NORTHERN TIER

Open Space, Greenway & Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

Final Master Plan Report

September 2010

NORRIS DESIGN
www.norris-design.com

CONTENTS

1 Introduction 5

2 Community Background 27

3 Community & Stakeholder Input 45

4 Community Survey Findings 55

5 Inventory & Conditional Analysis 71

6 Services, Operation & Management Analysis 93

7 Economic, Financial & Resource Analysis 115

8 GIS Mapping & Level of Service (LOS) Analysis 137

9 Opportunities & Constraints Analysis 171

10 Areas of Focus 177

11 Recommendations 181

1

INTRODUCTION

INTRODUCTION

Project Purpose & Vision

The purpose of this project is to develop an Open Space, Greenway and Outdoor Recreation Plan (Greenways Plan) for the Northern Tier region of Pennsylvania, focusing on Tioga, Sullivan, Susquehanna and Wyoming Counties. This plan will analyze parks and recreation, transportation, land use and economic development programming within the Northern Tier region. From this common thread analysis, a strategic planning document will be developed to assess and identify strategies to enhance existing recreation, create connections, preserve the natural and cultural heritage, develop prioritized recommendations and actions strategies, and to initiate implementation of the plan.

Project Success Indicators

At project startup the consultant team worked with Northern Tier Regional Planning and Development Commission (NTRPDC) staff and the members of the Project Advisory Committee, which represent the four counties, state agencies and community organizations, to identify the most important goals and outcomes that are critical to the success of this strategic planning process. These stakeholders were asked "What processes and results need to be accomplished in order to consider this plan a success upon completion of the project?" The following areas of focus were identified as project goals for the Northern Tier Greenway Plan:

Table 1.1: Northern Tier Greenways Plan - Project Success Indicators

Project Success Indicator	Objective
Create a thorough inventory of the recreation opportunities and amenities throughout the region.	Gain an understanding of what is currently available in the region and the level of service currently provided to the region by those opportunities and amenities.
Integrate with previous and current planning efforts.	Recognize the planning efforts of the past and present to avoid duplication of effort and reinforce the objectives of those planning efforts.
Increase connections between the counties and throughout the region.	Identify and create connections extending across political boundaries to further connect the region visually and physically. Recognize the potential connections to Bradford County, the Susquehanna Greenway and New York to enhance the region as a whole.
Identify potential partnerships to create a seamless system.	Facilitate partnerships with the State, counties, agencies, private organizations and private land owners that provide recreation and open space opportunities and maximize the use of resources.
Identify needs and strategies for open space conservation.	Identify areas where open space conservation is needed and recommend appropriate strategies for protection.
Identify opportunities for economic development associated with recreation.	Understand what workforce industries support the region and identify areas for expansion and/or development of complimentary recreation opportunities to promote economic growth of the area.
Outline key implementation and funding strategies that support the recreation and open space needs of the region.	Put into action key strategies identified for implementation through available funding mechanisms.
Identify potential marketing strategies to promote the region as a key recreation destination.	Create a unified identity and brand for the Northern Tier Region. Implement the identity and brand through various marketing collateral items and outlets.

Study Area & Community Background

Overview and History

Setting

The Northern Tier is a large five-county region located in north-central/north-eastern Pennsylvania, bordering the state of New York and near the state of New Jersey. Counties included in the region are Bradford (not included in this study), Sullivan, Susquehanna, Tioga and Wyoming. The region covers 4,000 square miles and is quite rural in character. Scranton/Wilkes-Barre, Williamsport, Binghamton (NY) and Elmira (NY) are the closest urban areas.

Sullivan County

Sullivan County is the least populated county in the study area, with 6,378 residents (ESRI Business Solutions – 2009); however, it is the second smallest in area at 452 square miles. The area is characterized by mountainous topography that creates the scenic views the County is known for. A large portion of the County (37%) is owned by the state and is preserved as state forests, parks or game lands. The County was formed as a break off from land in Lycoming County in 1847.

Susquehanna County

Susquehanna County's 832 square miles were part of Luzerne County until 1810. Many of the County's 42,449 residents are part of the agriculture industry and their farm stands dot the County. Additionally, blue stone quarries are part of this county's economy and provide the stone for the dry stack walls seen along the County's roads. The Susquehanna River flows into the County before returning to New York on its journey to the Chesapeake Bay.

Tioga County

Tioga County was formed from Lycoming County in 1804 and encompasses 1,137 square miles, making it the largest county in the study area. Although the largest, the County is primarily characterized as rural and its 40,897 residents have access to limited urban amenities, such as major retail and Mansfield University. Tioga County also has large tracts of state-owned land comprising 25% of the County. These lands act as preserves for the area's vast natural and recreation resources, such as the Grand Canyon of Pennsylvania, which draws many visitors every year.

Wyoming County

The smallest county in the study area, Wyoming County was formed when its 405 square miles were separated from Luzerne County in 1842. The closest county to a large metropolitan area (Scranton and Wilkes-Barre), Wyoming County's 28,080 residents have access to major retail, Keystone College and other urban amenities. The County also has major waterways such as the Susquehanna River and Tunkhannock Creek as well as many tributaries that serve as scenic and recreational assets for the community.

Brief History of the Region

Pennsylvania has a long and storied history, from settlement to wars, industrialization and political unrest. The Iroquois and Delaware tribes once inhabited the general area now known as the Northern Tier. European settlers came to the area in the 1600's, but it was some time before the Northern Tier was settled. At times, relationships with the Native Americans were not peaceful and settlers did not always feel safe in this remote area.

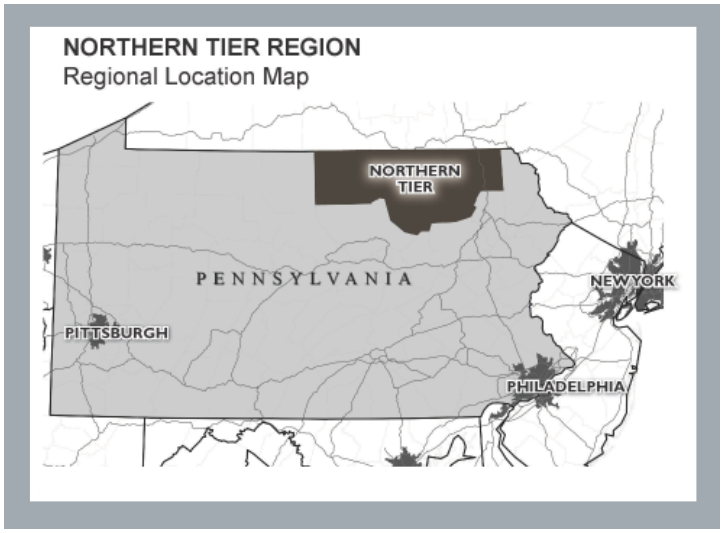
Record keeping in the early years was spotty at best, particularly land records. Questions arose not only about ownership between settlers and Native Americans, but also between colonies. Connecticut's charter led them to claim northern Pennsylvania, causing three conflicts known as the Yankee-Pennamite Wars between Pennsylvania and Connecticut claimants. However, Congress eventually settled the matter in the Trenton Decree, giving Pennsylvania title to the land.

Once ownership disputes were mostly resolved, settlers began inhabiting the Northern Tier. Forests were cleared for agriculture. Native American paths became roads used to bring goods to market. Eventually, the railroad made the transport of goods to market faster and industry came to the area with the discovery of coal and with the harvesting of lumber. While these industries brought settlers to the Northern Tier, the area remained relatively sparsely populated.

The introduction of other industries and advances in technology resulted in a decline in the agricultural uses of the land. The number of farms also declined over time, a trend that continues today. The types of industry that dominate the area have changed throughout the region's history and today tourism, largely focused around recreation and heritage, is a main industry in the area along with several major manufacturing plants.

Character

The Northern Tier is located northwest of the Appalachian Mountains, also known as the Allegheny Mountains. The topography varies from rolling hills to steep slopes and ranges from about 600 to 2,600 feet above sea level. The mountains and vastness of the landscape led to the larger area and Northern Tier region being named the Endless Mountains. Streams, creeks, lakes (both natural and man-made), and rivers are plentiful, and the steep topography contributes to the many waterfalls in the area.



The land is largely forested once again, having recovered from the timber harvesting of the 1800's. Predominant species include oak, maple, cherry, ash, hemlock and pine. Timber harvesting still occurs, but in a more selective fashion rather than the clear-cutting practices of the past.

The region is dotted with rural communities, townships and boroughs that provide centers for commerce and services. Communities vary from small, with a few homes and a gas station, to large with a central business district and big-box retail. The rural character dominates the region, giving it a pastoral feel.

Involved Agencies and Organizations

Northern Tier Regional Planning & Development Commission (NTRPDC)

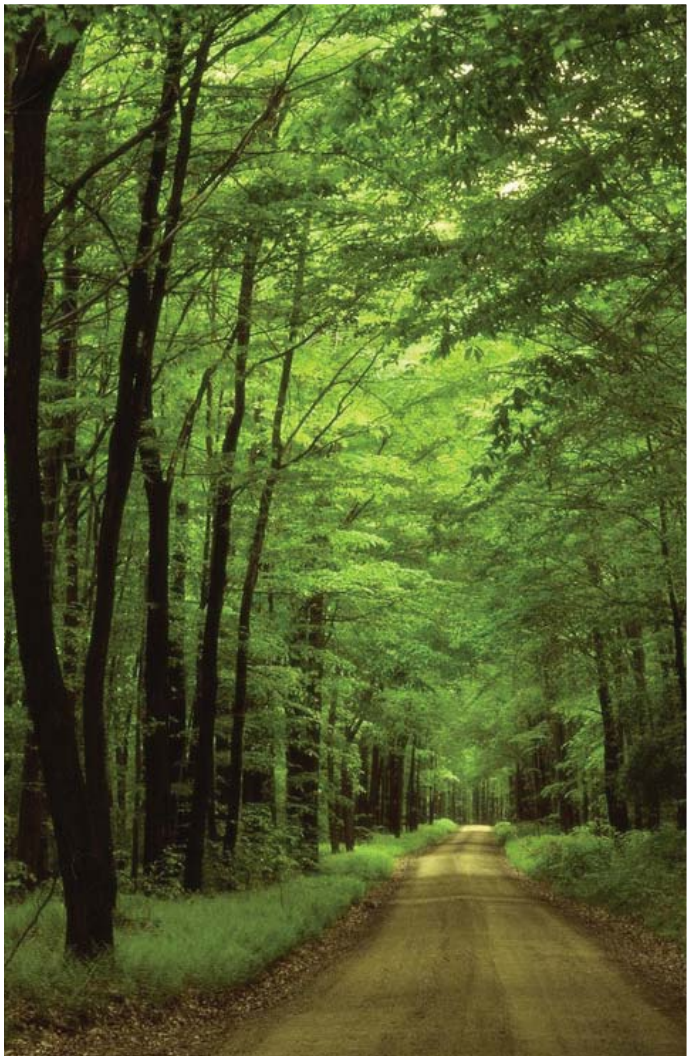
The NTRPDC is the Local Development District serving Pennsylvania's Bradford, Sullivan, Susquehanna, Tioga and Wyoming Counties. The commission's mission is "To help businesses expand their markets, generate employment, improve the local economy, and plan for the future development of the Northern Tier Region." The coordinating agency for this plan, the NTRPDC has been the consultant team liaison to the counties in the study area as well as the stakeholders. (http://www.northerntier.org)

Northern Tier Greenways Plan Advisory Committee

The Advisory Committee is comprised of stakeholders from the region including county planners, commissioners, state agencies, as well as conservation and tourism representatives. The Committee members assisted with the information gathering process, coordinated meetings with stakeholders, and guided the plan at the County level.

Pennsylvania Department of Conservation and Natural Resources (DCNR)

The DCNR was established in 1995 and is charged with maintaining and preserving Pennsylvania's 117 state parks and the 2.1 million acres of state forest land. Additionally, the agency provides information on the state's ecological and geologic resources and establishes community conservation partnerships with grants and technical assistance to benefit rivers, trails, greenways, local parks and recreation, regional heritage parks, open space, and natural areas. DCNR is a project partner, contributing an advisory role in addition to being a funding agency of the Greenway Plan. (http://www.dcnr.state.pa.us).



Pennsylvania Department of Transportation (PennDOT)
PennDOT is responsible for overseeing design and construction of the state's roadways. Roadways in the Northern Tier region have been designated as bike routes, necessitating this department's involvement in the planning process. PennDOT is a project partner as well by contributing to the funding for this plan and advising the Plan. (http://www.dot.state.pa.us).

The following agencies and organizations have also participated in the Plan and represent various stakeholder and advisory participants. Based on their mission, they provide recreation and open space amenities and services to the Northern Tier region. These agencies and organizations brought valuable insight and information to the research and analysis phase of the project and will also play key roles in the implementation of the Plan.

Pennsylvania Fish and Boat Commission (PFBC)
The PFBC owns and manages boat launches, waterways and lakes for recreational fishing and boating. Their mission is to protect, conserve and enhance the Commonwealth's aquatic resources and provide fishing and boating opportunities. (http://www.fish.state.pa.us).

Pennsylvania Game Commission (PGC)
Charged with managing the state's wild birds and mammals, as well as state game lands and hunting, the PGC operates with monies generated through licenses and assets. The Commission's land system contains about 300 separate tracts for a total of more than 1.4 million acres throughout the state. (http://www.pgc.state.pa.us).

Pennsylvania Department of Environmental Protection (DEP)
The DEP is the agency responsible for administering Pennsylvania's environmental laws and regulations. Their mission is to protect Pennsylvania's air, land and water from pollution and to provide for the health and safety of its citizens through a cleaner environment. (http://www.depweb.state.pa.us).

Pennsylvania Environmental Council (PEC)
PEC is a private organization involved with statewide environmental policy, research, programs and projects. The organization works with the private sector, government, communities and individuals to accomplish their mission of protecting and restoring the natural and built environment. (http://www.pecpa.org/).

Pennsylvania Wilds (PA Wilds)
The PA Wilds is a tourism marketing campaign that promotes a 12-county region in north central Pennsylvania, including Tioga County. Its vision is to be well-known throughout the country as a region that offers authentic recreational experiences, interesting towns, hospitable hosts and other heritage and cultural attractions in one of the most remote and beautiful settings in the Northeast. The initiative is overseen by multiple state, regional and local agencies. (http://www.pawilds.com).

Endless Mountains Visitors Bureau

The Endless Mountains Visitors Bureau represents Sullivan, Susquehanna and Wyoming Counties in the study area. The Bureau promotes the various activities and amenities found throughout the region, including outdoor recreation. (http://www.endlessmountains.org/).

Endless Mountains Heritage Region (EMHR)

EMHR is a non-profit agency within the state's Heritage Areas Program. Designated by DCNR, the region includes Sullivan, Susquehanna and Wyoming Counties. The organization's mission is to maintain and enhance the unique rural character and culture of the Endless Mountains. The agency is involved with various greenway, land conservation, trail, scenic byway and vista projects. It serves as the regional lead organization for the North Branch Region of the Susquehanna Greenway Partnership. (http://www.endlessmountainsheritage.org).

Susquehanna Greenway Partnership

The Susquehanna Greenway Partnership seeks to develop and sustain the Susquehanna Greenway to connect communities and enrich lives through enhanced recreation, healthy living, economic prosperity and environmental stewardship. It is comprised of public and private entities from the national to local level and includes the Susquehanna River Basin Commission, Federal Highway Administration, state agencies, county planning departments and land conservancies. The Partnership has developed an Interpretive Master Plan for the greenway. (http://www.susquehannagreenway.org

Northcentral Pennsylvania Conservancy

The Conservancy is a regional land trust that was established in 1990 to conserve the working lands and identifying waters of northcentral Pennsylvania for the enjoyment and well-being of present and future generations (mission statement). The organization works to achieve its mission through a balance of development and growth in the region with conservation of working forests, local farms and water resources. The Conservancy has projects and programs in Sullivan, Susquehanna and Tioga Counties. (http://www.npcweb.org/).

Countryside Conservancy

Countryside Conservancy was established by citizens in 1994 to protect lands and waters in order to preserve trees, stone walls, farmland and other distinctive features in and near the Tunkhannock Creek Watershed for the benefit of the public. It has protected land in Susquehanna and Wyoming Counties through private agreements with landowners and direct acquisition with funding from both public and private resources. Land owned by the Conservancy is open to the public.

North Branch Land Trust

The North Branch Land Trust began in 1993 and focuses its conservation work on the watersheds and other lands that frame the North Branch of the Susquehanna River. It currently holds conservation easements or land in fee within Sullivan, Susquehanna, Wyoming, Bradford, Columbia, Lackawanna and Luzerne Counties. The organization has protected approximately 10,000 acres on 28 properties. (http://www.nblt.org)

Watershed Associations

Several watershed associations are active in the study area. These associations are interested in protecting the waters, wetlands and wildlife within each particular watershed. Many of the associations have assembled river conservation plans for their watershed. Watershed associations in the study area include (but are not limited to):

- Bowman's Creek Watershed Association
- Loyalsock Creek Watershed Association
- Mehoopany Creek Watershed Association
- Muncy Creek Watershed Association
- Pine Creek Headwaters Protection Group
- Tobyhanna Creek/Tunkhannock Creek Watershed Association

Related Planning Efforts and Integration

Parks and Recreation - Regional and State

Integration

In addition to current and past planning efforts completed by planning groups within the Northern Tier, the consultant team has also reviewed numerous Regional and State park and recreation planning documents as part of the information gathering process. Documents included "A Recreation Plan for the State Parks and State Forests in the Pennsylvania Wilds", "Pennsylvania's Recreation Plan 2004-2008," "Pennsylvania Outdoors: The Keystone for Healthy Living, 2009-2013 SCORP," as well as the Bradford County Greenways Plan. Reviewing these documents ensures that the efforts of this Master Plan coincide with the goals and strategies of existing planning efforts.

