listed based on the goals established for the Nittany and Bald Eagle Greenways. The Greenway Advisory Committee reviewed the criteria and assigned priorities based on three categories: high priority, low priority, and municipal priority. The greenway network was divided into geographic segments resulting in 25 segments and/or links. Each segment and/or link was evaluated based on the criteria and a numeric value was established which resulted in a ranking for each link and corridor segment. Table 5-3 on page 5-12 illustrates the ranking process and outcomes.

Ranking the greenway corridors and links by segment is a useful planning tool for Centre County and municipal officials to use to prioritize protection strategies. The ranking does not place a relative value on the resources found within each greenway segment but rather acknowledges that resources exist within the greenway segment that satisfy or partially satisfy the established criteria. Land and its state of protection is a dynamic consideration. The degree of threat from development and the availability status for any portion of the Nittany and Bald Eagle Greenways network is continually influenced by outside factors and will require ongoing monitoring and responding action.

Public Access within the Nittany and Bald Eagle Greenways

The foremost-recognized benefits of greenways are environmental conservation and recreation opportunities. But these benefits are not always compatible in each geographic segment of a greenway system. Public access for recreation activities such as birding, walking, nature study, bicycling, fishing, and horseback riding all impact the environment. The degree of potential environmental impact must be considered to determine if public access is appropriate throughout the entire length of a greenway. Impact to soil, vegetation, wildlife habitats, and water resources should be considered in the master planning stage of greenway development. Strategies for managing the impacts of public use should be developed in concert with trail development.

The Centre County Natural Heritage Inventory identifies areas of Centre County that contain important natural communities, special animals, and special plants. Protecting these areas is important to the maintenance of biodiversity and ecological integrity of the County. The Natural Heritage Inventory areas within the Nittany and Bald Eagle Greenways Plan area are mapped on the Resource Map. Some of these areas are more vulnerable than others and strategies for their protection and preservation should correspond to the potential impact. Examples of tools for minimizing impacts to natural areas are shown in Table 5-2.

Factor	Strategy	Tool
Use Characteristics		
Amount of use	Limit the amount of use	Limit number of entrants Limit size of parking lot
Type of activity	Limit destructive activities	Prohibit certain activities Zone by activity type
Visitor behavior	Influence behavior	Low-impact education Prohibit certain behavior
Use distribution		
Spatial	Concentrate use	Concentrate use at facilities such as trails
Temporal	Control timing of use	Close areas at certain times

¹ Daniel S. Smith, Paul Cawood Hellmund, *Ecology of Greenways* (University of Minnesota Press, 1993), p. 114.

Table 5-2 (cont.) Examples of Tools to Minimize Recreation Impacts on Natural Areas ²		
Factor	Strategy	Tool
Vulnerability		
	Control location of use	Locate facilities on durable sites Close fragile areas
	Harden sites	Surface trails
	Shield the site from use	Bridge vulnerable places Install toilets

Chapter 4 of this study identified and summarized natural resource sites of significance in the study area based on the Centre County Natural Heritage Inventory. Six sites were identified within the study area and of those sites two are within designated greenway corridors or links: Spring Creek Valley and Big Hollow Road. Both of these areas have plants of special concern and the Spring Creek Valley site has natural communities that are significantly imperiled on the ridge and rocky summit. Permitting public access in these areas should be assessed during the master plan stage of greenway development. The areas should be explored with a qualified ecologist to determine if the potential impacts of public access can be mitigated by sensitive trail location or if alternative re-routing around the sites is most appropriate. Barnes Lane has been identified as a potential accessway to re-route around the Spring Creek Valley and the limited access portion of the Rockview State Correctional Institution.

² Daniel S. Smith, Paul Cawood Hellmund, *Ecology of Greenways* (University of Minnesota Press, 1993), p. 114.

Chapter 6 – Organization and Implementation

Introduction

To establish the Nittany and Bald Eagle Greenways, an organized approach to implementation needs to be established. Success stories about trail and greenway implementation cover a gamut of methods from grass roots groups with a single focus on a relatively short trail to sophisticated greenway organizations that cover multiple counties and long corridors.

The Centre County Planning Office set forth a large vision for accomplishing the greenway. Along with other planning efforts, including such concepts as open space planning, the Planning Office is looking at a fifty-year horizon. Accomplishing major planning projects does require time, money, and commitment. However there is some urgency here as development pressures are intense and mechanisms need to be put into place before opportunities are forever lost.

Nittany and Bald Eagle Greenways Planning, Implementation & Management

The goal of the Nittany and Bald Eagle Greenways Plan with respect to operations and management was to establish a conceptual framework, not a detailed management plan. Centre County Planning wanted to set forth an approach to setting up a management plan without fleshing out details that should rightfully be developed when a master plan is underway. The organizational unit should evolve overtime as the greenway planning and development come online.

Tasks

To present the rationale needed to support staffing and partnership commitments, a list of tasks was generated. The list clearly shows the level of commitment required to establish greenways. While many of the related tasks can be achieved through partnerships and volunteers, the responsibility for orchestrating these tasks needs to be vested in a specific organization and designated individuals. If greenway planning and implementation is an adjunct responsibility and not a delegated function, success is less likely. Portions of the greenway might happen if a dedicated group emerges to complete the development of a specific trail or greenway segment. But large-scale connection of a regional network is complex and requires an established management structure.

Figure 6-1

Greenway Implementation Considerations Explored

Management

- Structure
- Partnerships
- Ownership
- Daily Responsibility
- Commission
- County Role
- Funding
- Policies
 - Ownership and control
 - Rules and Regulations
 - Ordinances
 - Agreements with partners
 - Naming
 - Security
 - Emergency Plan
 - Risk/liability

Operations

- Trail Heads
- Maintenance Tasks
- Patrolling
- Development of a Maintenance Management System
- Record Keeping

Planning

- Overall picture of how to approach the Nittany and Bald Eagle Greenways development: Blueprint
- Land Preservation and Linkages
- Master Planning
 - Segments: naming
 - Segments: prioritizing
 - Segments: pilot project for success
- Designing and Construction Documents
- Construction/oversight
- Phasing In Segments Over Time

Figure 6-2

Management and Operations Options for Nittany and Bald Eagle Greenway

Type	Scenario	Pros	Constraints	Conclusions and Implications
Current Operations	Centre County Planning Office has the staff responsibility for planning the Nittany and Bald Eagle Greenway. This includes one staff person dedicated to the Spring Creek Watershed Commission.	Provides professional, dedicated staff to planning.	Staff time is limited to planning. No staff is in place to implement the greenway study recommendations. The County does not have a parks and recreation department that would typically assume responsibility for greenway management and operations.	There is a need to establish an organizational structure and dedicated staffing for the implementation of the Nittany and Bald Eagle Greenways. This could be within the current organizational structure of the Planning Office with dedicated staff for greenway planning. However, the Planning Office does not operate and manage facilities.
Spring Creek Watershed Commission	The Watershed Commission could employ staff dedicated to the implementation of the greenway plan.	Would provide dedicated staffing for the greenway.	Watershed currently uses Centre County Planning for its staffing. The Watershed Commission does not have funds for staff and relies on the County to provide support for its staff housed in the Planning Commission	The staffing arrangement with Centre County Planning appears to be a sound approach and provides greater efficiency and effectiveness in comparison with the Watershed employing its own staff. There is a need to maintain county funding to employ dedicated staff for the Watershed within the Planning Office. The Watershed Commission does not have the capacity for the physical maintenance of the trails and support facilities in terms of staff, equipment or expertise.
Centre County Planning Office	The Centre County Planning Office would formalize Greenways as a division within its organizational structure. The Greenways Division would expand the Planning Commission's current greenway commitment to expanded functions that would include implementation and management.	Centre County Planning Office is already working on greenways and has the skills and expertise to carry forward with implementation.	It is likely that additional staff would be needed for special projects such as land acquisition, trail planning and development. The Planning Commission does not have the capacity for the physical operations required by trails.	The Centre County Planning Office could move the greenways plan forward through implementation. Partnerships would be crucial requirements for outreach, developing agreements, and other phases of implementation. The Commission would need assistance with land acquisition and outreach. This could be addressed through an ad hoc team to be called upon for planning and when needed for implementation. The Commission does not have the capacity for the physical maintenance of the trails and support facilities in terms of staff, equipment, or expertise.
Centre County Parks & Recreation Department	Centre County does not have a parks and recreation department.	A county parks and recreation department in Pennsylvania is typically a resource-based department. Parks and Recreation departments are organized to plan, develop, and manage natural resources and recreation facilities. They either own their own equipment or outsource maintenance. The County has the legal authority to dedicate millage for this purpose. Planning could still be spearheaded by the Planning Office.	Would require the establishment of a new county department. Planning the department would require maintenance impact statements regarding greenways with consideration of doing work in-house or through outside contracts.	Consideration of the establishment of a county parks and recreation department should include factors beyond the Nittany and Bald Eagle Greenway alone. It requires an examination for the County's larger vision regarding greenways, open space, conservation, and recreation countywide. This is the option chosen by the GAC with the recommendation that a management study be carried out prior to the establishment of a department. Maintain existing organization within the Planning Commission until then.