A Recreation Plan for the State Parks and State Forests in the Pennsylvania Wilds

Information provided in this document is relevant to this Master Plan because it provides important insight into the history, regional characteristics, park and public lands, as well as area land use management agencies and their specific roles within the region. The benefits of nature-based tourism business development efforts and existing recreation opportunities were also identified. Specific strategies and recommendations were defined for DCNR public lands, including improvements to communications, staffing, programming and infrastructure across the region. Research was conducted on the development of a strategic recreation plan specifically for the Pennsylvania Wilds. Some of the site-specific recreation recommendations in Tioga County state parks include:

- Hills Creek State Park – Developed Camping, Wildlife viewing/photography, swimming, and warm-water fishing
- Colton Point State Park – Natural scenery viewing/photography
- Leonard Harrison State Park – Interpretive Centers, and natural scenery viewing/photography

Pennsylvania's Recreation Plan 2004-2008

This document provided a vision for recreation for the State between 2004 and 2008 and became Pennsylvania's official recreation policy document during this time. Concerns and needs of the State's citizens, policies and priorities for capital investment projects and several implementation strategies were identified. Priorities specific to the Northern Tier included defining, preserving and maintaining the rural atmosphere and areas; coordinating funding efforts with the state and providing matching funds for grants; and identify and market tourist attractions and natural resources of the area. This recreation plan also served as a guide for acquisition and outlined strategies for development and rehabilitation of facilities. In addition, this document served as a framework for ensuring the preservation of the state's cultural and natural resources while also identifying existing recreation opportunities throughout the state.

Pennsylvania Outdoors: The Keystone for Healthy Living, 2009-2013 Statewide Comprehensive Outdoor Recreation Plan (SCORP)

This document summarizes the SCORP process, which includes evaluations, research, and public input gathering. This information is then used to provide citizens, policy makers, and recreation professionals with a snapshot of the current trends and issues within the State (including a growing interest in climate change, getting children outside, the importance of Pennsylvania's state parks in the lives of its residents and the new trend of geocaching). This process is required every five years by each state to remain eligible to receive Land and Water Conservation Funds and to meet other federal requirements

2008 Pennsylvania Resident Survey: A Summary of Key Findings

This particular survey was conducted in support of the 2009-2013 Pennsylvania Outdoor Recreation Plan. The purpose of the survey was to better understand the State's outdoor recreation patterns and the opinions of the citizens regarding future recreation land conservation, facility development, and management. This survey was designed to collect information regarding recreation participation, favorite outdoor recreation activities, recreation area and

facility needs, outdoor recreation and physical activity patterns, demographics, and perceived impacts of outdoor recreation and conservation. The sample used in the study was designed to provide even representation for six DCNR planning regions and the metropolitan areas of Philadelphia and Pittsburgh. General findings include a need for integration of recreation and transportation planning between agencies, as trails were a primary need noted by respondents. Most believe having public lands and recreation opportunities in proximity to their homes improves the quality of life. There was also a strong interest in environmental programming and a commitment to conserving and preserving the state's natural resources.

2008 State Parks Visitor Survey: A Summary of Key Findings

This study, commissioned by the DCNR, was performed by on site visitor intercepts. The survey included questions and responses on the following topics:

- Visitor socio-demographics (typical visitors were diverse in age and socio-economic levels, but not ethnically diverse)
- Trip characteristics (the majority were day-users),
- Physical activity levels (most engaged in a moderate activity during their visit)
- Visitor motivations and perceived benefits of visiting state parks (having fun, reducing stress/ anxiety and connecting to the outdoors and improving mental and physical health)
- Evaluation of state park facilities and services (the parks were perceived as scenic, a good value and welcoming, however, improvements to park signage, restrooms and visibility of staff were indicated)
- Preferences for state park management actions (including providing trail connections to other state parks and adjacent communities, making improvements to visitor/interpretive centers)
- Program participation and evaluation (typically not day-users, and only 13% of respondents, however those that did participate responded favorably)
- Respondent's personal conservation practices, values, and beliefs

Trail Gap Study Overview

This study, conducted in two phases, was generated to identify the current gaps in the State's land-based trail system, assess the importance of factors that influence priority-setting in trail development decision-making, and identify effective strategies for developing and maintaining land-based trails. Phase I of the study, The Pennsylvania Trail Gap Inventory, included documentation from trail advocacy organizations that identified current voids and gaps in the State's trail system (including a few identified in Tioga and Sullivan Counties). Phase II of the study was entitled the Pennsylvania Trail Gap Priorities Survey. This survey polled individual trail advocates in order to gain a better understanding of the relative importance of different factors that influence priority-setting for completing critical trail links in the system and trail development (including geographic issues, social or experimental issues and organizational issues). This survey also included polling trail advocates on strategies for developing and maintaining trails. Results included the following criteria for identifying priorities:

- Geographic priority – providing connections between existing trails
- Social or experimental priorities – access to natural scenery and providing trails that accommodate more than one user group
- Organizational priority – securing trail rights of way that would otherwise be lost to trail development

What Urban Youth and Baby Boomers Have to Say About Outdoor Recreation in Pennsylvania

This document describes the purpose, design, structure, and findings of facilitated discussion groups conducted in late summer/early fall 2008 with urban youth (especially African-American and Hispanic) and Baby Boomer groups (aged late 40's to early 70's). The purpose of these discussion groups was to obtain their insights into uses, opinions, concerns, and beliefs regarding the extent of the current State park system. The findings of this study were part of the information gathering of Pennsylvania's Outdoor Recreation Plan 2009-2013. Youth participants were specifically concerned with access (including providing access to ATV/dirt bike trails), programming to keep them engaged and safety (adult supervision, often not by a parent). Boomers noted interest in increasing the depth and diversity of nature and environmental programs and access to outdoor recreation (including accommodating the physical abilities of this aging group).

Pennsylvania State Comprehensive Outdoor Recreation Plan 2009-2013 Recommendations

This document, compiled after research was conducted throughout the state, includes a series of four recreation goals with associated recommendations. These goals include:

- Strengthen Connections Between Outdoor Recreation, Healthy Lifestyles and Economic Benefits in Communities - build partnerships between health, economic and outdoor recreation stakeholders
- Reconnect People to the Outdoors and Develop a Stewardship Ethic Through Outdoor Recreation Opportunities and Experiences - reconnecting people to the outdoors through marketing, expansion of school and social programs and tourism
- Develop a Statewide Land and Water Trail Network to Facilitate Recreation, Transportation and Healthy Lifestyles – standardize planning, funding, signage, and difficulty ratings of trails and expand the electronic information, trail access points and on-trail education for the system state-wide
- Enhance Outdoor Recreation Through Better Agency Cooperation – develop a set of green principles for all state grant programs for recreation, reaching underserved communities (both rural and urban), protect working landscapes and local economies, and working with other agencies to coordinate trails and facilities

Bradford County Open Space, Greenways and Outdoor Recreation Plan

Bradford County completed their Plan in May 2006. Located in the center of the Northern Tier Region, connections to Bradford County will play a key role in connecting the region as a whole. The Plan has three main goals: maintenance of the rural landscape, linking sites of significance with open space corridors and recommendations for development of additional outdoor recreation resources.

The Plan recommends enhancing and extending existing greenways such as the Carantouan and Susquehanna Greenways, as well as establishing new greenways, typically along major creeks. It also recommends protection and management of sensitive natural features. These natural features may include sites identified in the Natural Areas Inventory, bodies of water, prime farmland, tracts and linkages of forest, and wetlands. Priority areas are located near other protected areas and have a number of features on one site. Historical and cultural features are also recommended for protection. Scenic viewsheds and corridors, such as PA Route 6, are also recommended for conservation.

Expansion and enhancement of the existing recreation system are also part of the Plan. Development of the recreation possibilities along the Susquehanna River Greenway as well as other greenways is included. A number of trails for walking, biking, hiking and backpacking are also included for development.

Parks and Recreation Regional and State Documents - Key Findings

The previously mentioned documents included extensive information gathering efforts in order to identify existing and future park and recreation opportunities for the state of Pennsylvania. Much of the information provided in these documents has a common theme and is relevant to this Master Plan.

Key Findings

Extensive Information Gathering

Common throughout the reviewed state and regional documents are the extensive efforts for information gathering regarding current recreation issues, needs, and trends. The documents provided record of several local and state agencies conducting numerous public outreach efforts to a wide variety of demographic groups which included both state citizens and visitors to Pennsylvania park and recreation facilities. The public outreach and information gathering efforts included internet surveys, mail-in surveys, on site visitor intercepts, public meetings, stakeholder meetings/ interviews, and phone surveys. As acknowledged in the previously mentioned regional and state documents, these information gathering efforts will be critical in developing policies, capital investment priorities, coordinating efforts for improvements and recommendations for existing and proposed park and recreation facilities throughout the state.

Restore, Maintain, and Improve State Parks and Other Existing Facilities

State lands and other recreational facilities are a source of revenue for the state. Suggestions and recommendations included making improvements/modifications to restroom facilities and trails, providing accessibility for disabled users, bringing older facilities up to current standards, improving overnight accommodations and making general infrastructure improvements. Also mentioned were protecting and conserving natural resources and areas of ecological and historical importance. The common thread of these state and regional documents is that restoring, maintaining, and improving state parks and existing recreation facilities will improve visitor service and attract more visitors which will, in turn, generate revenue for the state.

Revitalize Communities through Recreation and Conservation

The previously mentioned state and regional documents show that people want easy to access the outdoors and want to be able enjoy recreation opportunities. These documents recommend providing open space, connections, and stewardship of resources as ways to provide recreation access and opportunities. The documents state that implementation of these strategies will help to promote a healthier lifestyle and increase the quality of life for Pennsylvania communities.

Community planning and conservation efforts at the local level (i.e. through townships and boroughs) are noted as ways to identify key areas and implement proper land management techniques in order to create open space areas. Creating more open space areas within existing communities will provide greater access to recreation facilities and opportunities.

Enhancing and creating existing connections and links between and within communities are ways to provide better access to recreation amenities. Specifically, recreation trails provide an active use through state parks and other recreation areas. It was noted that creating a statewide trail network, providing access for disabled users, and rehabilitating/improving existing trails (including addressing gaps and voids in the existing system, a few of which are located in Tioga and Sullivan counties, are crucial in implementing recreation access and opportunities.

Stewardship of resources was also noted as another way to revitalize Pennsylvania communities. Promoting healthy, green, and sustainable practices and solutions are ways to help conserve ecologically sensitive land areas and to protect wildlife. Promoting stewardship of resources will increase community awareness and create a better surrounding environment.

Grow and Diversify Recreation Offerings

Another common theme throughout the state and regional documents was to grow and diversify recreation offerings. One recommendation to implement this strategy is to develop recreation programs and opportunities that target a wide variety of demographic groups and that meet current and future recreation needs and trends such as environmental/stewardship education programs for all ages, adventure activities for youth, and trails which can accommodate multiple users.

In addition, state forest lands offer opportunities for expansion of recreation facilities. If expansion into state forest lands is pursued, it was recommended that the recreation opportunities must offer diversity of uses (such as horseback riding, water sports (swimming, kayaking), bicycling, camping, and viewing/photographing wildlife or scenery) rather than just traditional recreational uses such as hunting and fishing.

Developing nature tourism opportunities is another way to grow and diversify recreation offerings throughout the state. If this opportunity is pursued, it will be necessary to provide training in hospitality and back country safety and to concentrate marketing efforts towards a predominantly urban user base.

Improve Information and Public Outreach

Informing and educating the public about new recreation programs, opportunities, and events is just one of the ways recommended to improve recreation information and public outreach. The previously mentioned state and regional documents also noted to provide a central clearinghouse for dispersing park and recreation information. Another recommended method was to provide easily accessible information, such as on the internet, to give the public access to facilities, schedules, trails and local community resources. It may also be feasible to develop a consistent health and outdoor recreation message/campaign to be marketed to a mostly urban customer base. Finally, implementation of a signage program was recommended. Currently, several state park areas do not display either interpretive or informational signage. It is important to provide appropriate signage in parks to provide directions and to clarify rules and regulations which may differ widely between agencies.

Improve Agency Alignment

According to the state and regional documents mentioned above, improving alignment between local, county, state, and private sector agencies will help to create a more efficient and integrated approach to facility management and recreation opportunities. Creating partnerships between health, economic development, and outdoor recreation stakeholders and providing state-wide studies and resources for local jurisdictions to use will also help to improve agency alignment.

Increase Funding Opportunities

Increasing funding opportunities will help aide in the development and rehabilitation of recreation facilities and programs. The state and regional documents mention that park and recreation resources play a vital role in community revitalization and help to promote healthy lifestyles close to home that are easily accessible. The State will facilitate partnerships among federal, state, local, and private entities to help secure grants and bond funds in order to enhance existing and provide for future recreation opportunities.

Environmental Planning- Regional and State

Integration

Environmental planning efforts for Pennsylvania and the Northern Tier have occurred at many levels and within many different boundaries creating a web of plans for various ecosystem components. Federal, multi-jurisdictional, state, regional, watershed, county and local entities have all joined the planning effort. Since the plans are too numerous to mention all of them in this report, only the major and most pertinent planning efforts are described.

Many environmental plan boundaries are based on watersheds. According to the US EPA, "a watershed is the area of land where all of the water that is under it or drains off of it goes into the same place. John Wesley Powell, scientist geographer, stated it best when he said that a watershed is: "that area of land, a bounded hydrologic system, within which all living things are inextricably linked by their common water course and where, as humans settled, simple logic demanded that they become part of a community." Watersheds come in all shapes and sizes. They cross county, state, and national boundaries. In the continental US, there are 2,110 watersheds; including Hawaii Alaska, and Puerto Rico, there are 2,267 watersheds."

Marcellus shale gas extraction will have many impacts on the Northern Tier region, both visual and non-visual with resulting effects on open space and recreation. Due to the relatively recent activity regarding Marcellus shale, planning documents created prior to 2007 did not take this resource and its impacts into account. Plans that do recognize this development are only able to use the information available at the time of their creation. Information regarding this resource is continually being made available and updated.

Many of the higher-level environmental plans, such as federal and state efforts, set goals to be acted on by more local entities. Local plans analyze a smaller area and set action plans to be carried out that meet both local and regional goals. Implementation actions in local environmental plans often speak to providing riparian and development buffers, which in turn can provide recreation opportunities. These implementation actions can inform this plan's priorities.

Federal Plans

Throughout the years, the US Congress has enacted many laws that regulate air, land and water. As a result, the EPA has forged many planning efforts to meet the requirements of those laws. These efforts have often occurred at the regional level to address watershed specific issues.

While the Susquehanna River provides many recreation opportunities to the Northern Tier region, it does eventually flow into the Chesapeake Bay. The Chesapeake Bay has long been a focus of environmental concern and the Chesapeake Bay Program formed in 1983 to begin to address the concerns. The Program is a partnership between various federal, regional and state agencies that issues directives as formal, voluntary agreements and general policy direction. Reduction of nutrients, primarily nitrogen and phosphorus, as well as sediment in the Bay is a priority. Efforts have been successful, but not enough considering that the EPA announced in September 2009 that they will be setting Total Maximum Daily Loads (TMDLs) for the Bay. Decisions made regarding the TMDL of the bay will affect the entire watershed, including the Northern Tier. Other Bay management goals of the Program include:

- Creation of watershed plans in two-thirds of the Bay watershed to address protection, conservation and restoration of stream corridors, riparian forest buffers and wetlands for the purposes of improving habitat and water quality by 2010.
- Conserve forests along all streams and shorelines.
- Permanently preserve from development 20% of the land area in the watershed by 2010.

The Susquehanna River Basin Commission (SRBC) is the administrative agency created in 1970 to develop, effectuate, coordinate and adopt plans, policies, and programs related to water resources in the basin. The SRBC is a

federal-interstate compact body comprised of states in the basin and with the jurisdictional boundary of the basin. The SRBC updated its Comprehensive Plan for the Water Resources of the Susquehanna River Basin in December 2008. The Plan grouped management responsibilities into Priority Management Areas with desired results, goals, ongoing activities and the actions needed to meet the goals:

- Water Supply
- Water Quality
- Flooding
- Ecosystems
- Chesapeake Bay
- Coordination, Cooperation and Public Information

The SRBC also selected several Areas of Special Interest with management activities and future direction provided:

- Abandoned Mine Drainage
- Climate Change
- Consumptive Use Mitigation
- Drought Coordination
- Economic Development, Recreation and Other Public Values
- Emerging Contaminants
- Energy Production
- Flood Forecast and Warning
- Invasive Species
- Migratory Fish Restoration
- Potentially Stressed Areas and Water Challenged Areas
- Water and Wastewater Infrastructure

The SRBC adopts an annual Water Resources Program based on the Comprehensive Plan. The Water Resources Program serves as the implementation document for actions defined in the Plan. Projects and facilities to be undertaken by the SRBC and others are included in the Program.