Type	Scenario	Pros	Constraints	Conclusions and Implications
Centre Region Parks & Recreation	Expand the service area and functions of Centre Region Parks & Recreation Department to include the Nittany and Bald Eagle Greenway and ultimately a county greenway network.	Organization already exists and has a successful track record in planning, developing, organizing, and implementing a full range of parks and recreation facilities and services. CRPR does maintenance as a primary function.	Would require: <ul style="list-style-type: none"> - Additional staffing. - Buy-in by the County and the currently non-participating municipalities. - Organizational changes to expand a larger service area. 	The full range of parks and recreation services provided in CRPR may be larger in scope than the County would desire overall. Careful consideration would have to be given to an expanded service area and determining the exact service responsibilities in order to establish clear public perception of CRPR's function.
Greenways Authority	Establish a Greenways Authority under the Municipalities Authorities Act.	State laws enable the establishment of Authorities. They are most often used when large capital investments are required such as sewers, golf courses, and swimming pools. Authorities, appointed by the chief elected officials, have the power to make decisions, own land, and borrow money. They cannot enact taxes.	Authorities are policy making and not advisory. This often creates difficulties with elected officials who appoint authority members who then have the power to make decisions unlike advisory boards in which only elected officials make the decisions	Authorities are usually set up when there is a need to borrow money. Recreation Authorities are typically expected to be self-supporting but can have difficulty generating sufficient revenue to cover costs thereby requiring tax support. This has led to conflicts with elected officials.
Centre County Greenways Commission	Establish a Centre County Greenways Commission. The Commission would be responsible for the overall planning, development and operation of greenways in Centre County using the Nittany and Bald Eagle Greenway as the pilot project. The Commission would make the best use of existing resources, and partnerships and add support where needed.	A county greenways commission would be set up representing conservation, trails, recreation, environmental education, and tourism. The Planning Commission would provide the staffing for planning and development through creation of an organizational unit for greenways. A system for greenway maintenance and management would need to be planned, instituted and funded. The maintenance system could include county workforce, municipalities, volunteers, contracts, private partners, and preferably a mix of these resources. Consideration could be given to expanding the maintenance responsibilities of Centre Region Parks & Recreation Department with commensurate support.	A Commission would require funding and the concentrated management of numerous partners. It would be crucial to establish "where the buck stops" regarding greenways as with so many partners, diffused responsibilities may negate final authority.	A greenways commission would provide a countywide single focus on greenways. It would highlight the importance and dedication of the county to greenways. It would unite different groups with similar goals such as the Spring Creek Watershed Commission. Dedicated staff time would be required to manage the Commission to insure that it works as intended.
Nittany and Bald Eagle Greenway Alliance	Set up a private non-profit organization to develop and manage the Greenway.	The goal would be to develop and operate the greenway with minimal public funding largely through the efforts of volunteers.	Volunteer groups have a difficult time raising the resources needed for efforts on this scale. While light maintenance and trail clean-up days are typical functions of volunteer organizations, emergency repairs and heavy maintenance are nearly impossible for the most well-intentioned groups. Initial enthusiasm for such projects is usually followed by a marked drop-off in participation. While good examples of effective volunteer trail groups exist, the reality for most of these groups is that of hard times. It is important to keep in mind that volunteers are not free and require supervision, training, funding, and coordination.	Volunteers are vital to greenways and trails. However, they should be a support group and not the main operational unit in order to achieve long-term success and viability.

Potential Models

Models were developed based upon greenway and parks and recreation systems within the region and elsewhere. They served as the basis for discussion to determine potential approaches for Centre County to use for the Nittany and Bald Eagle Greenways. Figure 6-2 presents sample configurations. The Lead Committee and the Greenway Advisory Committee (GAC) explored these models to develop a potential configuration that would work for the Nittany and Bald Eagle Greenways as well as for an eventual countywide greenway network.

Selected Approach

The GAC recommended the establishment of a Centre County Parks and Recreation Department. Since establishing a new county department is difficult within a climate of fiscal austerity, a dedicated position should be established in the Planning Office. This would enable work on greenways to progress and provide Center County with the opportunity to phase in long-term management and operations mechanisms. The approach recommended is based on phasing in the greenway based upon the following tasks established by the GAC in conjunction with Centre County Planning:

1. Institute an outreach program with the municipalities
2. Develop a public education program about the benefits of greenways, the Nittany and Bald Eagle Greenways, and a countywide greenway network.
3. Build upon existing partnerships and create new ones with respect to greenways and trails.
4. Complete Nittany and Bald Eagle Greenways Master Plan.
5. Conduct a Pilot Project to demonstrate a success.

Phasing

Greenway planning and development is viewed as a long-term effort. Planning and development, and management would be in two phases organizationally.

Phase 1. Establish a Greenway Division in County Planning Office

At present, greenway planning is a function of existing staff in Centre County. The need to develop a master plan, produce and conduct an outreach program, orchestrate partnerships, and harness the resources of the GAC and related organizations such as the Spring Creek Watershed Commission and the ClearWater Conservancy require additional and dedicated staff time. A second factor that supports this recommendation is the Centre County Comprehensive Plan that is underway. As planning for the greenway unfolded, it became clear that open space planning is an important adjunct consideration to greenway planning. Open space preservation and greenways are closely allied. Centre County Planning indicated that open space as a concept had been emerging in the comprehensive planning process and that it might be a topic they would want to cover in its own right. Given the larger context of countywide planning with an open space component, the additional planning staff could be designated as open space planner(s) charged with a function of greenway planning. Organizations such as the Spring Creek Watershed Commission already use the Planning Office for staffing.

Phase 2: Establish a Centre County Parks Department

Once the greenways are established, the operation, protection, maintenance, and management should become the responsibility of a county parks department. In the model of a traditional county parks department in Pennsylvania, the Centre County Parks Department would be a natural resource based

department focused on parks, trails, nature preserves, and resource based outdoor recreation and environmental education.

The primary focus of the Centre County Parks Department would be on the provision of services primarily for the people who live in Centre County. A secondary mission would be alliance with tourism to serve the people who visit Centre County. Greenways and trails have the advantage of benefiting both residents and visitors.

Partnerships would be a strong foundation for the county parks department especially with respect to greenways and trails. The County could not do all that is needed to be done with greenways independently. Since greenways connect communities, partnerships with municipalities and community organizations will be vital. Coordination between Centre County Planning and Parks would be essential.

Funding the Greenways

A financial commitment to greenway planning, development, and management is required. The financing should be a mix of public and private means.

Greenway planning, design, and development can be supported through federal, state, county and local funding. In addition, support for these efforts can come through private support and volunteers.

Federal

TEA 21- Transportation Equity Act for the 21st Century - A federal program known as **TEA-21**. Administered through the Pennsylvania Department of Transportation, the program addresses transportation alternatives to automobiles. Project funding is available for transportation-related projects including pedestrian and bicycle facilities, education programs for pedestrians and cyclists, landscaping and beautification, historic preservation, rehabilitation of historic structures for transportation, preservation of abandoned rail corridors, control/removal of outdoor advertising, archeological planning, mitigation of water pollution due to highway run off, and establishment of transportation museums. Funds for the program have lapsed and Congress would need to re-authorize the Act and appropriate money for it for future trail projects. Centre County should advocate congressional re-authorization of this vital program.

TEA 21 provides 100 percent construction funding for trails. Trail plans that are in place including design and engineering are the most competitive because the trails are ready for the construction process. The cost of the design and engineering is viewed as the match.

Land & Water Conservation Funds – LWCF is managed through the Pennsylvania Department of Conservation and Natural Resources in conjunction with the Keystone Community Partnerships Program. It can be used for land acquisition and facility development such as trail construction. Application for LWCF funding is done in conjunction with the DCNR grant rounds under the Keystone Program.

National Recreational Trails Funding – The Federal Highway Administration provides funds for motorized or non-motorized trails as well as for maintenance and trail user education. Application for this program is through the Pennsylvania Department of Conservation and Natural Resources.

Forest Legacy Funds – Once Centre County is established as a Forest Legacy County, the County would be eligible for funding for preservation of forestlands.

State

Growing Greener – Growing Greener addresses the environmental challenges of the 21st century: loss of open space and farmland, tainted waterways, abandoned mines, aging sewer systems, and repair state

parks and forests. In 2002, the state increased its “tipping” fee for waste disposal at municipal waste landfills. This fee is in addition to the existing \$2 per ton Recycling Fee, \$1 per ton minimum host municipal fee and 0.25 per ton Environmental Stewardship Fund fee. \$50 million from the \$4 fee will be deposited into the “Growing Greener” Fund in fiscal year 2002-2003. Any remaining revenue will be deposited into the General Fund. Starting in 2003-2004 through July 1, 2012, the total amount of revenue generated from the fee will be deposited into Growing Greener.

Community Conservation Partnerships Program – Community Conservation Partnerships Program provides communities and nonprofit organizations with the technical assistance or grant funding for planning, land acquisition, park and recreation facility development, greenways and trails and Heritage Parks.

The Community Conservation Partnerships Program is a combination of several funding sources and grant programs: the Commonwealth’s Keystone Recreation, Park and Conservation Fund (Key 93), the Environmental Stewardship and Watershed Protection Act (Growing Greener), and Act 68 Snowmobile and ATV Trails Fund. The Program also includes federal funding from the Land and Water Conservation Fund (LWCF) and the Recreational Trails component of the Transportation Equity Act for the Twenty-first Century (TEA-21).

The program contains the following grant components: Community Recreation, Land Trusts, Rails-to-Trails, Rivers Conservation, Snowmobile/ATV, Heritage Parks, Land and Water Conservation Fund and Recreational Trails. Generally, all components require a match, usually 50% of cash or in-kind contributions

Department of Community and Economic Development (DCED) - This funding source provides support for community development projects. Funding rounds are usually in the fall annually and for special projects throughout the year. Greenways and trails could be eligible for grants in this program.

County

Counties in Pennsylvania have been supporting greenway planning through county tax millage. State tax codes enable Centre County to levy a tax for parks and recreation. This is used to support staff costs as well as to match state grant funds for planning, land acquisition, and development. Counties that have taken an aggressive approach to supporting open space preservation and greenways include Bucks, Chester, Montgomery, and Monroe who have all floated bond issues for this purpose.

Another source of potential revenues is the hotel tax. Since greenways and trails directly draw and support tourism and county visitation, supporting greenways and trails with this fund fulfills the intent of the legislation on use of funds generated by the hotel tax. An example of this is Montour County in which the Commissioners are dedicating a portion of the hotel tax towards park, open space, greenway, and trail types of projects.

Municipal

Taxes – Local governments can provide funding for greenways and trails either from the general fund or through a special tax levied for parks and recreation. Some municipalities have dedicated their earned income tax or a portion of it to open space or passed a real estate transfer tax for this purpose. An example is Solebury Township in Bucks County in which the Township and the New Hope Solebury School District agreed to allow the Township to collect the entire earned income tax as a means to enable the township to preserve open space. It will be done on an annual basis with ongoing review by the school board who will monitor the use of the tax revenues to insure that they are being used for the intended purpose.

Mandatory Dedication of Land – Ordinances for parkland. Municipalities enact this ordinance to insure that enough recreation lands are available to meet the needs of future residents. If no suitable parkland is available that meets the municipality’s criteria for land, the developer may offer a fee-in-lieu of dedication. The municipality uses this fee within three years to buy parkland. Table 6-3 provides examples of mandatory dedication provisions in municipalities throughout Pennsylvania.

Rounding Up – Programs use municipal bills to ask residents to round up to the next dollar and dedicate that donation to parks and recreation for a special purpose.

Land Use Planning – Can be used as an alternative means to preserve land. Since no municipality can afford to buy everything, land use planning tools can be an important means for preserving greenways, obtaining easements for linkages, and so on. Developing community greenway and trail plans, creating an official municipal map, monitoring proposed development plans, and similar strategies are powerful preservation tools.

Private Support

Sponsorships, partnerships, donations, and fundraisers – Sponsorships, partnerships, donations, and fundraisers have become standard fare in communities for facilities, buildings and trails. Montour County named their first rail trail after the land donor. Naming rights can also be sold in much the same way stadium-naming rights are. Bequests are becoming more common. Municipalities often work in partnership with local banks and attorneys in estate planning for the purpose of land conservation and helping large landowners preserve land while also benefiting financially. Partnerships with land trusts and conservancies are an important means to preserve land and linkages. These organizations can mobilize quickly and can often draw upon resources not available to government. The Nature Conservancy and the Natural Lands Trust have been instrumental in preserving land statewide.

American Greenways DuPont Awards Program - Provides small grants to stimulate the creation of greenways. The Conservation Foundation manages the program and is located in Arlington Virginia.

Table 6- 3

Municipal Compulsory Resource Mechanisms for Parkland (March 2001)

Municipality	County	Fee-in-Lieu of land		Acreage (sq.ft.) required		Effect. Date (incl. amend)	Open space plan	Notes
		Res.	NonRes	Res.	NonRes			
Muhlenberg Township	Berks	See note	None	.03 acre per dwelling unit	None	2000	Yes	*\$25,000 per acre fair market value used as fee-in-lieu of land. Equals \$750/dwelling unit *Partial credit, not to exceed 50% for private recreation improvements
Spring Township	Berks	\$900 per dwelling unit	\$1000 per acre	1500 sq. ft. (.03 acre) per dwelling unit	None	1993	Yes	
Doylestown Township	Bucks	\$1,880 per dwelling unit	None	2075 sq. ft. (.047 acres) per dwelling unit	None	1992	Yes	Per dwelling unit figures based upon 1992 land values.
Lower Southampton Township	Bucks	Fair Market Value	Fair Market Value	20% - 30% of total tract	30% of total tract	1990	Yes	2 Appraisals prepared for and paid for by Township if Township and Developer can't agree on fair value.
Newtown Township	Bucks	\$5,165 per dwelling unit	\$1,291 per 1000 sq/ft of building space	.07 acre per dwelling unit	3000 sq.ft. parkland per 4000 sq.ft. of building space		No	Est. residential value is \$75,000 per acre
College Township	Centre	0.65 LV/A L=#of lots V=Appraised Market Value A=# of Acres .065=Adjustment Constant	None	.04 acre per dwelling unit	None	1990	Yes	Pedestrian trail and/or bicycle paths may be accepted as open space if meet certain conditions including the developer paying for the cost of improving the path.
Ferguson Township	Centre	Fair Market Value Reviewed Yearly Currently \$30,000 per acre	None	Units 0-10 .5 11-20 1.0 21-40 1.5 Etc.	None	1992	No	Will accept a combination of land and money with Board approval.
Harris Township	Centre	\$29,000 per acre	None	0.04 acre per dwelling unit	None	2000	No	
Carlisle Borough	Cumberland	\$10,000 per acre	Commercial & Institutional \$15,000/acre Industrial \$20,000/acre	Total Tract R-1 – 8%, R-2 – 10%, R-3 – 12%, R-4 – 14%,	Commercial/Indus.-5% Institutional-10% Office/Residential-8% of total tract	1995	Yes	Alternatives to paying fee include construct/improve existing rec. facilities, guarantee private reservation and maintenance of parkland or open space, or combo (incl. fee)
Dickinson Township	Cumberland	\$400 per dwelling unit	\$15,000 per acre	Single Family 8% Multi Family 12%	5% of Total Tract	1997	No	
Middlesex Township	Cumberland	\$400 per dwelling unit	1,000 per acre	.027 acres per dwelling unit	10% of gross land	1999	Yes	
Silver Spring Township	Cumberland	\$350 per dwelling unit	None	.032 acres per dwelling unit	None	1995	Yes	Alternative to land dedication, developer can agree to construct/ improve existing rec. facilities, pay fee in lieu, guarantee the private reservation and maintenance of parkland or combo of above.
South Middleton Township	Cumberland	\$600 per dwelling unit OR (see note)	\$1000 per acre	.027 acres per dwelling unit	None	1997	Yes	Residential developers shall pay 90% of the after-development fair market value of the amount of land to be dedicated or pay \$600 per residential unit.
Upper Allen Township	Cumberland	\$350 per dwelling unit	None	50-100 units 3 acres 100 units or more 3 acres/100 units	None	1999	Yes	

Table 6-3 (cont.)