State Plans

In 2001, the governor approved the state greenways plan, Pennsylvania Greenways: An Action Plan for Creating Connections. The Plan is a result of Governor Ridge's Executive Order 1998-3 to DCNR, DEP and PennDOT, assisted by the Pennsylvania Greenways Partnership Commission, to develop an action plan for advancing a Pennsylvania greenways partnership program. The Plan describes Pennsylvania's Greenway Vision:

> *"Pennsylvania and its many partners will develop an outstanding network of greenways across the Commonwealth, creating an asset highly valued by Pennsylvanians and enhancing the quality of life for all. This network of greenways will connect Pennsylvania's open space, natural landscape features, scenic, cultural, historic and recreational sites, and urban and rural communities. Greenways will become one of the Commonwealth's most powerful tools to achieve sustainable growth and livable communities."*

The Plan describes a system comprised of "hubs and spokes". Hubs will be parks, forests, game lands, lakes and other destination areas, including towns. Spokes will be greenways that connect natural areas and recreational and cultural destinations with where people live. Each county develops a Greenway Plan to identify these hubs and spokes. Hubs and spokes should create places for all people, promote health and wellness, provide transportation alternatives and protect natural resources.

The Water Resources Planning Act of 2002 requires DEP to update the State Water Plan and continue to update it every five years. The State Water Plan update involves state, regional and local agencies, as well as private entities. The Plan is divided into sections based on watersheds – the Northern Tier is located within the Upper/Middle Susquehanna watershed. Relevant to the Northern Tier study area, the Plan identifies the following as priorities within the watershed:

- Protect important headwater habitats and recharge areas of the Upper/Middle Susquehanna River Basin
- Address the consequences of acidic drainages on receiving streams to improve and protect water quality and aquatic ecosystems, and to enhance the availability and utilization of water

State-owned lands, which make up a total of 19% (534 of 2826 square miles) of the Northern Tier study area, have management plans created by the managing agency/bureau. These plans include:

- DCNR Bureau of Forestry State Forest Resource Management Plan 2007 Update
- Game Commission Strategic Plan
- Fish and Boat Commission Strategic Plan, Enhancing Fishing and Boating in Pennsylvania: Strategies for the 21st Century

Other state plans include:

- Pennsylvania's Wildlife Action Plan
- Pennsylvania Biodiversity Plan

These plans seek to manage Pennsylvania's native wildlife and habitats. Management includes controlled use as well as preservation of wildlife and habitat. These plans dictate what occurs in the portion of the study area owned by the state, including recreational lands and affect species users may hunt or fish. In turn, management of state lands may also affect adjacent lands' use and management. State plan priorities should also be used to inform plans on a more local level, using their goals to set priorities for action.

The DEP also produced the Riparian Forest Buffer Guidance document to give guidance and provide guidelines for regulatory, voluntary and grant programs as well as other agencies and levels of government. Riparian buffers not only perform various environmental functions that protect water quality, they also provide recreation opportunities. The guidelines suggest passive recreation such as wildlife viewing, hunting, fishing and trails are also a benefit of a riparian buffer. The document contains a toolkit for those interested in providing a riparian buffer that includes information for analyzing, creating, managing and protecting the buffer.

Watershed Plans

DCNR has developed the Pennsylvania Rivers Conservation Program to conserve and enhance river resources through preparation and accomplishment of locally initiated plans. The program provides technical and financial assistance for planning, implementation, acquisition and development activities. Grants are awarded to municipalities or river support groups with 501(c)(3) status to develop a River Conservation Plan that identifies significant natural, recreational and cultural resources in a watershed. Plans describe issues, concerns and threats to river resources and values. Subsequently, plans recommend methods to conserve, enhance and restore the stream or river. Rivers Conservation Plans completed in the Northern Tier study area are:

- Bowman's Creek Watershed Rivers Conservation Plan
- Mehoopany Creek Rivers Conservation Plan
- North Branch Susquehanna River Conservation Plan
- Pine Creek Watershed Rivers Conservation Plan
- Tunkhannock Creek Watershed Rivers Conservation Plan
- Upper Lackawanna Watershed Rivers Conservation Plan

Most of the previously listed Rivers Conservation Plans call for improving water quality within the watershed. Methods for improving water quality, such as wetland creation or

improvement, riparian zone restoration and protection, acid mine drainage clean up and headwaters protection are described as potential implementation actions. The Plans call for preservation of the land along waters through greenways, easements and acquisition.

The Plans also explore recreation opportunities along the waters in their study area. They call for development of trail connections and access points as well as promotion of canoeing, kayaking and rafting. Balance between recreational use and environmental preservation will be a key factor in recreation development, so as to not overburden the watershed. (Refer to individual plans for specific watershed information.)

Local Plans

Plans by local municipalities outline issues, such as drinking water quality, storm water management, wastewater treatment, wetlands protection, nonpoint source pollution, solid waste management or floodplain zoning. These plans are often part of the requirements set forth at the state or federal level. Typically specific to an issue, plans are developed to ensure local municipalities implement goals and priorities identified by agencies such as the EPA or DEP. Some of the key environmental considerations for the Northern Tier study area include:

- Acid mine drainage (primarily Tioga County)
- Stream water quality
- Protection of wildlife habitat and native plant species

Key Findings

Environmental planning occurs on many levels from federal to local. Many of these plans set goals, if not requirements, for water quality, habitat protection and preservation, and species (plant and animal) conservation and protection. Water quality and riparian buffers of the streams in the region is a particular concern of several plans. Providing sufficient habitat and corridors for the various species of the region is another concern. These plans should be used to inform priorities at the more local level for action regarding open space and greenways. These same spaces may also provide recreation opportunities to the Northern Tier region and will be identified in the Recommendations Phase of the project.

Land Use Planning - Regional and State Planning

Integration

As part of the information gathering process, the consultant team has reviewed a wide variety of current and past land use planning efforts completed by planning groups within the Northern Tier, ranging from regional planning documents to municipal subdivision ordinances. Reviewing these documents ensures that the efforts of this Master Plan coincide with the goals and strategies of the existing planning efforts.

Regional Planning

Regional planning documents such as the Pennsylvania Wilds Design Guide and the Northern Tier Land Use, Transportation and Economic Development Strategy (LUTED) are relevant to this Master Plan because they provide important insight into the development opportunities and constraints throughout the region as a whole, as well as the impacts of development on recreation opportunities and conservation efforts. For example, both of these documents discuss the importance of promoting development that is well placed, reflects the existing character of the region and preserves the region's valuable natural resources.

County and Multi-Municipal Planning

County and multi-municipal planning efforts provide more specific details of development potential within the region. These documents are valuable to this effort as they show the amount of coordination that currently occurs between various counties and municipalities within the Northern Tier.

Municipal Planning

The available zoning and subdivision / land development ordinances that are adopted and used by the municipalities provide the most detail on land development. Specifically, it is important to note the fact that only a few of the Northern Tier municipalities have these ordinances, which explains the existing and somewhat sporadic development patterns in the region. These documents are particularly relevant to this Master Plan as they explain specifics such as park and open space dedication requirements by each township or borough.

Key Findings

In reviewing the previously mentioned documents, there were a number of specific strategies and goals that were common throughout and relevant to this Master Plan. Overall, the region looks to maintain the existing natural and rural character of the Northern Tier, while promoting economic development through sound land planning techniques. Cooperation between local governments and the adoption of land use controls are two key strategies that are available to guide development that is sensitive to the character of the region.

Local Government Cooperation

Common throughout many of the reviewed planning documents is the need for additional local government cooperation. Working collaboratively can distribute the burden of costs, provide more facilities and services and ensure that future development occurs appropriately. This will help to make certain the rural charm and natural resources of the region are protected and provide appropriate land for commercial and business uses.

First, the low population densities that exist throughout the region make local government services more expensive, as there are less people to pay for these services. Collaboration can improve the services available to residents, while spreading out the costs. For example, the North Central Wyoming County Comprehensive Plan discusses recreation facilities, which are provided by Tunkhannock Township, the Tunkhannock Area School District and local community organizations. Lemon Township has no recreation facilities, but is served by the three previously mentioned agencies and organizations. This document goes on to discuss community surveys that show that approximately half of the residents agreed that recreation facilities are adequate, while 43% disagreed. Because local officials need to prioritize their resources, funding is first used on services such as police and fire protection and street maintenance. Increased collaboration between the municipalities and other organizations can help increase the quality and quantity of recreation facilities available to all residents.

Secondly, increased collaboration promotes cohesive land development patterns and ensures all land is developed for its highest and best possible use. If each county or municipality plans with only their land area in mind, abutting edges can end up unplanned or incompatible. Additionally, this allows municipalities to discuss large scale infrastructure plans like sewer and water. Land development will typically first occur in areas where infrastructure already exists. By planning both ahead and collaboratively, infrastructure can be sized and placed proactively thus promoting planned and logical development patterns. The same outcomes can occur when land planning is inclusive of recreation and conservation items like regional trail corridors.

Land Use Controls

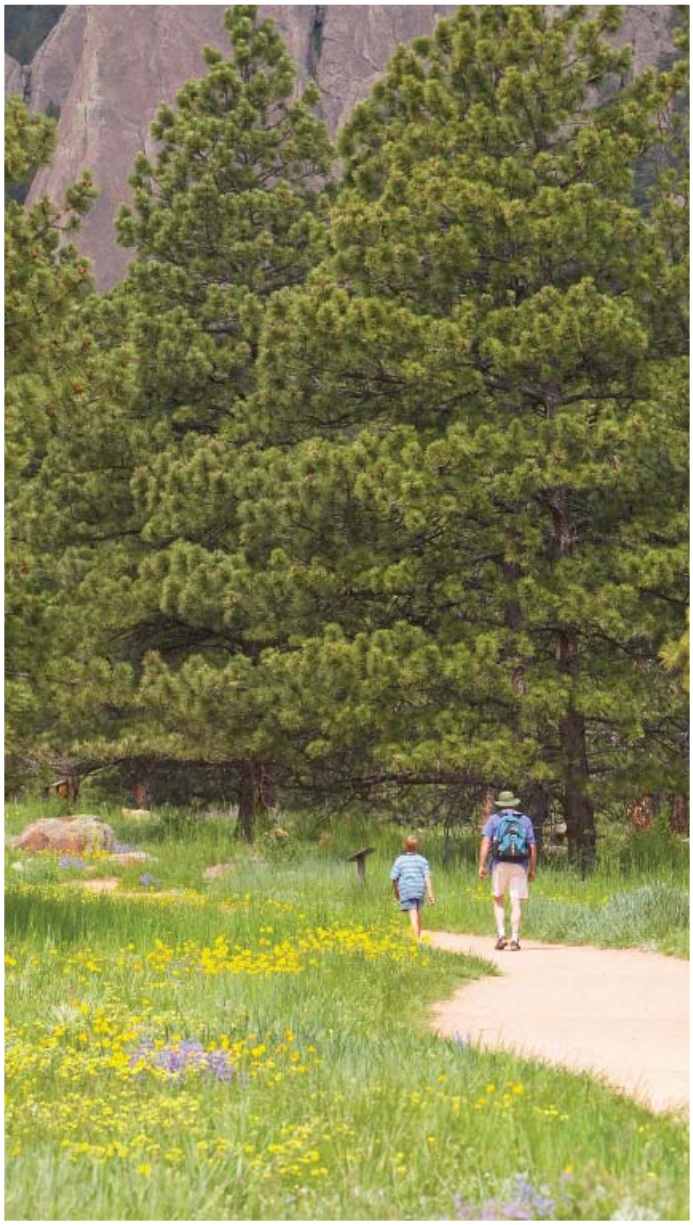
Planning for future development is the most effective way for the Northern Tier to provide for future land uses that meet the region's goals. Many counties, townships and boroughs do not have comprehensive plans, zoning ordinances or subdivision / land development ordinances to guide future development. Without these plans in place, development can occur sporadically and without sufficient regulation.

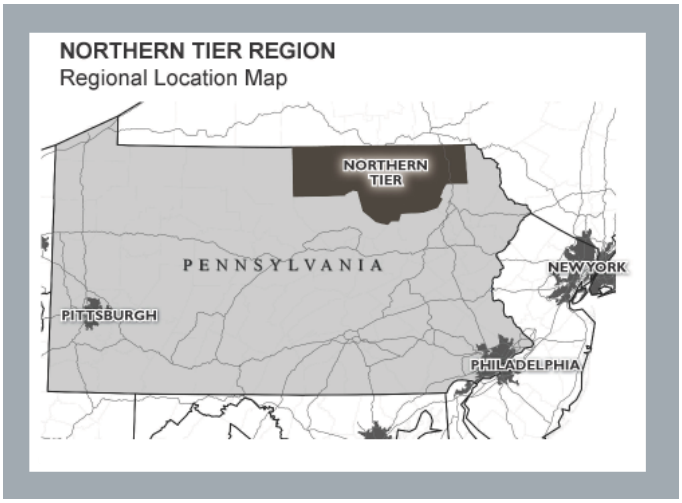
The topography and large amount of state owned land in the Northern Tier prohibit development over large parts of the region. The adoption of planning ordinances will help to ensure that development occurs in areas where it is best suited. Comprehensive plans project land use characteristics and connections that serve as a guide for future development. They set aside land for future recreation and predict transportation corridors. This can help reduce sprawl by determining where major transportation corridors are / will be located and how development should occur around them. This not only protects the natural resources and character of the region, but also creates compact developments that can reduce infrastructure costs and emergency services times. The more detailed zoning subdivision / land development ordinances carry out the guiding principles of the comprehensive plan by establishing review criteria for future developments.

Additionally, planning documents and ordinances make sure future needs are met. This is especially important in areas like the Northern Tier where population predictions could easily change with development of the oil / gas industry or construction of additional commuter rail lines. For example, recreation master plans establish goals and action plans for future recreation needs of an area. Requirements with timeframes and thresholds, including those specific to parks, trails and open space (i.e. - such as parkland dedication, cash-in-lieu, dedicated right-of-way and easements, etc.), can then be included in the subdivision / land development ordinances that create specific requirements for parkland dedication and recreation facility development as new development occurs. This requirement ensures that adequate parkland, recreation facilities and open space are guaranteed with future development and population increases.

Northern Tier Scenic Corridor Inventory

The NTRPDC worked with the Pennsylvania Historic and Museum Commission as well as the Department of Community and Economic Development to compile a working inventory of various resources along 28 scenic corridors in the region. Scenic corridors may follow roads, railroads, sidewalks, trails or waterways. Completed in December of 2009, the inventory complements this plan in that resources relevant to outdoor recreation, but not fully examined in this study, are included.





The resulting database includes an inventory of each corridor's location and primary and alternative travel modes. Features and attractions, traveler facilities, and intersecting/adjoining corridors are included. Archeological, cultural, historic, natural, recreational or scenic sites that demonstrate the region's heritage, beauty and current culture and economy are included in the features and attractions.

A working inventory and analysis tool, this will be used to characterize, rank and track recommended enhancements and improvements to the scenic corridors. Additionally, it is envisioned to effectively prioritize projects, advance existing plan recommendations, enhance outreach and cooperation and leverage funding. The database also produces an action plan for each corridor, summarizing four priority project recommendations and their potential implementation partners

Geographic Information Systems (GIS) and Mapping

Integration

The Northern Tier project required the research, review and assimilation of a mass of digital and hardcopy geospatial data elements from many qualified resources and associated regional projects. All project map data was acquired or produced within an ESRI ArcMap GIS-ready environment, via the standard Shapefile, Geodatabase and ArcInfo Interchange (E00) file formats. The selected datasets used for this Plan detail the existing physical, social, political and planned makeup of the Northern Tier region. The ESRI-based formatting used for this project facilitates the simple assembly, compilation and transfer of the project's final GIS data set to all participating project agencies.

Data Sources

The primary online GIS data resource for the project was the Pennsylvania Spatial Data Access (PASDA) site - http://www.pasda.psu.edu . The PASDA site houses the most inclusive, statewide GIS data layers for a project of this magnitude. It the most widely accepted GIS resource and clearinghouse for the State of Pennsylvania's land management, recreation, natural resource and transportation-related GIS data. All data from this site was selected based upon its ability to portray the subject matter equitably across each of the counties – providing a seamless base that did not favor one county over another for the project's analytical purposes.

Additional digital spatial datasets were retained through web-based resources including the United States Geologic Survey (USGS), US Census Bureau, various State of Pennsylvania agencies. Additionally, each of the participating Northern Tier counties submitted data from their own GIS divisions. Instances of data replication were noted, assessed for quality and then determined for inclusion/exclusion of the Plan's inventory and dataset, prior to final assembly and incorporation into the project base maps. High resolution, georeferenced aerial photos were also supplied for the project study area and were used as needed to understand details not offered through traditional GIS data resources. Other valuable information related to the existing parks, greenways and open space in the Northern Tier region was qualified and digitized from online, static map resources located upon various agency websites. Again, all data was qualified based upon its ability to equitably portray the subject matter across each of the counties.

2

COMMUNITY BACKGROUND

COMMUNITY BACKGROUND

Demographic and Community Profile

Analysis

Community Overview

The Northern Tier Planning and Development Commission (NTRPDC) has embarked upon the development of an Open Space, Greenway, and Outdoor Recreation Plan. One component of such a plan to understand the local demographics of the region and how they affect parks and recreation service and facility needs. It is also important to understand how the local demographics are either similar or different than state and national trends. This data will help to provide insights into what activities residents may be interested in; therefore, helping to facilitate the implementation of recreation services, as well as facility improvements and development that will be tailored to the residents of the area.

Bordering New York State to the north, the Northern Tier region of Pennsylvania is located in the rural north-central area of the Pennsylvania. Due to the low population density and rural characteristics of the area, the residents are mainly clustered in small communities which mean that the service area for NTRPDC is large, roughly covering 4,000 square miles. The study area for this analysis includes Tioga, Sullivan, Susquehanna and Wyoming Counties.