Municipal Compulsory Resource Mechanisms for Parkland (March 2001) *Continued*

Municipality	County	Fee-in-Lieu of land		Acreage (sq.ft.) required		Effect. Date (incl. amend)	Open space plan	Notes
		Res.	NonRes	Res.	NonRes			
Derry Township	Dauphin	\$900 per dwelling unit	None	.036 acres per dwelling unit	None	1999	Yes	
Susquehanna Township	Dauphin	\$1,000 per unit	None	2000 sq. ft. (.05 acres) per dwelling unit	None	1997	Yes	
Swatara Township	Dauphin	None	None	Single Family – .03 acre per dwelling unit Multi Family – 10% total area	None	1990	No	Fee in lieu of can be set by resolution, Township has chosen not to.
Manheim Township	Lancaster	\$760 per dwelling unit		.0383 acres per lot	10% of total gross land	1998	Yes	Greenways and non-motorized path maybe required and be credited against land donation or fees in lieu.
Mount Joy Township	Lancaster	Fair market value	None	.054 acres per dwelling unit	None	1990	Yes	Developer provides appraisal, if not acceptable Township gets appraisal. Developer can choose to build recreation facilities in lieu of land dedication or fee in lieu of.
West Lampeter Township	Lancaster	Fair market value	None	.04 acres per dwelling unit	None	1995	Yes	Alternatives include construct/improve existing rec. facilities, guarantee private reservation and maintenance of parkland or open space, or combo (incl.fee).
Whitehall Township	Lehigh	\$1,200 per dwelling unit	None	1125 sq. ft. (.026 acres) per dwelling unit	None	1993	Yes	No commercial requirements
East Norriton Township	Montgomery	Fair Market Value	None	10% Of total area	None	1992	Yes	Developer provides appraisal, if not acceptable Township gets appraisal.
Plymouth Township	Montgomery	\$1,000 per dwelling unit	\$300 per employee (see note)	800 sq. ft. (.018 acres) per dwelling unit	150 sq.ft. per *200 sq.ft. office space, *520 sq.ft. industrial space, *275 sq.ft. of commercial space	1995	Yes	Non-residential formula= Employees are determined at a rate of one per: *220sqft of gross office space, *520sqft industrial space *275sqft commercial space
Upper Merion Township	Montgomery	Fair market value-see note	Fair market value-see note	Min. 20% of subdivision acreage	Min. of 20% of net acreage	1999	Yes	For both residential and non res. the fee equals the fair market value of the undeveloped land
Whitpain Township	Montgomery	\$10,000 per 25 houses, or, \$400 per house	None	1acre/25 houses	None	1979	Yes	Ord. States 1acre per 25 houses or \$10,000 per 25 houses. Ratio is \$400 per house, or, 1/25 th acre per house
Bethlehem Twsp.	Northampton	\$1,000 per dwelling unit	\$3,000 per acre	1000 sq. ft. (.023 acres) per dwelling unit	7.5% of total development	2000	Yes	*Minimum area of dedication is two acres *75% of land to be suitable for active use/25% for passive or Natural Resource area
Peters Township	Washington	\$18,000 per acre	None	.07 acres per lot or parcel	None	1992	Yes	Parcels under 5 acres generally not acceptable for dedication.
Murraysville	Westmoreland	\$800 per dwelling unit	None	.028 acres per dwelling unit	None	1993	Yes	
West Manchester Township	York	5 dwelling units or less \$150/unit Greater Than 5 units-Fair Market Value*	None	.02 acres per dwelling unit	None	1989	Yes	* Fair Market Value determined by York County Tax Assessment Office. An independent appraiser is only used if Assessment Office fails or refuses to determine fair market value.
York Township	York	\$325 per dwelling unit	None	.05 acres per dwelling unit	None	1998	Yes	In the process of updating Comp. Park, Rec. & Open Space Plan

(Source: Pennsylvania Department of Conservation and Natural Resources and the Pennsylvania Recreation and Park Society)

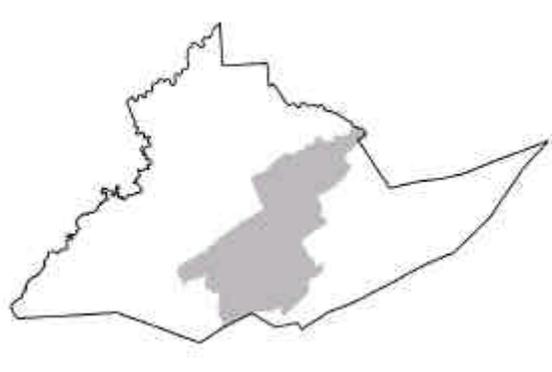
Chapter 7 – Recommendations and Actions

Introduction

The Nittany and Bald Eagle Greenways mark Centre County’s launch into a countywide greenway network. The strategies defined for outreach, planning, implementation, and operations of the Nittany and Bald Eagle Greenways can be applied county-wide. The plan is rooted in a commitment to both private property rights and partnership for land conservation. The first steps toward creating partnerships and alliances, developing education programs for the general public and landowners, and promoting the greenway and its trails will be critical long-term as Centre County moves toward a comprehensive greenway system. The greenways of Centre County will play an important role in the preservation and protection of the County’s natural resources, landscape heritage, and quality of life. Connecting greenways and bikeways throughout the County will promote a sustainable infrastructure that seeks the best balance between man and nature.

Description

The Nittany and Bald Eagle Greenways are located in Centre County in the Nittany and Bald Eagle Valleys. The greenway project area includes the watersheds of Spring Creek, Buffalo Run, Logan Branch, and their tributaries from the headwaters to their confluence with Bald Eagle Creek at Milesburg and the Bald Eagle Creek from Milesburg to Bald Eagle State Park.



Project Area within Centre County

Challenges

The development of the Nittany and Bald Eagle Greenways will be challenging for Centre County. The project involves both physical development and management initiatives. It requires the further planning investment, organizational development, and creation of partnerships. It will require the commitment of many citizens, agencies, and municipalities to get the word out and lay the groundwork for a network of protected greenway corridors and a complementary network of accessways. The challenges may appear overwhelming but there are many parallel initiatives in Pennsylvania to draw upon and a growing recognition from all fronts of the importance of preserving our green infrastructure.

Opportunities

There are tremendous opportunities for the establishing greenways in the Nittany and Bald Eagle Valleys. The natural resources of the area are abundant; the capacity for undertaking the project as been created through the Spring Creek Rivers Conservation Plan and this study; and the interest and support from public agencies, key organizations, and municipalities is high. The Nittany and Bald Eagle Greenways

can be the catalyst for significant change throughout the County and a new way of thinking. Developing the greenway system will provide opportunities for children to walk to school and adults to bike to work; the importance and value of environmental resources can be illustrated in real ways, recreation can become a lifetime pursuit, environmental resources will be protected and enhanced, and development can happen in a sustainable manner.

Recommendations

The recommendations for development of the Nittany and Bald Eagle Greenways are presented in the following sections.

1. Management and Operations

Centre County does not have an organizational unit for developing, managing, maintaining, and operating greenways and trails. There is no county parks and recreation department nor any non-governmental group organized for facility development and operation. In order to implement this plan and establish greenways, an organizational unit needs to be put into place. Existing organizations were considered including the Centre County Planning Office, the Centre Region Parks & Recreation Department, and the Spring Creek Watershed Commission.

Based on the Nittany and Bald Eagle Greenway multi-municipal geographical location and the County's vision that this greenway will be the first component of a countywide greenway network, a phased approach for developing an organizational unit needs to be put into place. The development of the organization should start with staffing allocations within Centre County Planning and move into the establishment of a county parks department.

Action Establish a Greenways Advisory Committee. The Committee would serve as an advisory committee to establish the Nittany and Bald Eagle Greenway as the first step in a countywide greenway network. The committee would:

- Serve as a sounding board for plan implementation.
- Help to prioritize actions.
- Advocate the trail to citizens, decision-makers, and greenway related interests.
- Represent municipalities, conservation, outdoor recreation, and other issues to be identified.
- Provide support through designated roles in getting the greenway pilot project successfully accomplished.
- Assist in the public outreach program, especially with municipalities.

Action Designate a full time professional position dedicated to greenway and open space planning and implementation. This would require an additional staff position in the Centre County Planning Office. Responsibilities should include:

- Managing greenway master planning.
- Public outreach and becoming a player in conservation, open space planning, and economic development in Centre County.
- Developing an orchestrated marketing program specifically geared to municipalities.
- Developing and coordinating public information materials.
- Managing county greenway or open space related programs.
- Coordinating educational and promotional programs related to the greenway.

- Developing a planned maintenance management system for trails and resource protection.
- Developing a public identity system to achieve a favorable highly recognized presence throughout the County.

Action Establish a County Parks Department. This department would have to grow over time. It would start small with a full-time professional with administrative support. The purpose of the department would be:

- Natural resources and resource protection
- Greenway and trail development
- Park and facility planning
- Land acquisition
- Coordination in environmental education
- Partnership development and outreach
- Seeking alternative revenue sources

2. Financing

Greenway planning, development, and operations require a commitment of financial and human resources. Centre County cannot do this alone. The mix requires a blend of both public and private resources. It also requires strong partnerships between the County and the municipalities. Since it is not possible to have enough money to buy all the land needed, various planning tools through ordinance and regulations need to be put into place. In order to support this effort, a basic level of investment for land acquisition, greenway and trail development, and operating needs should be established in Centre County. This basic investment should serve to leverage funds and support for non-county resources.

Development

Action Develop a financial strategy for capital projects that would include greenways and open space protection. While in this type of plan, it would be customary to recommend a financing plan just for greenways, the scope and extent of Centre County’s planning requires a comprehensive assessment of all county capital needs in order to establish a sound financial funding package that works for Centre County’s overall goals. Potential actions could include any or all of the following:

- Allocation of a portion of the hotel tax to greenway planning to establish resources for eco-tourism development.
- Designation of county general funds for greenway planning and development.
- Levying a special purpose tax which has no legal limit in millage for “Parks and Playgrounds” under 16 PS 2507 in the Taxation Manual
- Floating of a bond for greenway development and open space protection.

Operations and Planning

Action Provide funding for an additional planning position. The planner would be housed in the Centre County Planning Office. This position could be for greenways alone or an expanded position for open space planning. Depending upon Centre County’s pursuit of open space planning as a concept in the Comprehensive Plan, more than one planner might be needed. Funding for this position would be an additional item in the Planning Office budget.

Amount: \$50,000

Action Provide funding for marketing and outreach. This budget would be for logo design, signage development, promotional materials, Web site, and coordination with related county efforts such as the Centre County Convention & Visitors Bureau.

Amount: \$20,000+annual Web site maintenance fee

Action Provide funding to establish a County Parks Department. The amount of the allocation should be phased in over time. The start-up costs should include a full-time park and recreation professional salary and benefits, expenses related to outreach such as travel, materials and supplies for launching, computer hardware and software, internet access, clerical support, and office space and equipment. A benchmark could also reflect the findings of the budget and salary survey of parks and recreation department expected to be released this year. A target per capita figure could be phased in starting with \$10 per capita and moving up as facilities and responsibilities are added. Each project undertaken should include cost projections for development, operations, and maintenance. Unless the resources are available to support the project, such as a trail, the project should not be undertaken. Resources should be a mix of public and private sources. For example, volunteers could adopt a trail. The source of these funds can be County general fund, municipal funds, and/or a portion of the hotel tax.

Amount: \$ - To be determined

Action Provide funds for open space preservation, land acquisition, and capital development. Consider retaining a financial planning team to look at all of the projects the County has underway including such projects as transportation improvements, the greenway, and the recommendations from the Comprehensive Plan now underway. While many counties in Pennsylvania are floating bonds for open space preservation, Centre County is in an unusual growth mode that is placing large demands on the County finances. In order to allocate the County's resources in the most efficient and effective manner, it is crucial that all of the projects be assessed in combination. Consideration in terms of the urgency of projects would be a crucial factor as development pressures may result in lost opportunities for greenways should land be purchased for development that would block connectivity and access to important properties, resources, or features.

Amount: \$ - To be determined

3. Pilot Greenway Project

Greenways and trails are valued features in the landscape but they are often initially looked upon skeptically by the general public and sometimes even elected officials. Locally based outreach that explores the benefits of greenways, clarifies misinformation, and involves landowners is one of the most important steps towards establishing a comprehensive greenway network. Another important strategy to promote greenways is through the development of a pilot greenway. A pilot project within the Nittany and Bald Eagle Greenway network will illustrate the benefits of protecting natural resources and provide a valuable tool to illustrate how greenways and trails can be developed locally.

The Curtin Village to Bald Eagle State Park segment of the Bald Eagle Major Corridor contains several publicly owned lands that could be incorporated into a pilot greenway project. The corridor is prioritized as #5 in the ranking and would connect the destinations of Curtin Village and Bald Eagle State Park while protecting green resources along the corridor. Bald Eagle State Park is a popular recreation destination for Centre County residents as well as visitors to the area and implementing the pilot demonstration project at this location would go a long way toward public education and getting the word out about greenways. The corridor length is approximately 7.9-miles long and is located on lands of Pennsylvania Conservation Corp, Pennsylvania State Game Land No. 92, and the Army Corp of Engineers within portions of Boggs, Howard, and Liberty Townships. The development of a trail should be part of the demonstration project. Development of this greenway corridor will require addressing issues such as hunting in Bald Eagle State Park and protection of wetlands and other sensitive natural resources.

As noted in this study, the development of a greenway involves the assemblage of public lands, including significant federal- and state-owned tracts, or smaller parcels held by county and municipal entities. In addition, many greenway development projects require the acquisition of privately-owned lands (or interests therein), where such lands are evaluated and incorporated in the greenways plan and use objectives. Greenways contain variable objectives; some greenways are limited to land buffers (a “*cordon sanitaire*”) designed to protect critical water resources or threatened and endangered habitat from human use and degradation, or alternatively, a public access corridor that involves the development of a multi-use trail for pedestrian, equestrian, bicycle or snowmobile purposes.

In designing a pilot greenway along the Bald Eagle Creek we have assumed that public trail access is both necessary and vital. Such a trail would connect existing trails and underutilized rights-of-way along the Bald Eagle Creek or within the multiple public jurisdictions abutting the Foster Joseph Sayres Lake. Acquisition, development and maintenance of a permanent trail linking the communities of Milesburg, Curtin Village and Howard would provide improved access and, over time, trail links to Bellefonte and State College could be established.

In acquiring and developing a pilot greenway, Centre County or the qualified public or nonprofit project sponsor should be familiar with the tools and techniques for acquiring land (or interests therein). In the section below we review legal models for assembling private lands for public greenway and trail use. Thereafter, we apply a basic “acquisition protocol” for the establishment of a trail along the west shore of Bald Eagle Creek, from Milesburg to Foster Joseph Sayres Lake.

Legal Tools for Land Acquisition

1. **Fee Simple Absolute** – There are a number of terms that define how a private or public entity can own a piece of land. In particular, these terms describe how long a landowner owns the land and under what conditions he/she/it can dispose of it. The fee simple absolute represents the most unrestricted term the law recognizes *vis-à-vis* land ownership. The holder of a “fee simple” is entitled to absolute ownership of the property during his/hers/its lifetime. By absolute ownership we mean that the owner controls the surface, subsurface and aerial rights subject to federal, state and local regulatory restrictions (i.e., zoning, environmental permitting). As part of the fee simple, the owner enjoys the right of privacy, i.e., the ability to exclude the public from any use of the property, including trespass or hunting. Upon the death of the individual or dissolution of the private landowning partnership or corporation, the entity has the power to dispose of the property through a will or duly authorized deed of conveyance. Whether by sale or gift, such a conveyance must be memorialized through the granting of a deed that describes the physical and legal interest.
2. **Conservation Easements** – A conservation easement is a legal agreement that a private landowner makes to restrict the amount and type of future development and use that may occur on his/her/its property. A conservation easement is granted (via deed of easement) in perpetuity to a third-party (such as a government or nonprofit land trust), however, the grantor retains title to the property subject to the rights conveyed in the easement. The grant of easement is made in furtherance of conserving or protecting a legislatively-defined resource (natural, historical, cultural). The conservation easement holder (“grantee”) agrees to monitor the property and enforce the terms of the easement. For purposes of this pilot project, conservation easements should not be confused with access easements, which permit the grantee the right to cross the subject property on a defined trail, road or right-of-way, but does not involve the conservation or protection of the remainder parcel. Access easements – including trail easements – can be granted for fixed periods of time and/or can be revoked by the grantor. In legal terms, revocable easements operate more like leases or licenses.
3. **Leasehold Estate** – A leasehold estate (a lease) is simply the right to possess and use a piece of property on a temporary basis. These rights are defined in a form of contract known as a lease and are usually secured by the payment of rent to the owner of the property. The length of the

rights is dictated by the terms of the lease. Usually, leasehold estates take one of the following forms:

- Some leaseholds are given for a specific period of time, such as six months or 99 years. At the end of such time the leasehold estate expires and possession and use of the property reverts to the owner.
- Some leaseholds are described as periodic tenancies. Under this arrangement the leasehold continued indefinitely in certain set increments (from month-to-month or year-to-year) until one party gives notice of termination.
- Finally, a leasehold may be defined as an estate at will. In this arrangement the leasehold can be terminated by either party at any time.

These three tools – fee simple, conservation / access easements and leases – represent the foundation elements for legally assembling greenway lands and public access trails. It matters little whether the greenway or trail sponsor is a government entity or a local nonprofit land trust; both will utilize the identical tools when approaching private landowners.