Historically, timber, railroad, coal mining and agriculture were prominent in the region followed by a variety of industrial and manufacturing companies operating in the area. The cost of living in the Northern Tier is below the national average, which may correlate with the fact that household income rates are among some of the lowest in the state. Recently, unemployment has been higher in the area than other parts of Pennsylvania.

Currently, the Northern Tier region's major employers are health services, education services, and paper allied products. There are also active quarries in the area that produce sandstone and bluestone which are shipped throughout the country. In order to promote additional commerce in the

area, the Northern Tier has been proactively marketing to the business sector in order to promote relocating, starting, or expanding businesses in the area.

Marcellus Shale Influence

While Marcellus shale natural gas development is just beginning in the Northern Tier, the effects of this new workforce can already be seen and felt. Similar plays in the western US, particularly in Texas, Wyoming and Colorado, have been studied for their effects on population and demographics as well as many other aspects of the development process. These areas differ from the Northern Tier in several ways, but the overall development process remains essentially the same. This allows for some comparison and analysis through the Boomtown Model.

Areas with significant natural gas development have seen their populations as much as double over the course of the development, which may occur in excess of 20 years. Unfortunately, many workers are based out of other states and companies are not required to track demographic information. This also means that employment data is reflected in the home state of the company. Therefore, the data is hard to obtain or evaluate.

The workforce associated with development has essentially two phases: drilling and operation. The drilling phase, which may be up to 10 years, workforce is transient and rotating. These workers come to the drilling site from other states for 7 days, and then return home for the next 7 days before returning. Another group of individuals replaces them for those days off, essentially doubling the number of individuals to be considered. Anecdotally, these workers are mostly male, in their 20's or 30's and mostly white.

During the operation phase, companies begin establishing offices in the region and the workforce becomes non-transient. Population increases and changes will be noticed more in traditional reporting methods, such as the US Census. Like the drillers, this population is also mostly male, in their 20's to 30's and mostly white.

Due to the number of unknowns regarding population and demographic changes associated with natural gas development, the following population and demographics analysis is based on US Census data. This analysis will provide the Northern Tier region a baseline to move forward with and compare to later as more data is collected regarding this workforce.

Note: Unless otherwise noted, the raw data used for the analysis that follows was provided by ESRI Business Solutions, which is based on US Census data and is intended to provide consistent data and projections between all four counties. Individual counties may use varying demographic data sources that produce slightly different data. Additionally, the data does not consider the developing Marcellus Shale natural gas extraction that is becoming increasingly prominent in the area, as that data is currently being analyzed by various organizations.

Demographic and Population Definitions:

- Household Population - includes persons not residing in group quarters
- Average Household Size - is the household population divided by total households
- Persons in Families - include the householder and persons related to the householder by birth, marriage, or adoption
- Per Capita Income - represents the income received by all persons aged 15 years and over divided by total population
- Detail may not sum to totals due to rounding

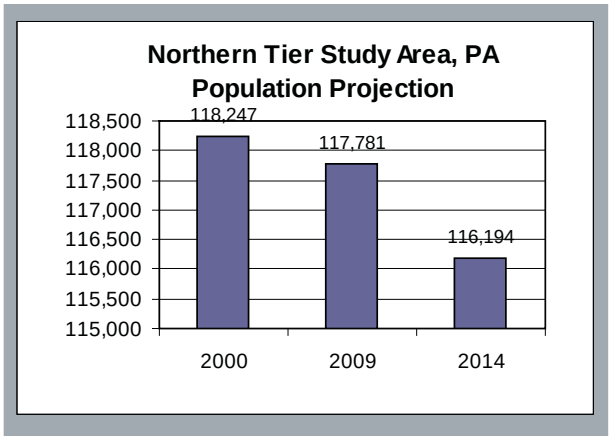
Population Projections

The Northern Tier study area currently has a relatively low population density with 117,781 residents and is forecasted to experience a population loss of 1.37% between the 5 year period of 2009 and 2014 (see Figure 2.1). This projection is contrary to the state of Pennsylvania's overall projected growth rate (0.80%) and the U.S. projected growth rate (0.91%) during the same period. By 2014, the Northern Tier's combined population is projected to be 116,194, approximately 2,053 less than the population of 2000. The projected population data for each county in the study area

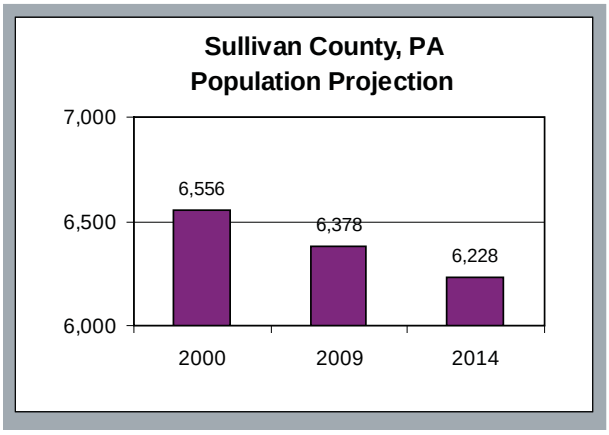
is illustrated on Figures 2.2a through 2.2d as well as **Figure 2.1**, which combines the population information for the entire Northern Tier study area.

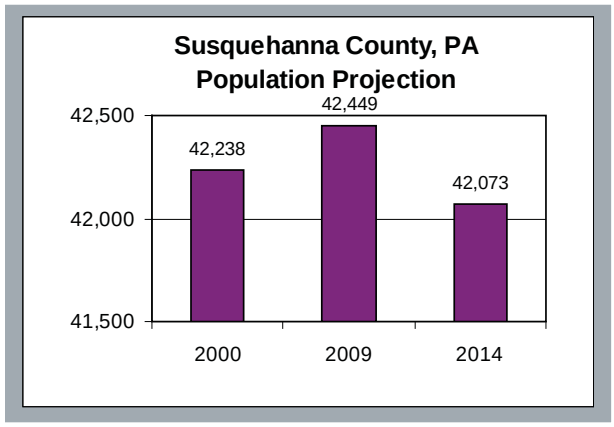
Information provided in the figures below is based on data provided by the U.S. Bureau of the Census, 2000 Census of Population and Housing. Projected population information is based on population forecasting from ESRI Business Solutions. These numbers are likely a reflection of the decline in the agriculture and commercial industry that has been occurring in the area in recent times, but it is important to note that these forecasts may not account for potential population growth that may result from recent developments in the area associated with the natural gas industry.

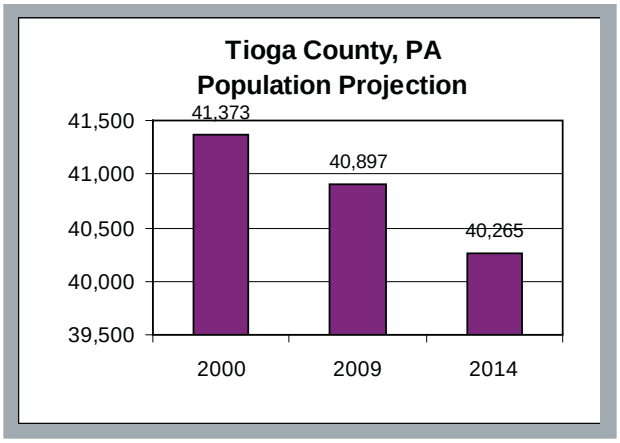
Figure 2.1 – Northern Tier Area Population Projections (2000-2014)

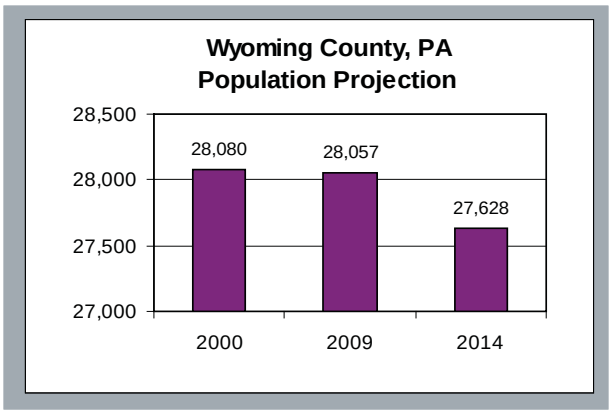


Figures 2.2a through 2.2d – Population Projections per County (2000-2014)







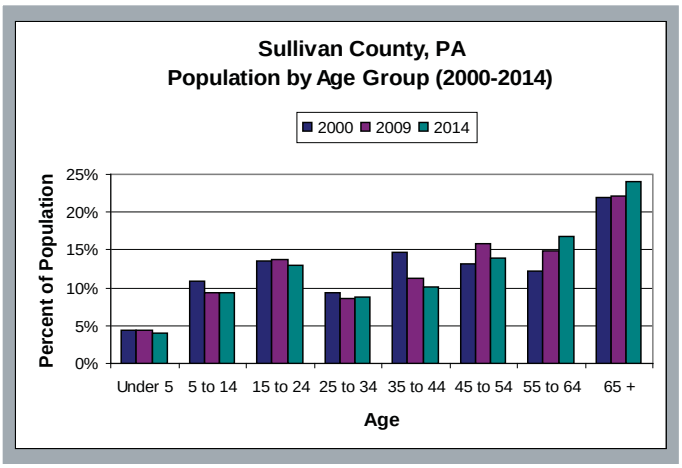


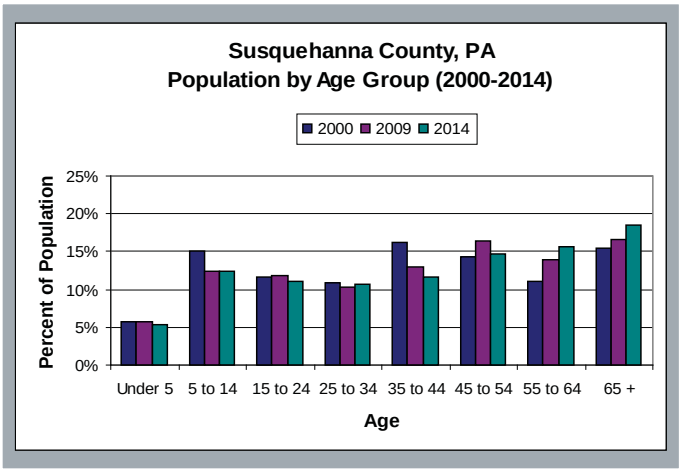
Overall, the population within the four counties of the Northern Tier study area is projected to decrease by 2014. Sullivan County, the least populated county in the study area, is projected to have the largest population decrease by 5.6 percent. Tioga County is projected to have the second largest decrease of 2.7 percent. Wyoming County is projected to have a slight population decrease of 1.6 percent, while Susquehanna County is projected to have a slight increase in their population by 2009, only to have an overall decrease of 0.3 percent by 2014.

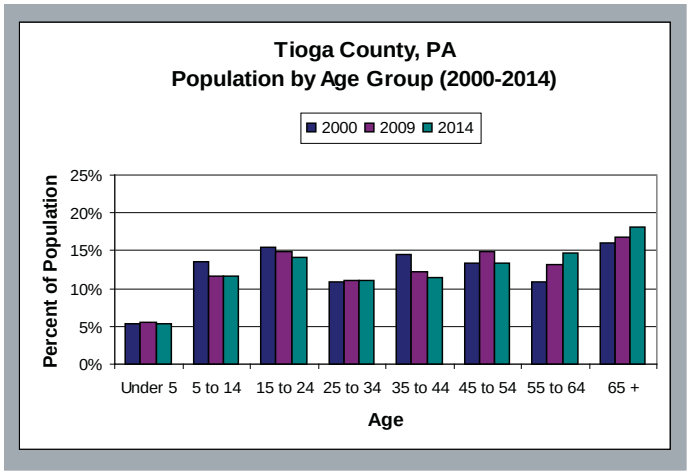
Age Distribution & Breakdown

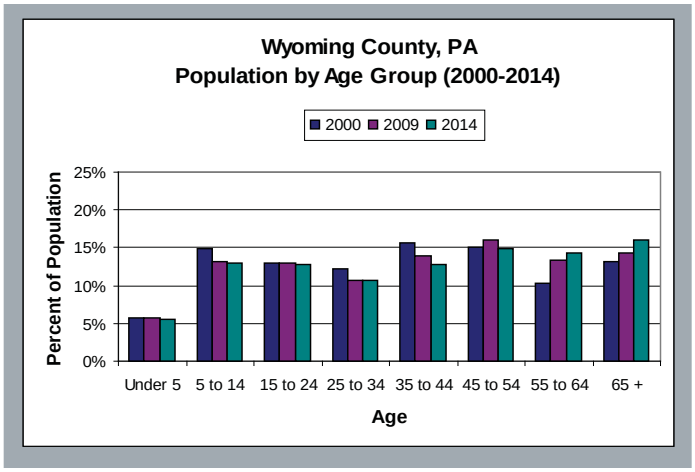
A profile of the Northern Tier study area's population breakdown is critical to parks and recreation programming, since different age groups can have very different needs and desires for activities and facilities. **Figures 2.3a** through **2.3d** illustrate the population by age group in each county within the study area.

Figures 2.3a through 2.3d – Population by Age Group in Each County (2000-2014)









For the purpose of parks and recreation planning and based on U.S. Census Tract Data, seven age groups are used to classify the population. These age groups generally define how a group uses parks and recreation facilities, their physical abilities, types of programs they may be interested in, and the amount of time available to spend participating in recreational activities. These groups are:

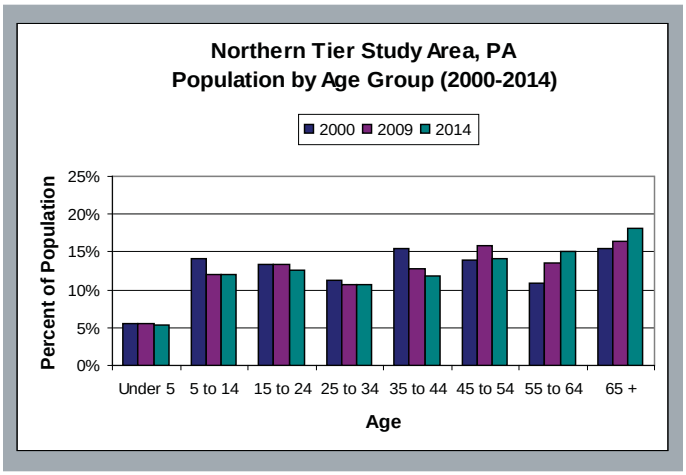
- Under 5 – those with limited physical abilities and who need constant supervision and typically experience facilities and programs with an adult
  - In the Northern Tier area, this group represented 5.5% of the population in 2009, and will decrease slightly to 5.4% in 2014
- 5-14 – The largest users of youth programs and playgrounds, this is also a key time to create habits of being active
  - In the Northern Tier area, this group represented 12.1% of the population in 2009 and will hold at that percentage into 2014
- 15-24 – young adults who use facilities and programs independent of their family, primarily with friends and as part of their social time
  - In the Northern Tier, this group represented 13.3% of the population in 2009 and will decrease to 12.6% in 2014
- 25-34 – those whose needs primarily center on relationships and starting families
  - In the Northern Tier, this group represented 10.6% of the population in 2009 and will increase slightly to 10.7% in 2014
- 35-44 and 45-54 – people whose needs generally revolve around their family, which likely contains children ranging from toddlers to young adults, and who are highly active themselves

- In the Northern Tier, this group collectively represented 28.6% of the population in 2009 and will decrease to 26.0% in 2014, with the largest percentage drops occurring in Sullivan and Susquehanna counties

- 55-64 – empty nesters, and those focused on new grandchildren are preparing for retirement. This group is considered "young" seniors and is more active, typically in individual unstructured activities
  - In the Northern Tier, this group represented 13.6% of the population in 2009 and will increase to 15.0% in 2014, with the largest percentage increases occurring in Sullivan and Susquehanna counties
- 65+ – a group that is currently more active than at any point in history, has more leisure time, and whose abilities may be physically constrained
  - In the Northern Tier, this group represented 16.4% of the population in 2009 and will increase to 18.1% in 2014. The largest portion of this age group to increase tends to be the 65-74 portion of the category, accounting for the majority of the increase, but not in the total percentage of the age group
  -

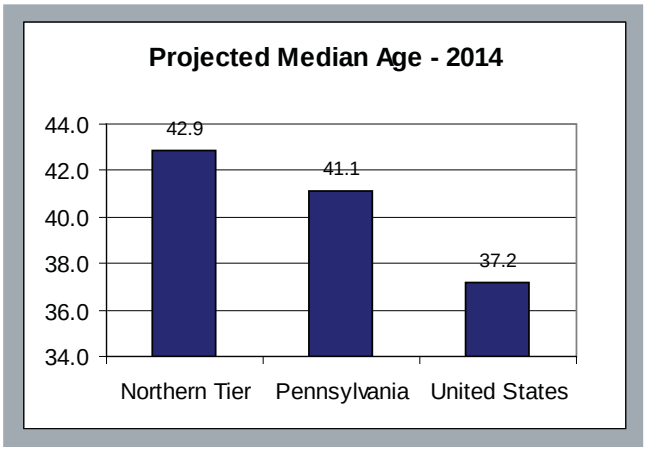
Figure 2.4 illustrates the overall population trend of the Northern Tier area by the age groups described above. It does appear that the 55 to 64 age group and the 65+ age group population is increasing, and combined will be the largest segment of the population (33.1%) in 2014. It is also important to note that the population of the 25 to 34 age group is slightly increasing except for that of Wyoming County where this age group is projected to level out between 2009 and 2014.