General Acquisition Protocol: Working with the Private Landowner

Work on a pilot greenway must begin with a project sponsor who is ready to approach landowners, explain the objectives of the greenway and trail plan, and work cooperatively on acquisition alternatives. Capable staff is needed to transmit the message that the greenway/trail is a voluntary program and that the project sponsor has funding available for land purchases combined with the expertise to assist with beneficial income and estate tax planning options. Many greenway assemblage efforts fail because the sponsor has not planned the early, labor intensive, effort required to meet and prepare landowners for the benefits. Rumors of government incompetence or poor response, fueled in-part by misleading press, will do more to douse a greenway effort than the *bona fide* fears of landowners that the “long arm” of government will be used to condemn their land.

For these reasons alone, we recommend that the pilot project hew to the following “general protocol” for managing land assemblage efforts.

1. **Determine Lands Required for the Greenway and Trail** – The greenway/trail sponsor should accurately plan and map the subject lands. Using the best available mapping, either aerial photogrammetry, GIS imagery, or topographic at approximately 1:200 scale, the project sponsor must lay out all tax parcels needed for the greenway/trail effort.
2. **Accurately Establish Greenway/Trail Width and Routing** – It is critical that the greenway plan be accurate with respect to trail width and alignment. Slope, wetlands, and stream crossings must be factored into the plan. If ten feet (10’) or less is required for the improved trail surface, the project sponsor should consider what additional width is needed to buffer the surface improvements and insure the trail user remain within a well-defined corridor of public use. Is 25 or 50 additional feet required? If the trail is routed through urbanized areas, is thirty feet excessive? Because public access is often one of the most difficult components of any greenway, both in planning and negotiating the purchase, clarity in the proposed alignment (or alternatives) is essential.
3. **Identify All Greenway / Trail Property Owners** – From the parcel mapping and trail alignment, prepare an index or matrix of all property owners by name and address. Where appropriate, add information regarding the length of ownership, the original purchase price, assessed valuation of the subject parcel, and any known easements or encumbrances upon title.
4. **Meet with Private Owners** – Before going public with the greenway/trail plan, consider meeting with individual landowners one-to-one to explain the plan and share their concerns. While certain landowners will voice opposition to the plan or refuse to sell any land to the effort, the bulk of affected owners will appreciate the “fairness” and good will created by the government

sponsor's effort. If such meetings are impractical from the standpoint of the government sponsor, due to political sensitivity or uncertain alignment, then consider enlisting a third-party intermediary, such as a local land trust or consultant, who can explain the general basis of the project without having to make formal commitments or denials.

5. **Develop a Greenway / Trail Support Coalition** – For all the reasons listed in Item 4 above, having a project backer or coalition is critical to early project success, in addition to working with the press on “positive spin.”
6. **Prepare Preliminary Estimates of Land Value** – Using the greenway/trail alignment information from Item 2, above, engage a local appraiser to prepare preliminary opinions of fair market value for the subject lands needed for the project. Having preliminary land values are essential for open acquisition discussions with private landowners, who will be anxious about “the numbers.” For each land ownership, instruct your appraiser as to whether you require a “full take” of the parcel, meaning that you are interested in purchasing the entire tax parcel, or whether a “partial take” is acceptable. A partial take involves subdivision and acquisition of a piece of the whole, or a defined right-of-way. Depending on the size and location of the partial take, the cost implications to the remainder interest could be significant. In addition, instruct the appraiser as to whether the acquisition is proposed for fee, easement, or lease (w/proposed term of lease). If these alternatives are not immediately known, consider discussing them with the private landowner(s) during the initial meeting. Many landowners are thrilled to learn of the legal acquisition alternatives (fee, easement, lease); depending on the relative values and land interests needed for the greenway/trail project, landowners may consider a bargain sale or donation once the tax and estate planning benefits are factored in.
7. **Consider Phasing Greenway/Trail Implementation** – Based on the location of known “willing sellers,” consider phasing land assemblage efforts around these individuals. While greenway planning requires a powerful vision, successful pilot projects are built around real estate closings and evidence of progress. If the pattern of available “willing seller” lands is spatially disaggregated, consider acquiring them anyway and banking them until key links are acquired.
8. **Allocate Resources for Land Management** – Many greenway efforts devote considerable time and funds to the planning and public involvement phase, with a dearth of support allocated to land management. If the County planning department is responsible for greenway/trail design, be certain to coordinate with the agency responsible for land management, as few planning departments fully consider the implications of managing and enforcing greenway/trail projects. A parks and recreation bureau or improvement authority should be consulted for support.

Generalized Steps of Greenway/Trail Acquisition

1. Cruise the greenway/trail area
2. Compile accurate mapping and ownership data
3. Research appurtenant deeds for easements, encumbrances; confirm ownership and lot lines; commission title work
4. Refine ownership maps and indices; bring in project partner
5. Develop greenway/trail plan, including parcel “taking” recommendations
6. Secure approval of greenway/trail plan from DCNR
7. Develop appraisal valuation methodology
8. Prepare instructions for appraiser; seek advisory values
9. Consider Phase I environmental audits for early warning
10. Meet w/private landowners early/throughout process
11. Work on land management strategies w/park agency
12. Distribute greenway/trail plan; schedule public mtgs.
13. As authorized, negotiate purchase agreements w/owners
14. Acquire and convey greenway/trail fee, easements, etc.

Action **Develop a Greenway Master Plan for the Curtin Village to Bald Eagle State Park Segment of the Bald Eagle Major Corridor.**

- Form a study committee to complete the master plan in conjunction with professional consultants. A representative of the Centre County Planning Office should lead the study committee. Members should include: representatives of the Pennsylvania Conservation Corp, Pennsylvania State Game Commission, Army Corp of Engineers, Bald Eagle State Park, elected officials from each municipality, and general citizens representatives.
- Retain a professional with expertise in greenway and trail acquisition and development to identify the trail route, complete a title search to verify the ownership of land within the designated corridor, and identify any deed restrictions associated with the land. Although preliminary assessment indicated that the likely corridor is entirely within lands of public agencies it is important to verify the ownership and any use restrictions associated with the land.
- Develop an organized outreach program for communication with the public agency landowners. The goals of the outreach program should include:
 - Undertake effective communications through an orchestrated approach to communicate with agencies and gain their buy in and support. Designate who should initiate communications.
 - Develop strategies to resolve potential conflicts (hunting season, trail designation status for trail length within State Game Lands)
 - Develop a professional presentation of information to address the greenway and trail concept with the public agencies.
- Develop a design for the greenway/trail corridor to include locations of trailheads, trail access areas, parking areas, trail amenities, trail surface options based on user groups, road crossing improvements, stream/lake access areas, the signage system, and other facilities.
- Estimate the development costs based on the final design of the greenway/trail.
- Develop a greenway management plan to address:
 - Determining who will maintain and accept responsibility and liability for the trail
 - Developing strategies for working with partners
 - Developing a Friends of the Greenway group
 - Developing a security plan
 - Developing strategies for communications with agencies and municipalities
- Determine funding sources for the greenway/trail development.
- Develop an action plan for funding and development of the greenway/trail.
- Complete design, engineering, and construction documents/specifications.
- Bid project and complete construction.

Action **Develop pilot project amenities and undertake actions to demonstrate the benefits of the Nittany and Bald Eagle Greenways system, trail development, and corridor protection.** Special projects should be developed within the pilot greenway to support greenways and trails county-wide. Prototype projects include:

- Develop kiosks with educational displays at trailheads that describe the Nittany and Bald Eagle Greenway system, other Centre County greenway/trail initiatives, and the benefits of greenways.
- Provide signs along the Curtin Village/Bald Eagle State Park trail to identify the corridor as part of the broader Nittany and Bald Eagle Greenway system.

- Develop programs to educate users about riparian buffers, stream bank stabilization, and other resource protection issues along the greenway corridor.
- Develop a comprehensive signage system that identifies the greenway at road/trail intersections, provides direction/length of trail information at points of interest and intervals along the trail.
- Develop a promotional program that publicly promotes the initiative and informs the public about the greenway development. A promotional program should include the following:
 - Press releases
 - Ribbon cutting
 - WEB site updates and information (Centre County, Bald Eagle State Park, Centre County Convention & Visitors Bureau, clearwaterconservancy.org, springcreekwatershed.org)
 - Map updates (Purple Lizard recreation maps, Bald Eagle State Park maps, State Game Land maps)

4. Commuter Uses of Trails and Bikeways

Trails and bikeways are typically viewed primarily as recreation facilities but when planned correctly and developed with the needs of commuters in mind, trails and bikeways can serve as transportation corridors for commuters traveling to work, school, or other destinations. A comprehensive greenway network that includes trails that connect community hubs and residential areas offer opportunities for alternative modes of commuter transportation. Promoting bicycle and pedestrian commuting in a community has many positive outcomes including a reduction in traffic congestion, improved air quality, energy conservation, and improved environmental quality while promoting improved fitness and wellness and overall physical health of participants.

Action Work with employers to develop an incentive program for commuters to promote bicycling and walking as alternative means of commuting to work.

Action Provide facilities that are bicycle and pedestrian friendly to encourage use of trails and bikeways.

- Trailheads in convenient locations.
- Bicycle parking in secure, convenient, visually prominent locations with adequate space for parking and maneuvering. Parking facilities should be permanently anchored. Short-term parking (2 hours or less) should be located within 50 feet of the destination. Long-term parking (several hours or more) should be located within 750 feet of the destination and at least 50% should be covered.
- Signage that identifies bicycle and pedestrian facilities.

Action Work with municipalities to adopt ordinance provisions that promote use of bicycles and walking for commuting to work. Adopt bicycle parking provisions. Require new office buildings to provide bicycle parking, showers, and changing facilities.

Action Work with PennDOT and local municipal road departments to incorporate bicycle and pedestrian friendly facilities when roadway improvements are planned and implemented.

Action Benchmark with bicycle-friendly communities, especially communities with colleges and universities, to learn what initiatives and facilities have worked elsewhere.

5. Resource Conservation

Greenway planning, development, and operation will require a strong commitment on the part of state and local agencies, the county, involved municipalities, and non-profit organizations such as the ClearWater Conservancy. Municipal codes need to be revived and amended to facilitate the creation of the greenway and to reflect community goals and values for the greenway. To ensure the preservation of prime natural, cultural, and scenic resources of the corridor, a wide array of acquisition and preservation techniques can be utilized. Also, a concerted awareness and educational campaign needs to promote stewardship among the many private landowners within the corridor. To insure consistency of the message and to represent the greenway coalition/partnership in sensitive land negotiations, an “acquisition manager” should be assigned/hired in this capacity to support the effort.

Action Use land use practices and planning tools to preserve and develop the green infrastructure and update municipal ordinances to include conservation and “greenway-friendly” codes.

- Encourage, support, and assist municipalities in amending their ordinances to include “Conservation Subdivision Design” principals (also known as *Growing Greener*) as put forth by the Natural Lands Trust.
- Conduct Growing Greener Audits for all municipalities in the corridor.
- Develop a greenway overlay district/zone and a draft model ordinance for the same that each municipality can use as a starting point for potentially amending their zoning codes.
- Adopt or strengthen riparian buffer ordinances.
- Encourage the use of Best Management Practices for stormwater management and erosion control.
- Protect the forest ridges through participate in the Forest Legacy Program and ordinance provisions. Complete the documentation to be declared a Forest Legacy Program under the U.S. Forest Service guidelines.
- Use official maps in each municipality to identify green infrastructure.
- Prepare or update a municipal or joint-municipal open space and recreation plans for each municipality in the region.
- Adopt mandatory dedication/fee-in-lieu requirements in the municipal subdivision and land development ordinances. (The rationale and formula for determining fees and standards must be contained in the municipal open space and recreation plans).

Action Acquire key tracts of land. Priorities for the greenway system development should relate to the hierarchy of corridors identified in the plan, e.g. the corridor areas between State College and Bellefonte and between Bellefonte and Milesburg. Acquire lands which are most threatened by development and which if lost to development would seriously impinge upon the integrity of the greenway system network. These tracts can be acquired through fee simple purchase or through conservation easements and efforts should focus on working with willing sellers.

- Assign a staff planner to focus on greenway and open space planning activities to provide technical assistance to the municipalities to examine land use regulations related to open space easements.
- Hire an “acquisition manager” as needed to support more complicated greenway system acquisition efforts and budget for the same on an annual basis (approximately \$8,000 - \$15,000 per year).
- Pursue the potential for use of Transferable Development Rights (TDRs) & Purchase of Development Rights (PDRs) by identifying potential sending and receiving areas in and near the greenways corridor.
- Acquire and/or otherwise protect lands designated in the Centre County Natural Heritage Inventory that are not currently protected.

- Increase support and funding for farmland preservation efforts possibly through a bond issue.

Action Encourage stewardship of lands and waters within greenways corridors.

- Develop landowner education programs and materials.
- Begin an active outreach program to encourage land stewardship.
- Encourage conservation options for private landowners, such as land donation, bargain sale of land, deed restrictions, and use agreements for greenway access.
- Educate landowners about agricultural and forestland conservation easement programs.
- Develop a natural resource management plan for state agencies and municipalities.
- Develop a forum between the public agency landowners in the greenway for sharing of information and developing initiatives for protection.
- Provide buffers and designate alternative trail routes in environmentally sensitive areas of the greenway.
- Promote the development of riparian forest buffers on private lands.

6. Trails and Recreation

Greenways provide areas for hiking, walking, horseback riding, bike riding, in-line skating, kayaking, canoeing, birding, nature study, fishing, and other recreation activities. Walking is the number one activity enjoyed by Pennsylvanians and there is a growing awareness of the importance of recreation activities to promote fitness and wellness. Incorporating trails and opportunities for other resource based recreation activities into the Nittany and Bald Eagle Greenway should be a priority from the outset.

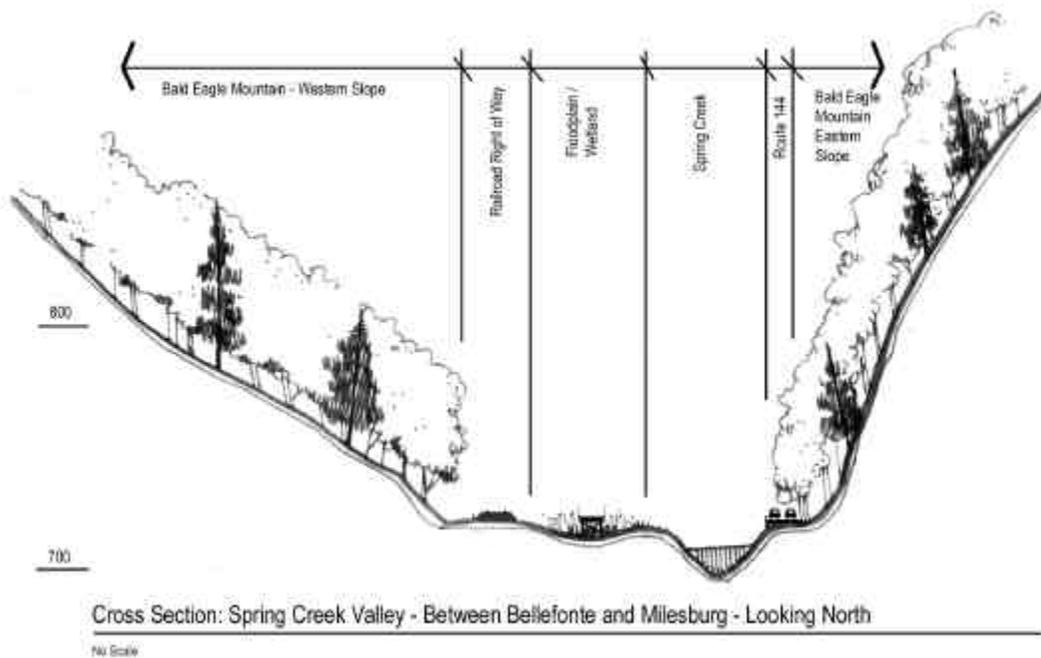
Centre County is fortunate to have extensive examples of successful trail and bikeway projects at the municipal level.

Action Support rail-trail initiatives and municipal trail initiatives. Maintain an open dialogue with the SEDDA-COG Joint Rail Authority regarding the status of active rail lines and the potential development of trails with rails.

Action Evaluate trail opportunities of existing easements and rights of ways and work with municipalities, utility companies, and others to develop trails that promote the Nittany and Bald Eagle Greenway.

Action Develop trails for recreation, commuting, and access to historic, cultural, recreation, and environmental education destinations.

- Develop trails for multiple users as appropriate throughout the greenway system.
- Develop trails that loop and provide a variety of recreation experiences to meet the needs of the broad user community.
- Work with municipalities to extend trails locally.
- Seek partnerships with the health-care community to tie trail development and activities to fitness and wellness.
- Work with municipalities to revise zoning ordinances to allow trail/recreation related business within the greenway network to benefit from economic development potential.
- Connect to existing trails.
- Explore creative solutions for the integration of trails within areas of sensitive natural resources and constrained physical conditions.



Action Consider the unique needs of each recreation user group when developing the greenway and its support amenities.