Figure 2.4 - Population by Age Group in the Northern Tier (2000-2014)



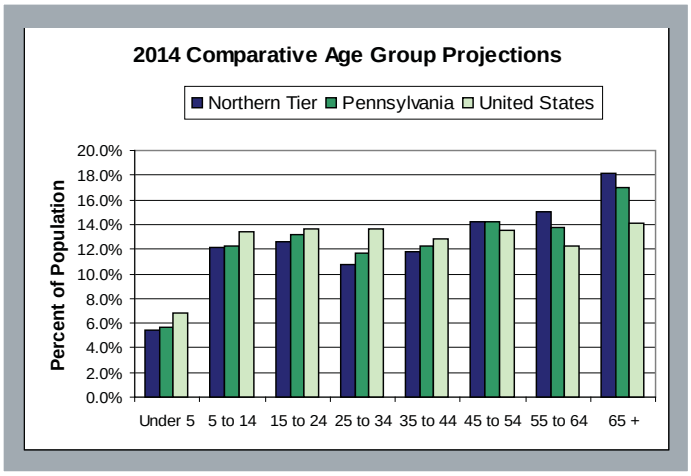
When compared to the State of Pennsylvania and the United States as shown in **Figure 2.5**, the Northern Tier study area's population is projected to be older than both. In 2014, Figure 2.6 shows the study area is projected to have a higher percentage in ages over 55 than both the state and country. The study area is projected to have an even percentage for the 45 to 54 age group as compared to the state, both of which are higher than the projected national population for that age group. The projected median age in 2014 is as follows: Northern Tier study area – 42.9 years; State of Pennsylvania – 41.1 years; United States – 37.2 years. This means that the NTRPDC needs to position its programs and services to accommodate an aging population, but cannot do so without working to meeting the needs of the younger population, which make up a large portion of the visitors to the area.

Figure 2.5 – Projected Median Age in the Northern Tier



With the study area projected to have a higher percentage of its population over the age of 55 than both the rest of the state and country, it is important to consider the recreation trends and interests of this age group when planning for parks and recreation facilities. There are two different generations to consider when planning parks and recreation facilities for people over the age of 55, the Silent Generation (65+) and the Baby Boomer Generation (45-64). The Silent Generation is mainly interested in passive recreation activities (i.e. - nature walks, bird watching, etc.), group social activities, and volunteering. In contrast, Baby Boomers prefer small group or individualized active recreation opportunities (i.e. day trips, hiking, fitness).

Figure 2.6 – 2014 Projected Age Group Distribution

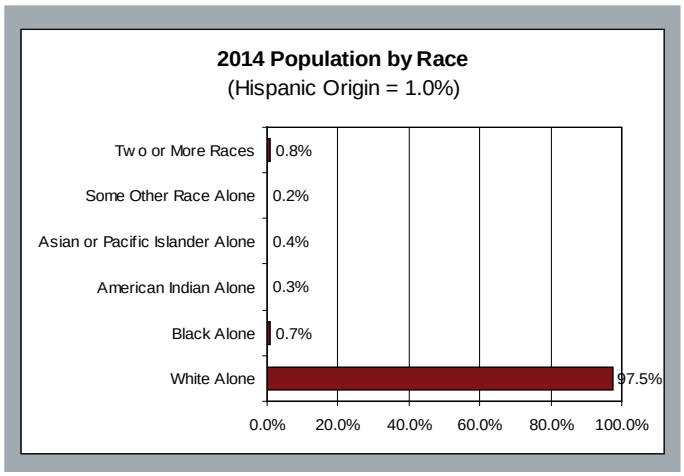


Race/Ethnicity

Race and ethnicity play a role in the population's parks and recreation needs and desires. Trends can be found in the ways that different races/ethnic groups use parks, recreation facilities, and the types of programs they seek. As **Figure 2.7** illustrates, the Northern Tier region's ethnicity makeup is predominately "White Alone" and will remain this way through 2014. The Northern Tier study area is less racially diverse than both Pennsylvania and the country as a whole. The percentage of the population in 2014 that is "white alone" will be significantly lower in both Pennsylvania (81.8%) and the country (70.3%) than in the Northern Tier region (97.5%). Additionally, in 2014, the percentage of state residents projected to be of Hispanic origin is 4.9% and the percentage of US residents of Hispanic origin will be 17.5% - a significant difference from Northern Tier's 1.0% projection.

In its parks and recreation programming, the Northern Tier region should consider any special needs or desires of the various races/ethnicities or other special groups within the area. However, they should also be aware that programming specifically geared towards minorities would likely have low participation numbers because of the very low percentage of the population made up by minorities. Therefore, increased marketing to minorities may be a more effective use of resources instead of specific programs geared towards minority groups.

Figure 2.7: Northern Tier Population by Race (2009)



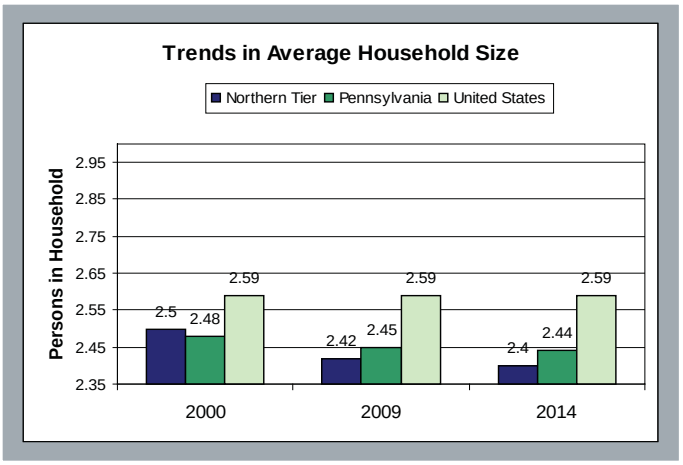
Household Makeup

Currently, the Northern Tier study area has a smaller than average household size than both Pennsylvania and the United States as compared to the year 2000 in which the study area's household size was slightly higher

than the state average, but still lower than the national average as illustrated in **Figure 2.8**. Projections for 2014 are as follows: Northern Tier study area – 2.40; State of Pennsylvania – 2.44; United States – 2.59.

Household makeup is very important to parks and recreation programming. The projected population trend shows that household sizes will become smaller, which could correlate to the aging population of the area. Programs and amenities aimed at ages 55 and older, such as regional events, should be successful in the Northern Tier area.

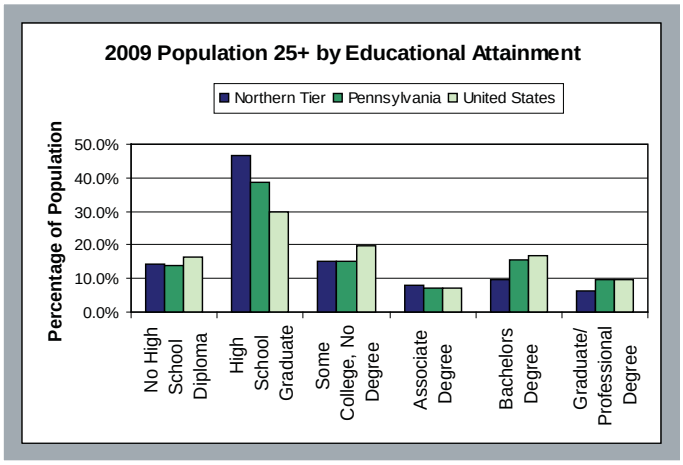
Figure 2.8: Average Household Size (2000-2014)



Education

In 2009, 10% of the population in the Northern Tier study area has a bachelors degree and 7% has a graduate degree. By way of comparison, approximately 16% of the population in the State of Pennsylvania and 17.5% of the population in the U.S. has a bachelor's degree and 10% of both the state and the country have a graduate degree. The educational attainment breakdown is shown in **Figure 2.9**. With the low level of higher education, such as a Bachelor's or Graduate/Professional degree, it is important to consider that higher educational attainment is often correlated with health and physical activity. Therefore, the NTRPDC may need to focus its efforts in educating and increasing participation in health and wellness programs to counterbalance the lower education attainment rate.

Figure 2.9: Educational Attainment for the 25+ Population (2009)



Health and Related Factors

Research shows that a person's physical activity level, which by extension is large determinant of their overall health, is determined by many factors, including education, income, number of household members, and gender. According to the Centers for Disease Control and Prevention in Physical Activity and Good Nutrition: Essential Elements to Prevent Chronic Diseases and Obesity, At a Glance 2009:

- More than 50% of U.S. adults do not get enough physical activity to provide health benefits
- 25% are not active at all in their leisure time
- Sufficient activity is less common among women than men
- Those with lower incomes and less education are less active
- About two-thirds of young people in grades 9–12 are not engaged in recommended levels of physical activity

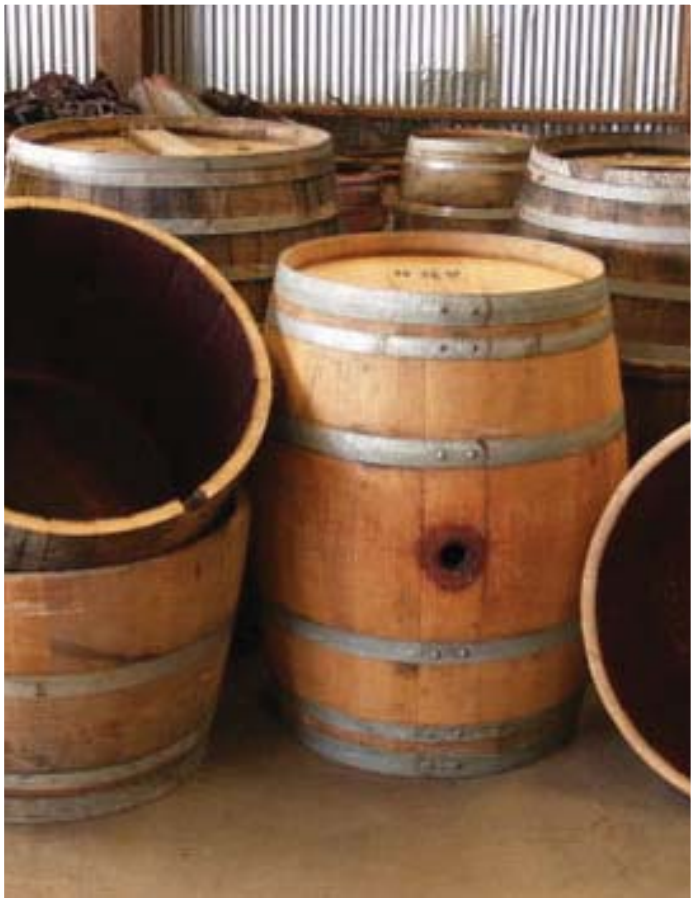
Research has also shown that the availability of opportunities to engage in physical activity is positively correlated with the amount of physical activity people engage in. Therefore, the availability of parks and recreation services are vital to increasing physical activity across all age sectors and plays a key role in reducing obesity rates. When evaluating the availability of these opportunities, one must consider their accessibility and proximity to residents in addition to their mere existence. Physical barriers, safety

concerns and distance to parks and facilities often prevent residents from using the facilities and programs. Research has found that larger sizes of parks and open spaces do not increase how often or how much people use them, but rather the distance to the park or open space is the greatest determining factor.

Key Findings

Overall, studies show that the population of the Northern Tier study area is declining and those that remain or plan to move to the area are primarily part of an aging population. Although these studies most likely do not account for the additional people moving to the area as part of the exploration of natural gas, a declining population generally tends to lead to a declining tax base which can lead to difficulties in obtaining funds for park and recreation improvements.

With the study area projected to have a higher percentage of its population over the age of 55 than both the rest of the state and country, it is important to consider the recreation trends and interests of older adults when planning for parks and recreation facilities. Data also show that the people that reside in this region generally have lower education levels. Therefore, lower education and income may have negative impacts on health, wellness and physical activity levels. With these findings in mind, it is important to consider recreation trends that will accommodate those over 55 and to reach out to the residents of the area in order to educate them about the benefits of recreation, and to make recreation opportunities easily accessible to all.



Employment Indicators

In order to understand the relationship and importance of outdoor recreation to the regional economy, it is necessary to understand where residents are employed, what they do, and what the outlook for these industries is on a regional basis. Since 12% or more of the residents of the four county area work outside of their own counties, the economies of each of the five counties in the Northern Tier are linked together. Although Bradford County previously completed its own recreation plan, it is included in this analysis because it accounts for 40% of the total employment in the Northern Tier, making it likely that many residents from other counties in the Northern Tier work in Bradford County.

Estimated and Projected Employment

Total employment in the five counties that comprise the Northern Tier was 64,460 in 2006, and is projected by Pennsylvania's Center for Workforce Information and Analysis to increase by 1,890 jobs (approximately 3%) by 2016, for a new total of 66,350 workers. The four largest employment sectors, as shown in **Table 2.1** are manufacturing (11,340 employees/17.6% of the total employment), health care and social assistance (14.7% of total employment), retail trade (11% of total employment), and educational services (8.6% of total employment).

The Workforce Investment Board projects employment growth for the Northern Tier between 2006 and 2016 in health care and social assistance (1,630 employees), accommodation and food services (200 employees), administrative, support, waste management (160 jobs), and professional, scientific, and technical services and management of companies (110 new jobs each). Losses are expected to occur in educational services (170 jobs), finance and insurance (130 jobs), two sub-sectors of the manufacturing sector: paper (120 jobs), and primary metals (90 jobs), and retail trade (80 jobs).

Table 2.1 - Industry Estimated Employment and Projections for Northern Tier Workforce Investment Area, 2006 to 2016

Industry	2006 Estimated Employment	2016 Projected Employment	Total Employment Change	Total Percent Change
Total Employment, All Jobs	64,460	66,350	1,890	2.9
Agriculture, Forestry, Fishing, Hunting	3,510	3,560	50	1.4
Mining	630	670	40	6.3
Utilities	***	***	***	***
Construction	1,880	1,930	50	2.7
Manufacturing	11,340	10,820	-80	-5.4
Wood Products	2,060	2,080	20	1.0
Paper	2,270	2,150	-120	-5.3
Primary Metal	1,860	1,770	-90	-4.8
Wholesale Trade	1,610	1,690	80	5.0
Retail Trade	6,810	6,730	-80	-1.2
Transportation and Warehousing	***	***	***	***
Information	660	620	-40	-6.1
Finance and Insurance	1,370	1,240	-130	-9.5
Real Estate and Rental and Leasing	270	270	0	0
Professional, Scientific, Technical Serv.	900	1,010	110	12.2
Mgmt. of Companies, Enterprises	440	550	110	25.0
Admin., Waste Mgmt., Remediation	1,000	1,160	160	16.0
Educational Services	5,600	5,430	-170	-3.0
Health Care and Social Assistance	9,500	11,130	1,630	17.2
Arts, Entertainment, and Recreation	520	590	70	13.5
Accommodation and Food Services	3,620	3,820	200	5.5
Other Services (Except Government)	2,760	2,760	0	0
Government	4,470	4,560	90	2.0

Source: Center for Workforce Information and Analysis, Pa Dept. of Labor and Industry, www.paworkstats.state.pa.us

Employment by County

Table 2.2 shows 2007 annual average employment in the Northern Tier by North American Industrial Classification System for each of the five counties in the Northern Tier. Bradford County is by far the largest employer, with about 40% of the total employment in the Northern Tier. The most important sectors in Bradford's economy are manufacturing, health care and social assistance, government, retail trade, and accommodation and food services.

Tioga County, the second largest employment center, accounts for about 23% of Northern Tier employment, and has employment concentrations in government, manufacturing, health care and social assistance, retail trade, as well as accommodation and food services. Wyoming County, with about 18% of total employment, has concentrations in government, health care and social assistance, retail trade, and transportation and warehousing. Susquehanna County and Sullivan, the smallest counties in the Northern Tier, both have concentrations of government, health care and social assistance, and retail trade jobs.

Table 2.2: Employment by County by Industry Sectors, 2007

	Employment				
NAICS Industry Sector	Bradford	Sullivan	Susquehanna	Tioga	Wyoming
Total Employment, All Jobs	21,768	1,633	8,977	12,806	9,664
Agric., Forestry, Fishing, Hunting	164	12	44	94	117
Mining	147	N/A	422	N/A	43
Utilities	128	N/A	N/A	118	N/A
Construction	530	78	441	285	571
Manufacturing	5,441	160	764	2,572	N/A
Wholesale Trade	518	31	252	378	376
Retail Trade	2,704	189	1,352	1,788	1,101
Transportation and Warehousing	581	13	155	358	637
Information	226	24	116	165	125
Finance and Insurance	598	40	235	322	200
Real Estate, Rental , Leasing	117	N/A	39	59	19
Profess., Scientific, Tech. Services	328	27	199	203	156
Management of Companies and Enterprises	N/A	N/A	75	N/A	N/A
Admin./ Support ,Waste Mgmt/Remediation Srvs	355	45	138	147	221
Educational Services	80	N/A	N/A	N/A	N/A
Health Care and Social Assistance	4,450	426	1,305	1,959	1,176
Arts, Entertainment, Recreation	99	41	270	80	59
Accommodation, Food Services	1,198	125	783	1,092	573
Other Services (Except Govern.)	516	36	287	314	230
Government	3,314	359	2,069	2,732	1,276

Source: Center for Workforce Information and Analysis, Pa Dept. of Labor and Industry,

Unemployment by County

Table 2.3 shows that the Northern Tier, at an average of 5.2% between 2005 and 2008, as a whole had a slightly higher annual unemployment rate than both the State (4.8%) and the nation (5.0%). Within the Region, Bradford and Susquehanna Counties generally have had the lowest unemployment rates, while Tioga has had the highest rates.

During 2009, however, the Northern Tier performed slightly better than the State (8.3% and 8.5% respectively), and substantially better than the United States' unemployment rate of 9.7%. The unemployment rate for Tioga County (9.4%) was significantly higher than any of the other counties in June 2009. Wyoming County had the second highest unemployment rate (8.9%), and Susquehanna had the lowest rate (7.5%) in June 2009.

Table 2.3 - Unemployment Rate by County and Region

	Annual				Monthly
	2005	2006	2007	2008	Jun-09
Bradford	5.0	4.7	4.7	5.4	8.0
Sullivan	5.9	5.2	4.6	5.8	8.2
Susquehanna	5.0	4.8	4.3	5.6	7.5
Tioga	5.8	5.4	5.4	6.2	9.4
Wyoming	5.2	5.1	5.2	6.1	8.9
Northern Tier	5.2	4.9	4.8	5.8	8.3
Pennsylvania	5.0	4.5	4.4	5.4	8.5
United States	5.1	4.6	4.6	5.8	9.7

Source: Center for Workforce Information and Analysis, PA Dept. of Labor and Industry, www.paworkstats.state.pa.us

Cluster Analysis

Operating under the Pennsylvania Department of Labor and Industry's Center for Workforce Development, regional Workforce Investment Boards have developed Industry Cluster Initiatives to identify key industry groupings or clusters that exist in seven multi-county regions and in the State as a whole. The State defines industry clusters as "A group of industries that are closely linked by common product markets, labor pools, similar technologies, supplier chains and/or other economic ties." Clusters can take on strategic importance because activities that benefit one group member will generally have positive spillover effects on other members of the cluster. One of the seven regions is the Northern Tier.

Cluster data will be used to identify occupations and training needed by key industries, forecast those industries and demand occupations, coordinate economic development with educational resources, and target investment to provide the greatest return for the region. Pennsylvania has identified 11 clusters that will be targeted Statewide, as shown in **Table 2.4**. Four of these clusters have also been targeted specifically for the Northern Tier, and account for about 30% of the region's employment.

Table 2.4 - Employment by Statewide Industry Clusters

	Northern Tier Region			
	Employment			
Industry Cluster	2009 Estimates	2014 Projections	Percent Change	Number Estb.
Agriculture & Food Production	7,871	7,802	-0.9%	114
Advanced Materials & Diversified Mfg.*	4,098	3,800	-7.3%	77
Bio-Medical	93	101	8.6%	10
Building & Construction*	8,397	9,111	8.5%	537
Business & Financial Services	7,254	7,962	9.8%	498
Education	2,217	2,297	3.6%	152
Energy	902	934	3.5%	52
Health Care*	8,480	9,106	7.4%	275
Information & Communication	868	891	2.6%	77
Logistics & Transportation	2,404	2,496	3.8%	132
Lumber, Wood & Paper*	4,369	4,643	6.3%	103
Total Industry Clusters	46,953	49,143	4.7%	2,027
Total Other Industry	35,271	45,855	30.0%	2,616
All Industries	82,224	94,998	15.5%	4,643

**Industry clusters targeted by the Northern Tier Workforce Investment Board*

Due to classification methods, the Education cluster does not include public education and the Health Care cluster may not include all public hospitals

Source: Economic Modeling Specialists, Incorporated Complete Employment - 2nd Quarter 2009 V. 2 Central Pennsylvania Workforce Development Corporation

Natural Gas and the Marcellus Shale

No analysis of employment and economic indicators in the Northern Tier would be complete without mention of the Marcellus Shale and drilling activities that have begun in several of the Northern Tier counties. The Marcellus Shale Education and Training Center has created a workforce projection model to estimate the direct workforce requirements for the natural gas industry. The numbers in **Table 2.5** are the "likely scenario" for what this industry's impact may be in the Northern Tier between 2009 and 2013.

Data in **Table 2.5** are based upon the assumption that the drilling companies will increase production substantially between now and 2013. The direct jobs are generally filled by experienced workers who come in from other regions and they last only as long as the companies continue exploration and drilling. They include occupations necessary to locate, engineer, clear, drill, fracture, and produce a well, and the majority of jobs necessary to construct pipelines and compressors. The production jobs, while they are much smaller in number, are longer term and compound as the number of wells increases.

Table 2.5 - Natural Gas Extraction Employment

	2009	2011	2013
Estimated direct full-time jobs	1723	2809	4375
Drilling Jobs	1698	NA	4150
Long term production jobs	25	NA	225

Source: Marcellus Shale Workforce Needs Assessment, by the Marcellus Shale Education & Training Center

Land Use and Development Patterns

Analysis

An important part of understanding a region's background is reviewing its land use and development patterns. The types and intensities of existing land uses are reflective of a region's economy, natural resources, history and its residents' values, as well as the role that parks, greenways and outdoor recreation play in each of these. In addition, land use patterns often display large-scale changes to an area. For example, in the Northern Tier, the growth of the oil and gas industry and decline of family farms changes where and how development has occurred and will occur in the future. Reviewing and understanding these patterns illustrates the goals and challenges of the region and guides the development of this Master Plan.

Sullivan County

Sullivan County is a rural county made up of open space, waterways, forests, game lands, farms and small villages. It has a very rugged terrain and approximately 1/3 of the County is state-owned parks and game lands. Existing development is very low-density residential with small local businesses.

Tioga County

Land use patterns in Tioga County are generally structured around transportation routes, waterways, agricultural land and forests. Agriculture and forest uses cover a vast majority of land with one-quarter of the county owned by state agencies. As small family-run farms become less viable as an industry, the amount of land used for agriculture has decreased. Dairy farmers have left and the abandoned farms are being operated by part-time farmers or have been subdivided for residential use. This loss of farms has stimulated growth from outside the county as urban dwellers have purchased them as vacation homes, resulting in more scattered villages and boroughs.

Most residential developments in Tioga County are located in existing villages where municipal services are already available. In addition, land previously used for vacation homes, adjacent to the state forest and game lands are now being converted to year-round dwellings. Small commercial uses are typically located in the central districts of the existing villages, with additional commercial developments located along the major transportation routes through the county (Routes 15 and 6), primarily located at interchanges to serve the traveling public. Residents of Tioga County typically go outside the county for larger commercial needs.

Wyoming County

The existing land use plan in Wyoming County is reflective of the natural and historical features of the county, including topography, waterways, existing infrastructure and settlement patterns. Based on the recommendations of this plan, a large portion of the county should remain undeveloped, specifically in the south where steep topography makes construction uneconomical. The majority of residential land uses are located around the existing villages and boroughs, but recent trends have shown an increase in development outside of these municipalities, along the existing road network where land is less costly and perceived as more desirable. The majority of potentially developable land in Wyoming County is located in the areas surrounding the five boroughs and major villages.

Susquehanna County

Susquehanna County is generally a rural, bedroom community of mostly single-family detached homes. Small boroughs, villages and townships are located among farms, fields and forests and are connected by a highway system that includes Interstate 81. Commercial developments (mainly retail and service industries) are minimal and are located primarily along major state routes. New development within Susquehanna County has occurred in a few specific locations: the southern half of the county where residents can easily commute to Scranton and seasonal homes are popular, in Great Bend and New Milford along I-81 interchanges, and finally areas within close proximity to Binghamton, NY and Montrose, PA.

Development trends in Susquehanna County over the past few decades include a large increase in large lot development and dispersal of new development. In 1974, the Pennsylvania Farmland and Forest Land Assessment Act (Act 319 Clean and Green Program) was enacted to help preserve farmland, forest land and open space by providing real estate tax reductions for development of lots that are 10 acres or greater. This has led to a significant decrease in the number of lots being platted at less than 10 acres across the county. In 1998 the Clean and Green statute was amended (Act 156) to allow additional uses to qualify. The flexibility of eligible uses within this act created an incentive for large lot developments that are not necessarily being used for any agricultural or open space purposes. Act 156 was later reversed in 2004.

Key Findings

As a region, the Northern Tier has very limited amounts of land available for development. Federal and state-owned lands and steep slopes cover over half of the region and provide the backdrop for the rural character of the Northern Tier, while limiting development to the land remaining. This small amount of potentially developable land limits the amount of land that can produce tax dollars and can create fragmented development, thereby necessitating that all available land is used with its highest and best use in mind. The reversal of Clean and Green Act 156 put an end to the financial incentives available for development of large lots in place of compact residential development. Future planning efforts can continue to guide land uses and provide for future economic vitality that coincides with the rural character of the region and preserves the recreation and natural resources available to residents and visitors.

3

COMMUNITY & STAKEHOLDER INPUT

COMMUNITY & STAKEHOLDER INPUT

Introduction

A key component to successful public engagement and consensus building is close interaction with the key stakeholders and the public when identifying the community's concerns, needs and priorities.

The Norris Design team embarked on an aggressive effort to obtain public input including two separate information gathering field trips. The first trip was scheduled the week of July 20, 2009 and consisted of four days of stakeholder and public meetings, with each day being designated to a different county. The general agenda for each day involved a staff interview followed by focus groups and stakeholder meetings with the day concluding at an open, evening public workshop. The trip was scheduled as follows:

- Monday, July 20, 2009 – Sullivan County
- Tuesday, July 21, 2009 – Tioga County
- Wednesday, July 22, 2009 – Wyoming County
- Thursday, July 23, 2009 – Susquehanna County

The second trip was scheduled the week of August 17, 2009 and was a more abbreviated version of the first trip. This trip was meant to include those stakeholders that may have not been able to attend the first round of meetings in July or was targeted towards new stakeholder groups that were identified during the first trip. The general agenda for each day involved an individual or small group interview and focus group and stakeholder meetings. The trip schedule was as follows:

- Tuesday, August 18, 2009 – Tioga and Sullivan Counties
- Wednesday, August 19, 2009 – Wyoming and Susquehanna Counties

Each meeting generally followed the same agenda which included facilitated, interactive sessions that were focused on sharing and obtaining information related to parks, greenways, open space and outdoor recreation facilities and opportunities for each specific county. Various team members were present at each meeting in order to facilitate the meeting and to record the findings. The interactive

sessions asked a series of questions that will be divided into the following general categories, for the ease of reporting:

- What are the strengths of your County?
- What are the challenges of your County?
- What are the opportunities in your County?
- What are the priorities for your County?

These general questions, as well as more detailed follow-up questions, resulted in a variety of opinions by focus groups, stakeholders and residents regarding a diverse range of topics including watersheds, state resources, natural resources, preservation and conservation, connectivity and greenways, marketing, outdoor recreation and events and activities. Following is a county by county summary of the community and stakeholder input obtained during the extensive public outreach efforts of the project.

Sullivan County

Strengths

Sullivan County is a small county in both land area and population and residents highly value and want to preserve the rural character of the area. The small town feel and minimal new development within the county contributes to the friendliness of the people, good hospitality, very low crime rate and dark skies. Residents feel that the school system is good and that there a many activities like camps and leagues for children to get involved in.

One of the most significant strengths of this county is the fact that 37% of total land area is owned by the State in Parks, Forests, Fish and Boat Commission and Game Lands. These lands support a great deal of the outdoor recreation and tourism that the county offers. Additional tourism draws include agricultural, genealogy and heritage tourism. With the large expanses of open lands within the county, outdoor recreation such as hunting and fishing are very popular. The county also benefits from a variety of festivals and events that residents and visitors alike can enjoy throughout the year.

Challenges

While there are benefits to a sparsely populated county, there are also challenges including the fact that approximately 32% of Sullivan County landowners are absentee, which for the purpose of this report is defined as those who have second homes in the county. The general population is declining as residents are aging and younger residents often move away to be near jobs and urban conveniences such as regional shopping, transportation and technology (i.e. - access to cell phone service). As an effect of the limited services and the sparse population, the county's tax base is low. Long-time residents are also challenged by a low average median income, while the cost of living is increasing due to retirees moving in to area. The county is also divided politically into areas, which are generally focused around where commercial services are provided. Participants also stated that there is an overall resistance to change by many residents.

Although the amount of open lands and recreation opportunities are vast in Sullivan County, there is a lack of lodging for overnight stays and therefore, tourism is sporadic and focused around short-term day visitors. Therefore, the County is not able to collect the economic benefits of long-term visitors through commercial spending (i.e. restaurants, lodging, retail). The state lands also put a burden on resources, especially for the maintenance of infrastructure and amenities which need consistent re-investment.

There are several challenges that are quite impactful from a visual standpoint. However, if planned well and coordinated on a regional level, these challenges could prove to be a great opportunity for employment, business and tax generation. These challenges include natural gas exploration, wind farms and wind turbines. The conflict arises as a result of the impacts that these land uses have on the beautiful landscape in Sullivan County. Natural gas exploration will scar the landscape with well completion operations and transmission line easements being scattered throughout the forest and farmlands of the county. Additionally, wind farms, which are typically located along prominent ridgelines, will be seen from miles away.

Opportunities and Priorities

The stakeholders and community in Sullivan County feel that there is a great opportunity to capture more of today's "drive-through" visitors. Many residents want more tourism and overnight lodging stays. They want tourists to shop, dine and stay in the county instead of bringing in their food, camping several nights and leaving. Participants felt that in order to achieve this goal, additional lodging facilities are needed, efforts to create more 4-season amenities and activities should be pursued and a comprehensive marketing plan should be developed to attract visitors and to promote activities and events within the county. Several of the opportunities in the county relate to increasing awareness of the natural and built amenities including: the wide-open spaces and unspoiled lands, Rail-Trail connections and the preservation and protection of the watersheds, view sheds and vistas.

Tioga County

Strengths

In Tioga County, 25% of the entire county is encompassed within State Parks, Forests and Game Lands, which include widely used trails and roads. There are numerous scenic and recreational rivers, lakes and dams in this rural and quiet county. Residents describe the area as "Canyon Country." Tioga County is home to the Pine Creek Gorge, commonly referred to as the Grand Canyon of Pennsylvania, which is surrounded by approximately 140,000 acres of State Forest and Park Land. Activities such as hunting, fishing, outdoor sports, birding and wildlife viewing are abundant.

The county boasts a small town atmosphere, with the convenience of proximity to highway access for visitors to get there easily, but not so easily that it is overcrowded. The county provides a perfect balance of wilderness, family recreation and is relatively safe and crime free.

This is also a place where one can come for arts and culture, numerous and diverse festivals and events, active outdoors clubs, fresh produce at the farmer's markets or a Civil War and Revolutionary War reenactment. One can also find absolute solitude with dark skies, although light pollution is beginning to become more significant. Many photographers are drawn here to capture the pristine beauty of the area.

Challenges

Much like in Sullivan County, one of the challenges mentioned by residents and stakeholders was the lack of urban amenities. With that said, they would like to strive for a balance between providing these amenities and maintaining the pristine, rural, small town feeling of today. In order to do this, the County residents believe they need to utilize good land use planning practices and policies and make politically tough land use decisions when required.

From a tourism standpoint, Tioga County generally has good lodging capacity, but during peak times it can be difficult for visitors to find rooms. The Tioga County Visitor's Bureau has done a good job of promoting the local activities and amenities available, which occasionally causes traffic flow to become difficult as a result of tourism traffic, bus tours and other events. Maintenance of amenities is also a burden and the overall infrastructure needs to be re-invested in including new and safe bike lanes and routes

along roads and highways, better signage and maps to locate existing recreation amenities, and improved access sites for trails as they are often very difficult to find for visitors and new residents. It was also noted that the county is experiencing chronic health and obesity issues and that more needs to be done to keep residents active, healthy and engaged.

Much like what was reported in Sullivan County, the Tioga County residents and stakeholders said that the surrounding counties compete with each other for visitors. Tioga County is a county on the fringe of two areas including the PA Wilds region and the Northern Tier / Upstate PA region. Tioga is also divided politically based on geologic amenities particularly the Canyon area. Other challenges are similar to Sullivan County including both natural gas exploration and wind farm development. However, unlike Sullivan County, Tioga County already has begun to experience active natural gas and wind farm development sites, which has had visual effects on the landscape.

Opportunities and Priorities

Much of the participant's comments in regard to opportunities and priorities related to continuing to pursue efforts to connect communities with greenways, including developing more trail connections using links such as Rail-Trail beds and existing corridors. Other opportunities include developing a comprehensive way finding and signage program to be designed in a low-key, tasteful manner, as well as marketing amenities that currently exist and working with local residents to increase stewardship for the environment.

Wyoming County

Strengths

Wyoming County is the most urbanized of the four counties, with a population of approximately 28,000 people who primarily reside in the east side of the county. The county is a bedroom community to Scranton and Wilkes-Barre, where the area's larger companies, such as Proctor and Gamble employ approximately 2,000 people. There are no Interstates in this small county but, with the major transportation routes of 6, 309 and 29, people tend to pass right through. The County consists of small towns with small town pride resulting in excellent community stewardship. Towns are clean and buildings are well cared for. Many municipalities are experiencing new residents, and as a result have created zoning.

Despite being the only county that does not have a State Park, there are still many recreation opportunities provided throughout the county, such as those along the Iroquois Trail, Trolley Trail, quad trails, water trails, and a future county Rail-Trail. Additionally, there are State Game Lands, State-owned lakes, waterfalls, local parks, camps, conservancies and active watershed groups that provide a variety of active outdoor recreation including hunting, fishing and hiking, bird watching, kayaking, canoeing and golfing. Wyoming County also has a variety of arts and culture activities such as local events, festivals, art and cultural draws, agricultural heritage and wineries and wine tastings. Additional strengths include the area's many historical buildings, historical sites, bridges and tunnels, scenic roads including Highway 6, active railroads, historical tours and genealogy.