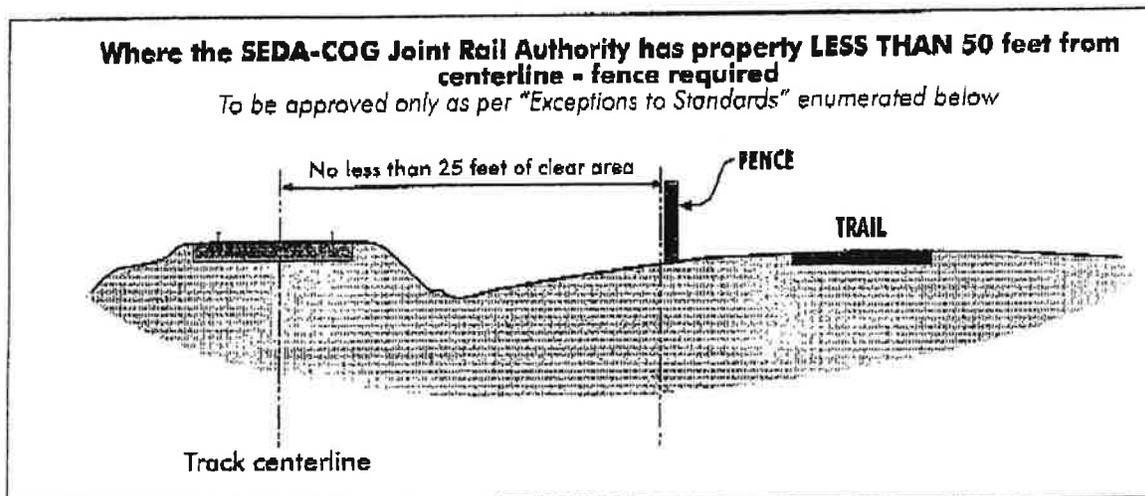
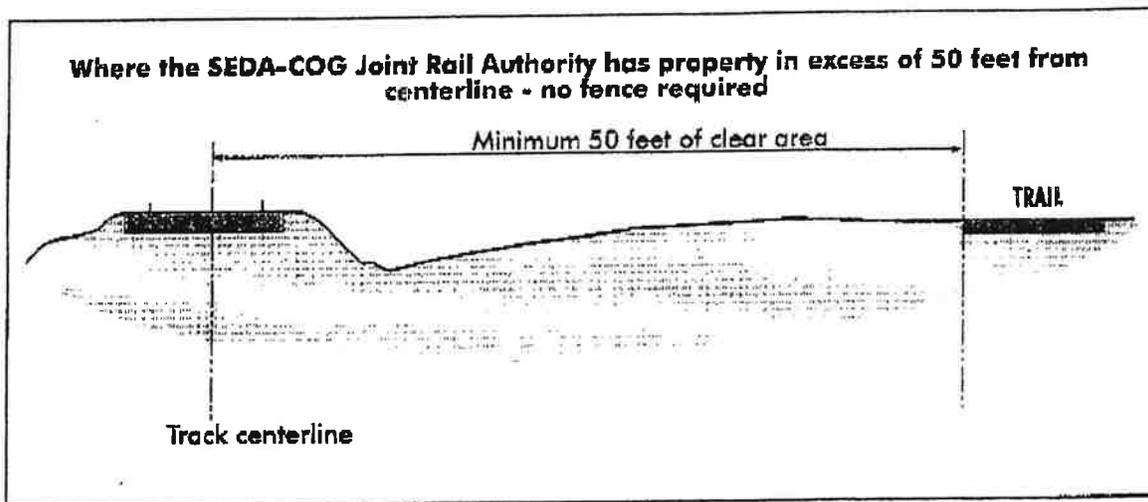
- Equestrians – Provide staging and parking areas that accommodate horse trailers.
- Paddlers – Provide convenient access points at logical locations for paddling excursions. Provide additional access points on Bald Eagle Creek. Provide a river gauge at Milesburg on Bald Eagle Creek.
- Hikers/Walkers/Cyclists – Provide trail signage that identifies trail length and links and spurs for loop opportunities.
- Anglers – Provide convenient access points with trail spurs that provide fishing areas separate from loud or conflicting recreation activities.
- Birders – Buffer bird watching destinations from other trail activities. Provide bird blinds and amenities as appropriate.
- In-line Skaters – Provide paved trails, where appropriate in suburbanized and urban settings of the greenway system for use of skaters.
- Cross-Country Skiers – Provide fireplaces in pavilions and warming huts along popular cross-country ski trails.

Action Promote environmental sustainability in the development of trails and recreation facilities. Seek to achieve the best balance between protection of natural resources and public access. Buffer sensitive natural areas and reroute trails as necessary to protect vulnerable resources.

Appendix A – SEDA-COG Joint Rail Authority Rail with Trail Criteria

The SEDA-COG Joint Rail Authority is opposed, in principle, to pedestrian/bike trails on its property. The Authority may consent to working with a trail sponsor if its proposal meets the following criteria:

TYPICAL CROSS-SECTIONS;



Standard R/W is 30-33 feet from track centerline. Where the Authority R/W extends beyond 30-33 feet and there is no other parallel track, a trail may be considered. If accepted by the Authority, separation by a chain link fence (minimum 60 inches high) installed no less than 25 feet from track center shall be required.

Exceptions to Standards:

If a trail does not meet the above standards, and there is a constriction with no other reasonable option, then the standards may be relaxed for an extremely limited distance. The exemption will be of a longitudinal distance no greater than 400 yards, and in no case less than 25 feet separation distance with a fence or vegetative barrier required.

Exceptions to these standards will be considered only if:

- The trail sponsor demonstrates sincere and exhaustive analysis of non-rail locations.
- The sponsor prepares an operating and maintenance plan. Operation and maintenance are at the expense of the trail operator.
- The sponsor agrees to pay for services of a risk assessment specialist, secured by the Authority, in determining the real risk of the proposal for the railroad owner, operator and all other operation entities, such as Norfolk Southern and Bellefonte Historical Railroad Society. Included in the assessment shall be a review and recommendation by the Authority legal counsel.
- The sponsor provides information addressing insurance and indemnification for the railroad owner and operator. A governmental body shall fund the insurance and indemnification for the railroad and its operator on behalf of the sponsor.
- Long-term indemnification is assured by the sponsor.
- The Rail Authority and its operator need sufficient time to review designs.
- Trail sponsors understand that trails may require modifications or total relocation at their own expense in the event of expansion or modification of rail facilities or utilities licensed by the Authority.
- Trail projects will not impose additional costs on the operator in terms of his staffing, maintenance or insurance costs.

Grade Crossings:

Except in exceptional circumstances, no new at-grade bike/pedestrian crossings shall be allowed.

An exceptional circumstance would occur when there are no viable options on a slow speed line with limited train traffic. All pedestrian grade crossings must be made "public" through the process established, and sanctioned by, the Pennsylvania Public Utility Commission. Pedestrian grade crossings shall be made at existing grade crossings and sanctioned by the PUC.

Appendix B - Municipal Parks and Open Space

College Township

- Dalevue Park
- Slab Cabin Park
- Millbrook Marsh Nature Center
- Spring Creek Park
- Mt. Terrace Park
- Harris Acres Parklet
- Penn Hills Park
- Oak Grove Park
- Oak Hall Parklet
- Mountainside Park
- Walnut Springs Park
- Nittany Orchard Park
- Thompson Woods Preserve

State College Borough

- Walnut Spring Park
- Nittany Village Park
- Fairmont Park
- Smithfield Park
- Tussey View Park
- Central Parklet Memorial Field
- Community Field
- Holmes Foster Park
- Orchard Park
- High Point Park
- Lederer Park
- Welch Pool
- Thompson Woods Preserve

Bellefonte Borough

- Tallyrand Park

Milesburg Borough

- Milesburg Community Park
- Milesburg Baseball League, West Penn Fields
- Milesburg American Legion Fields

Benner Township

- Buffalo Run Community Park

Ferguson Township

- Haymarket Park
- Tudek Memorial Park
- Park Hills Park
- Meadows Park
- Fairbrook Park
- Westfield Park
- Sunset Park
- Greenbriar Saybrook Park
- Overlook Heights Park
- Suburban Park
- Foxpointe Lexington Place Park
- Homestead Park

Patton Township

- Green Hollow Park
- Oakwood Park
- Woodycrest Park
- Patton Township Woodlands
- Park Forest Pool
- Graysdale Park
- Haugh Tract Township Park

Harris Township

- Country Place Park
- Fasick Memorial Park
- Stan Yoder Park
- Kaywood Park
- Blue Spring Park
- Nittany View Park

Howard Borough

- Howard Park

Spring Township

- Spring Township Nature Park