Challenges

Due to the proximity of Wyoming County to the major metropolitan areas of Scranton and Wilkes-Barre, approximately half of the population works outside of the county. Possibly, as a result of this fact, there is a reluctance to commit by some of the boroughs to provide parks and recreation facilities, as there are limited financial resources.

Many governmental entities function on a part-time basis, which leads to a lack of capacity. The County does tend to see a strong volunteer effort early in a project or task, but over time interest often diminishes. This county will also be faced with the impacts of natural gas exploration and wind farms.

This county struggles as a result of containing few publicly owned lands, which is a barrier for providing access to recreation amenities and connectivity. Streams and rivers are a great asset and greatly enhance the area; however, access and parking for these amenities is limited again due to the adjacency to private land. Another concern along streams and rivers is the excessive erosion that occurs during storm events, which has resulted in a recent effort to increase the riparian buffers.

One of the major challenges in Wyoming County is that the region as a whole suffers from not having a consistent identity. The area is known as the Endless Mountains, the Northern Tier and more recently Upstate PA. A consistent marketing message would go a long way to promote the offerings in the county. However, much like Sullivan and Tioga Counties at peak times, Wyoming County experiences a lack of lodging for tourists and therefore is not able to benefit from the room tax, which is used to fund the tourism bureau. Participants stated that the county needs places to stay that include both hotels and campsites.

Opportunities and Priorities

There are some opportunities to acquire private lands to expand the dedicated open space and recreational

resources in Wyoming County. One option is the 2,000-acre area surrounding Miller Mountain. A comprehensive marketing effort would also greatly benefit the area so the county can “get the word out” and promote existing recreation destinations. The stakeholder and community groups felt that more tourism would revitalize many of the downtowns and that strategically partnering with neighboring counties may provide opportunities to lure in new businesses to benefit the region. There may also be opportunities to partner with local colleges to promote environmental education and stewardship programs.

Susquehanna County

Strengths

Susquehanna County is abundant with recreation amenities and activities. As a result, this area is a popular retirement destination and is attractive to many second homeowners that reside in the county during the summer and fall. A few of the county highlights include Salt

Springs State Park, State Game Lands, preserve lands, the Susquehanna River, old growth forests and wildlife sanctuaries, conservancies, the Starrucca Viaduct, blue stone quarries, Old Mill Village and Elk Mountain Ski Resort. Popular outdoor recreation activities include the use of Rail-Trails, golfing, hunting and fishing. Additionally, the area is fortunate to have abundant open space, natural pools, lakes and wetlands, which are home to fragile species including both plants and animals.
Susquehanna County also has rich historical assets, including the Freedom Trail which is a link of the Underground Railroad from Milford to Owego, the Aaronic Priesthood Site which is Joseph Smith's wife's family home and the Montrose Historic District. Additionally, there is a scenic driving tour from the Endless Mountains Heritage Tour and PA Scenic Byway – Route 92. The County is proud of its farmland preservation, dark skies and dark roads.

Challenges

Susquehanna County is similar to Wyoming County in that approximately half of the people in the county commute to work, with one-quarter working in Binghamton and the other quarter working in Scranton. As a result, it is the perception of participants that this results in these residents having less ownership in county affairs. Furthermore, Interstate 81 divides the county politically into west and east, with Montrose and Forest City acting as major hubs. There is a sentiment that Forest City is really part of Lackawanna County.

Through these meetings and discussions, it was identified that there are three distinct categories of people in Susquehanna County: Locals, New Residents and Visitors and each group has different needs. In addition, participants felt that due to the rural character of the region, some residents, especially senior citizens and farmers, are very isolated. The county is challenged by a lack of urban conveniences such as close access to grocery stores and retail, as well as inconsistent communication through cell phone, radio and newspapers because of service areas and geographical barriers such as hills and valleys.

The county does not have zoning and as a result, over time many of the larger land ownerships have been subdivided into smaller parcels, which makes land preservation more difficult. There is also limited access to private lands, public fishing and swimming locations. There is a need for public facilities including parking, rest and comfort stops and safe routes for walking. Similar to Wyoming County, flooding along rivers and stream has slowly led to a loss of trails due to erosion. Overall, the county is active with natural gas exploration activities and is facing the visual and environmental impacts of these activities.

Opportunities and Priorities

The people of Susquehanna County are a huge asset and resource, as they have a history of strong communication and volunteerism. There is a desire to publicize existing recreation destination and amenities, to provide more signage, to increase access to public lands, as well as to increase education, awareness and support for the region. There are also opportunities to expand amenities, such as snowmobiling and ATV trails, as well as to preserve scenic vistas and farmland.

Common Themes and Key Findings

Strengths

The common strengths amongst Sullivan, Tioga, Wyoming and Susquehanna Counties include their various and vast natural resources. Some of these natural resources include scenic vistas, State Parks (in three of the four counties), State Forests, Game Lands, Fish and Boat Commission Lands, streams, rivers and watersheds. There are also extensive trail systems that cannot be overlooked for their benefit to provide a wide variety of outdoor recreation activities.

Challenges

The challenges for this region include the growing development of natural gas exploration and wind farms, as they may create long-term impacts on many of the region's natural resources. Community connectivity is also hindered for a variety of reasons some of which include the area's steep terrain, private land ownership and geographic barriers. A major concern is the lack of lodging to support tourism efforts. There are also concerns with the significant decline in State-level resources including maintenance of facilities, providing proper staffing levels and budgeting for infrastructure improvements.

A general theme among all of the counties is that although there may be a variety of off-road trail opportunities, there is inadequate infrastructure to support road cycling. This is a result of unsafe conditions along road shoulders, which are typically cracked, narrow and falling apart. This leads to user conflicts between automobiles and bicyclists, as well as between motorized and non-motorized users on trails within State Game Lands, Forests and Parks.

Opportunities and Priorities

The inconsistent promotion of the region's recreation destinations and outdoor assets greatly impacts the potential for users including long time residents, new residents and visitors to take advantage of the area's existing amenities. There is a strong need for both a comprehensive marketing plan in order to establish a consistent brand and identity for the region, to streamline communication and to reduce the overall costs to each individual entity. In addition to marketing, a comprehensive wayfinding and signage program should be established that identifies the major destinations, parks, greenways and recreation amenities located in the Northern Tier.

Additionally, there are great opportunities to support more Agritourism in this region, as well as working to preserve the area's beautiful scenic vistas. Strong community connections should be emphasized including opportunities such as greenways, blueways and scenic country roads. These connections will also help support the development of new and/or improved recreation facilities that will further support the region's growth as a recreation destination.

4

COMMUNITY SURVEY FINDINGS

COMMUNITY SURVEY FINDINGS

Introduction

In an effort to improve services and to guide the future development of parks, open space, greenway and outdoor recreation facilities, the NTRPDC, in collaboration with Tioga, Sullivan, Wyoming and Susquehanna Counties, conducted a random, statistically-valid survey to understand community needs, perceptions and desires. This data is intended to guide the development of this plan by identifying interest and participation in outdoor recreation activities, as well as priorities for renovation of existing facilities, development of new regional parks and greenways, open space conservation and natural resource management for the next ten years.

Methodology

Data was collected from Northern Tier residents through a mail survey sent to random households in Sullivan, Susquehanna, Tioga and Wyoming counties. The mail survey was distributed in two mailings on September 9 and September 23, 2009 to a total of 5,000 homes. The number of surveys sent to each county was based on each county's population to the total of the four counties, although addresses were chosen at random. For a population the size of Northern Tier, 116,636, a sample of at least 245 surveys is needed to make estimates with a sampling error of no more than ±5%, at the 95% confidence level (Salant and Dillman, How to Conduct Your Own Survey). A very strong response was received and a total of 558 surveys were returned, with 409 of the returned surveys considered complete and included in the survey results. This response rate accounts for a more varied population, assuming nothing of the characteristics of the region. Surveys were counted from both mailing groups to improve the chances of collecting responses from all four counties.

The 34-question survey contained questions assessing the types of recreation in which citizens are currently participating and those which citizens show a future interest of participation. Questions also assessed resident's perceptions of existing facilities, the need for new or improved

facilities, marketing, land management and possible options for funding sources to support improvements. Finally, the survey addressed the region's demographics in order to better understand the responses of various demographic groups of respondents.

The following charts and graphs illustrate some of the survey results. Also included are selected comments from respondents. To see all survey results and a copy of the survey, refer to the Appendix.

Survey Results and Analysis

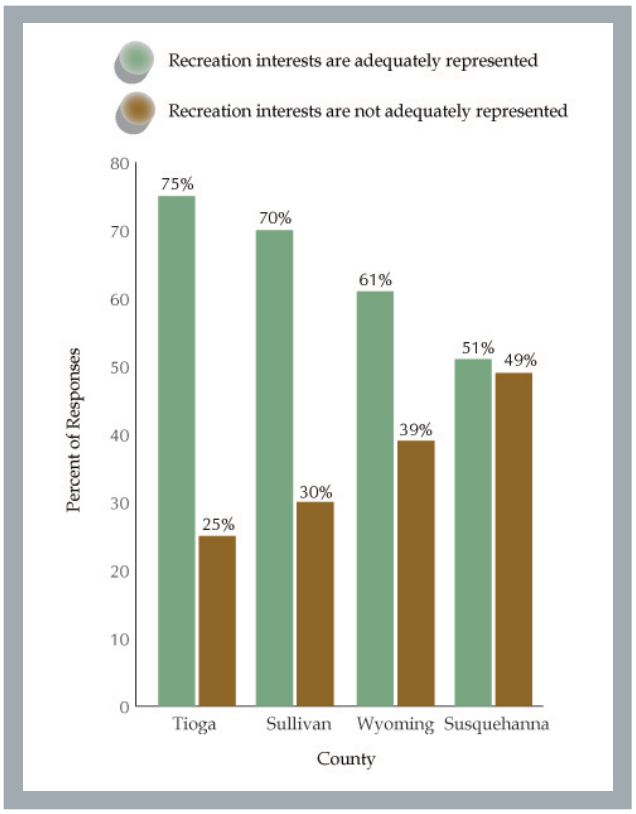
Benefits of Recreation

Respondents were asked questions that reflect if and how they feel that recreation opportunities benefit their lives. The majority (92%) of respondents feel that existing recreation areas do contribute to the health, quality of life and sense of community of the region. Only 8% of respondents disagreed **(see Appendix)**.

Of the total responses, 67% feel that their recreation needs are adequately represented in the region. When compared to the first question a connection can be found between how residents feel about the benefits of existing facilities and whether or not they feel their recreation interests are represented in the four-county region. Of the 8% who feel that existing recreation areas do not contribute to health, quality of life and sense of community, only 30% feel that their recreation interests are represented. In comparison, of the 92% that feel that existing recreation areas do contribute to health, quality of life and sense of community, 65% feel that their recreation interests are represented,.

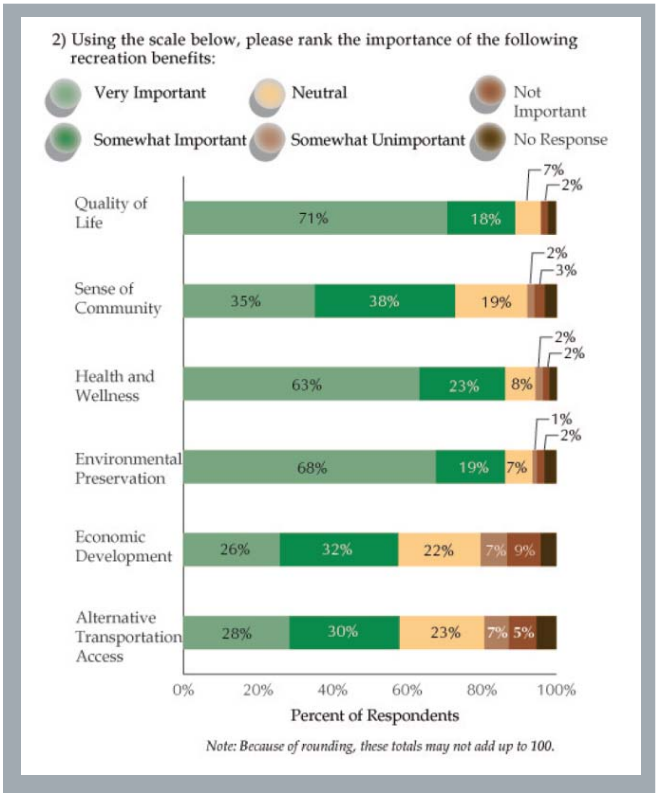
Of significance, residents from Susquehanna County are least likely to feel that their recreation interests are being met, followed by Wyoming and Sullivan counties. Residents from Tioga County are most likely to feel that their recreation interests are being met. **See Figure 4.1.**

Figure 4.1: Satisfaction – Recreation Interests are Being Met



Several notable benefits of recreation include quality of life, sense of community, health and wellness, environmental preservation, economic development and access to alternative transportation, such as trails, greenways and blueways. Respondents were asked to rate the importance of each of these benefits. As a whole, responses show that these benefits are at least somewhat important to most people. Respondents feel strongly (71%) that quality of life is a very important benefit of recreation. "Very important" rankings were also common for health and wellness (63%) and environmental preservation (68%) **(Figure 4.2)**.

Figure 4.2: Importance of Recreation Benefits



"Neutral," "somewhat unimportant" and "not important" responses were common answers among alternative transportation (37%) and economic development (38%) compared to other benefits. Many respondents may not have experienced the connection between recreation and economic development or they are using their trails strictly for recreation rather than a means of alternative transportation. A moderate number of people were neutral toward the importance of recreation to a sense of community. This could reflect the rural nature of the region, where small communities predominate, many without municipal parks, sports or other programs that often generate a common "community" feeling.

Analysis

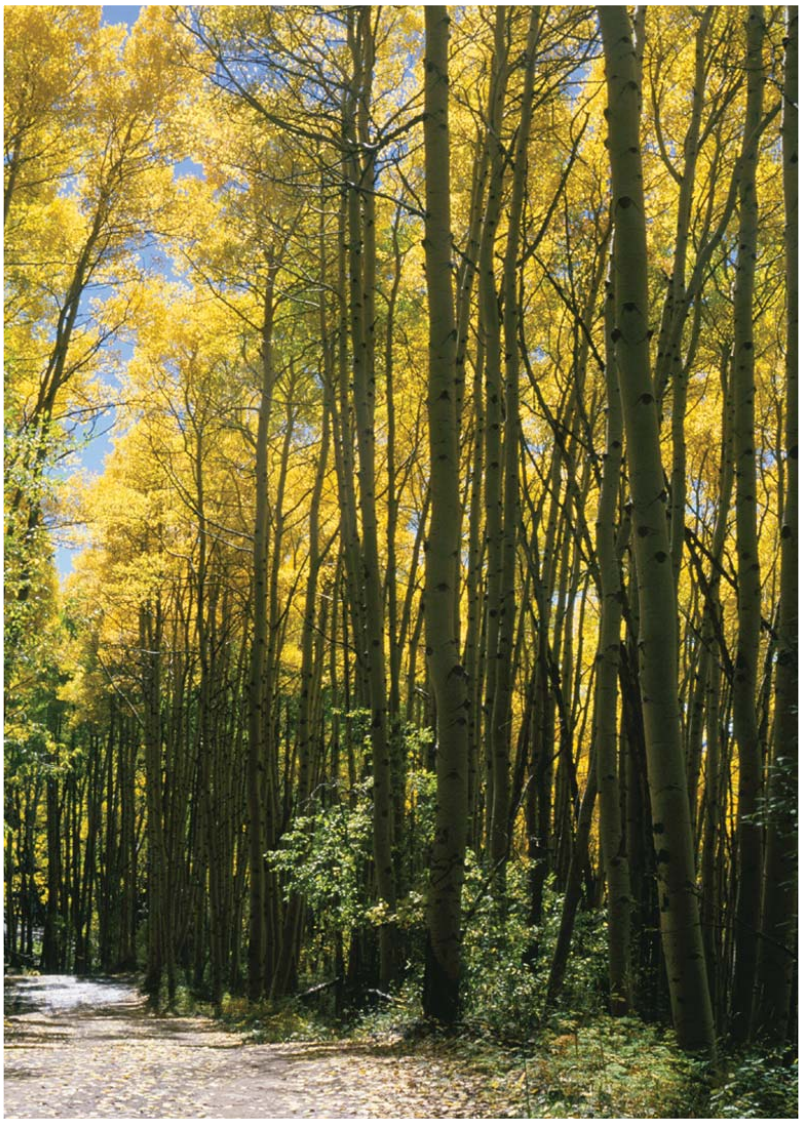
From this information we can gather that most residents whose recreation needs are being met also see existing recreation areas as being beneficial. We can also gather that residents of Susquehanna and Wyoming Counties are least satisfied with their recreation opportunities. Increasing recreation opportunities in these areas may increase positive sentiments and support toward growing parks and open space. In Tioga and Sullivan counties, where citizens are more satisfied with their recreation opportunities, planning and management efforts may be best served in preserving and improving existing facilities.

Recreation Amenities

When asked what new recreation amenities respondents would like to see in the four-county region, nature trails was the most popular answer **(see Appendix)**. The top five responses include:

1. Nature trails (70%)
2. Scenic vista (53%)
3. Nature centers (50%)
4. Fishing (43%)
5. Dedicated open space (43%)

This result is consistent with the type of activities that respondents engage in most, where walking and hiking



were most popular; in this case and in line with national trends, the desire for new nature trails is not surprising. Many respondents in the region may be fond of walking and hiking because of the availability of existing trails. The strong response to wanting more nature trails may point to a shortage of convenient access to the facilities.

The second most desired amenity is scenic vistas. Consequently, visiting areas with scenic overlooks is a common activity found in the survey results. Respondents seem to value the natural beauty of the region and desire to showcase it with similar experiences to the Grand Canyon of Pennsylvania and Mt. Pisgah, two sites frequently visited by residents of the Northern Tier.

A variety of other amenities that were not in the list of choices were written in. Of the write in responses, ATV trails was the most desired facility for development. Many references were made to ATV riding throughout the survey, pointing toward a common recreation trend in the Northern Tier region. All other write-in comments were repeated less frequently, but the next most desired amenities are equestrian trails/facilities and golf courses.

Recreation Culture

Respondents were asked several questions that provide insight into the region's recreational culture (i.e. - the type and frequency of activities, the frequency of activity, the relationship between people who recreate together and the places people visit) in order to paint a picture of local residents' connection to recreation. Responses to these questions provide data to support program and facility development that would best serve residents' natural tendencies for recreation pursuits.

While 58% of respondents visit recreation areas a few times a year, 23% of respondents visit parks and recreation areas monthly, **(see Appendix)**. Only nine respondents did not answer this question, indicating that an overwhelming majority of people engage in one or more outdoor recreation pursuits. Data also indicates that 75% of respondents visit parks and recreation areas with at least one member of their family, be it a spouse, child or other relative. Fifteen percent of respondents visit parks with friends and 10% go alone **(see Appendix)**.

Responses indicate that 36% of the 35-44 age group visit parks at least once a week, which is the highest percentage of all age groups. All other age groups visit less frequently. A comparison of all respondents in the "older adult" (55+) age group shows the frequency of visits to be fairly equal. A small percentage (5%) of older adults visit parks a few times a year over the average response, and 5% less during the week than average, which indicates that older adults are just as active as the rest of the community.

From the 93 activities that people listed as their form of recreation in local parks, the following ten were most popular:

1. Hiking/Walking (276 responses)
2. Fishing (178)
3. Hunting (147)
4. Camping (96)
5. Biking (84)
6. Boating (60)
7. Picnicking/cook-outs (58)
8. Swimming (53)
9. ATV riding (33)
10. Skiing (32)

Analysis

Again, these popular activities correlate with the most desired new recreation amenities mentioned earlier. Nature trails, scenic vistas and nature centers promote hiking and walking activity. Fishing, boating and swimming need clean water, stocked lakes and streams to enjoy fully. Camping and picnicking can be enjoyed because of dedicated open space is set aside for those activities.

The full list of respondents' recreational activities is included in the **Appendix**.

Popular Parks and Recreation Areas

One-hundred thirty (130) different recreation areas in the four-county area were listed where respondents were asked to write-in three parks/recreation areas that they or their family members visit most often. Some respondents were specific about the areas they visit most, such as "East rim of the PA Grand Canyon," while others were general listing "State game lands" or "Tioga State Forest." Within the four counties surveyed, Hills Creek State Park was listed most often, followed by Ives Run.

When regional references are considered, there was a strong response to the area and facilities associated with the Grand Canyon of Pennsylvania. Ninety-five (95) references were made to areas and facilities of Colton Point State Park, the PA Grand Canyon, Leonard Harrison State Park or Pine Creek as most visited recreation areas. These sites are adjacent to one another in southwest Tioga County. From the responses, Tioga County appears to be the most popular for recreation pursuits, although the highest number of returned surveys also came from residents of Tioga County.

Many parks that respondents listed as visiting most often are outside of Sullivan, Susquehanna, Tioga and Wyoming Counties. Of these, Lackawanna State Park was the most popular response. One-hundred percent (100%) of those who listed Lackawanna State Park as a most visited park reside in Susquehanna and Wyoming Counties, which is likely a reflection of the closer proximity to Lackawanna State Park than other counties in the survey.

The survey also asked, specifically, where residents recreate outside of the four counties. Again, Lackawanna State Park is the most popular answer. Recreation areas in New York State are also common answers.

Analysis

These results suggest that residents are travelling to the nearest facilities for their recreation needs, whether they are fishing, hiking, or just enjoying nature. Without more information, one cannot assume any other reason why residents are attracted to the areas they listed. For a complete list of parks that respondents visit, refer to the **Appendix**.

Support Facilities

The survey asked participants questions regarding the condition and adequacy of recreation support facilities, such as restrooms, signs, roads and parking lots. Support facilities can influence a person's recreation experience and may persuade people to continually visit parks or to try new forms of recreation. For instance, directional and informational signs may help local residents discover recreation areas they are not aware of, in addition to increasing safety (i.e. - reducing a person's chance of getting lost), therefore maximizing a user's total recreation experience. Designed properly, support facilities can add to the enjoyment of a park without disturbing the degree of nature one expects to find in wilderness areas, or they can enhance areas that are intended for heavier use by the public.

Sixty-one (61%) percent of respondents felt that recreation support facilities in state and locally run areas were adequate, while 39% felt that they were not adequate **(see Appendix**). Several respondents commented on this question, noting that some facilities are fine, but others are not.

People answered that they would most like to see additional restrooms (24%) and trails (22%) in recreation areas, followed closely by water access points (16%) **(see Appendix)**. When asked to write-in other needed support facilities, again, although more of a primary facility, ATV trails was repeated most often and bike trails, ADA access and camping areas and a few other support facilities received a few write-in votes.

Concerning support facilities, one question specifically asked about the adequacy of directional and informational signage. Results were similar to the response about general support facilities where 68% said yes, signage is adequate, and 32% say it is inadequate **(see Appendix).** Many people responded "all" when asked which areas need better signage, but Hills Creek, Lackawanna and Salt Springs State Parks were listed most frequently. For a complete list of the parks needing improved signage refer to the **Appendix**.

Marketing

Respondents were asked how they would like to be informed about recreation opportunities in the area and what they felt was the best method to promote the four-county region as a destination. Websites (20%), guidebooks (17%) and print media (17%) are the most preferred methods of receiving information. In contrast to how residents prefer to be informed, respondents feel that radio/TV advertising (27%) is the best method to promote the region as a destination. Print media (23%) is believed to be the second best method of marketing. Advertising through online social networks is the least favorable method of promotion with only 3% of responses supporting it, which may correlate with the prominence of older adults, as illustrated in the Demographics Section of the report. However, this does not reflect the national trends seen among youth and young adults. See **Figures 4.3a and 4.3b**.

Figure 4.3a: Desired Communication Mediums for Residents

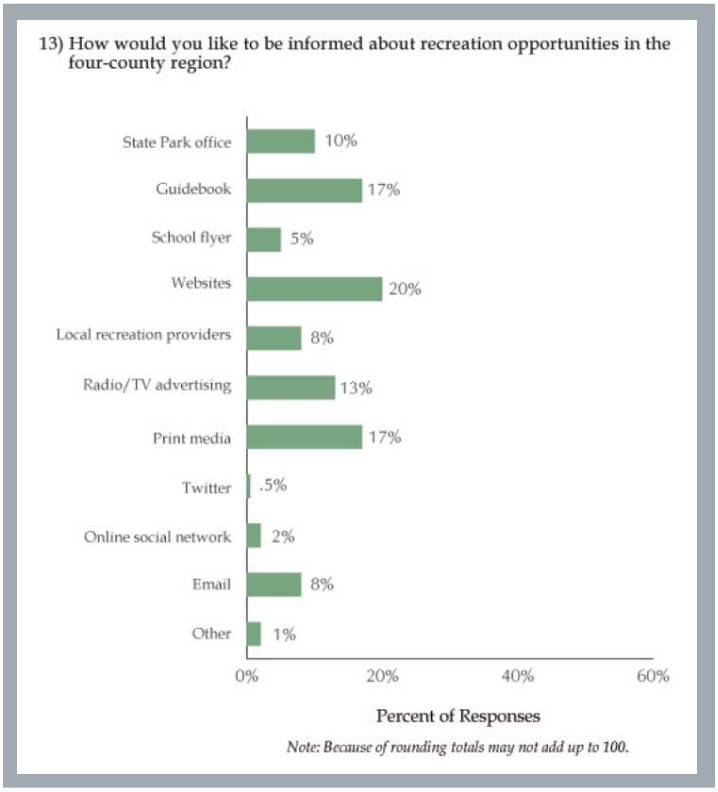
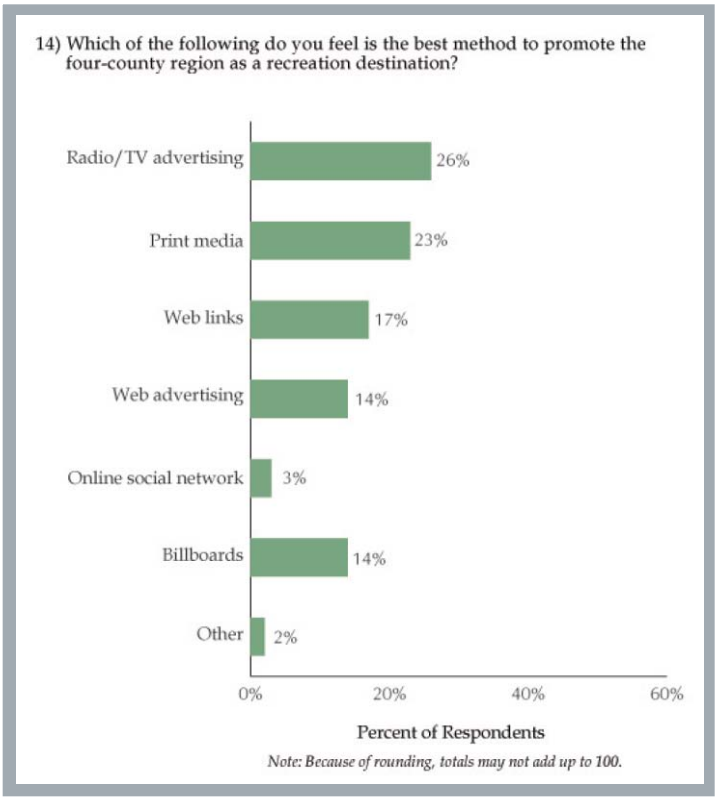


Figure 4.3b: Recommended Marketing Mediums



Results also show that the identity or name that people refer to the region as depends on the area where that person resides. The most common answer, Endless Mountains, received 44% of replies, while Northern Tier was second with 31%. Residents of Sullivan, Wyoming and Susquehanna Counties refer to the region as Endless Mountains, whereas Tioga County residents are more likely to refer to the region as Northern Tier or Upstate PA **(see Appendix)**.

Support for Recreation Expansion

Seventy percent (70%) of respondents would support the expansion of recreation activities to attract tourism and revenue generation for the four-county region **(see Appendix)**. Those who would support recreation expansion listed activities that they would support. The following list is the top ten activities in order from the most number of write-ins to the least:

1. Hiking/Walking activities and trails
2. Fishing
3. Bicycling/bike trails
4. Boating
5. Camping
6. Hunting
7. Skiing
8. ATV recreation/trails
9. Snowmobiling
10. Nature trails

Water-Based Recreation Activities

Several questions on the survey inquired about residents' interactions with and perceptions of local waterways. The most popular activity on local streams and rivers among respondents is wildlife observation (24%), followed by sport fishing (20%), then swimming (16%). Seventy-six percent (76%) of respondents feel that there is adequate access to local waterways, while 24% feel that access is inadequate **(see Appendix)**. Respondents were then asked to list where additional access points are needed. In general, the Susquehanna River, upper Pine Creek and Tioga River were listed most frequently (for all points noted on the survey, refer to the **Appendix**). The following list includes specific areas along these waterways in need of access points.

- Susquehanna River, between Ulster and Tunkhannock
- Susquehanna River, North End
- Susquehanna, to gain access to both sides of dam
- Susquehanna, Bowman's Creek Area
- Tioga River, Tioga to NY State

Nearly half of all responses about opinions of the water quality of local streams and rivers are positive; 49% feel that local water quality is good, and while only 12% feel that water quality is bad, 39% are unsure **(see Appendix)**.

When asked which specific parks/recreation areas are most in need of preservation, several were listed more than once. The following parks were listed 10 or more times, suggesting that preservation efforts in these areas will be well received by the public. For a complete list, refer to the **Appendix**.

- Hills Creek State Park (20)
- Salt Spring State Park (14)
- Ives Run (13)
- Colton Point State Park (11)
- Leonard Harrison State Park (10)
- Grand Canyon of PA (10)
- Ricketts Glen State Park (10)

Many people chose to further comment on this question, offering insight into the condition of some parks. Many comments speak to the need for clean-up along waterways and concerns about pollution. Although all comments can be found in the **Appendix**, the following are a sample from those in favor of preservation and those who are not.

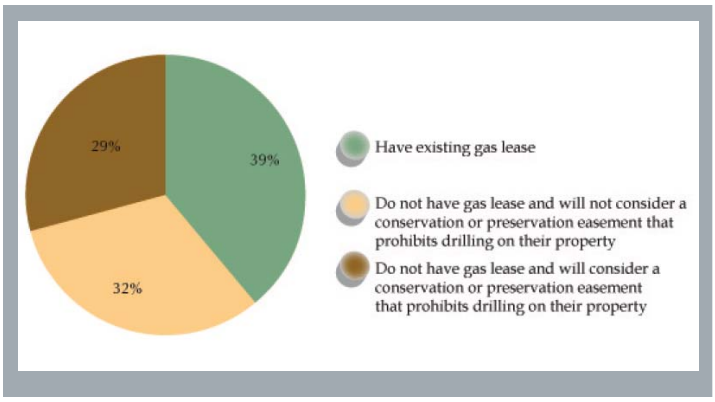
"All are in need of preservation due to onslaught of corporate drilling venues. This adversely can and likely will affect water quality."
"Any park or recreation area located on a river, stream, or pond."
"Salt Spring State Park needs cleared up badly after '06 flood."
"They all need conservation, not so much preservation."

Potential for Additional Open Space and Recreation Resources

Of many potential ways to expand recreation opportunities and preserve green space, the survey asked if participants were receptive to two methods: creating conservation or preservation easements on their property and allowing public access to their property.

In response to the question, "would you consider a conservation or preservation easement that prohibits drilling on your property [if you do not have a natural gas lease on your property]", 47% said yes, they would consider conservation or preservation easements, while 53% would not consider them. This amounts to 29% of the total respondents who have the ability to put an easement on their property and are willing to consider one. Thirty–nine percent (39%) of respondents have an existing gas lease on their property and 32% do not have a gas lease, but will not consider an easement that prohibits drilling on their property **(Figure 4.4)**.

Figure 4.4: Potential for Additional Open Space and Recreation Resources



In response to the question, would you be willing to allow public access on your private property for recreation opportunities, the majority (83%) answered no **(see Appendix)**. Of the 17% who would allow recreation on their private property, walking/hiking, hunting, fishing and ATV/snowmobiling were the favored activities, respectively. While some residents already allow recreation on their land with permission, many commented that the size of their property is prohibitive to recreation opportunities. Others commented about liability concerns, implying that the potential for injury and lawsuits is prohibitive to recreation on private land.

Potential Funding and Local Industry Influence

Respondents were asked several questions to gauge responses to potential funding opportunities and their views toward management of recreation areas. Many people chose to write in additional comments on these questions. However, it is important to note that these questions were less likely to be answered than others on the survey.

The results show that residents are 16% more likely to support drilling in state-owned recreation areas if a portion of the mineral royalties were retained to develop or enhance local recreation facilities. Some reinforced their answer with caveats, such as:

"But all the funds, not a small portion. Keep the money in the area it came from - 100%"
"With minimal disturbance of the land."
"Maybe as long as it doesn't impact the environment."
"Toss up: environmental impacts."
"However, if you drill, all royalties should go for preservation efforts."
"100%" [keep local]
"It will mess with water supply which would negate the idea of safe place for wildlife."

When asked if they believe that lighting controls or dark sky preservation is needed with respect to natural gas drilling sites, 72% said yes. When asked if they would support changes to land use regulation, 81% responded yes, if the changes resulted in more recreation opportunities. Eighty-seven percent (87%) responded yes, if it resulted in preservation of open space.

Very few recreation areas in the four-county region are operated by local, non-state, non-federal organizations. Sixty percent (60%) of responses favor the development of more locally-provided recreation programs and facilities

that are operated by a regional recreation authority, as a means to reduce the dependence on state recreation facilities. Of the total number of responses, 33% support both a regional recreation authority and a dedicated fee or tax to start or maintain the authority. Forty percent (40%) of residents do not support new non-state recreation through a regional recreation authority **(Figure 4.5)**.

Figure 4.5: Support for a Regional Recreation Authority and Dedicated Funding Source

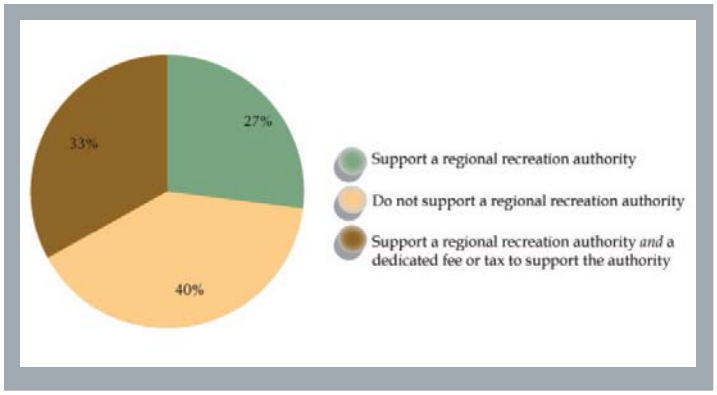
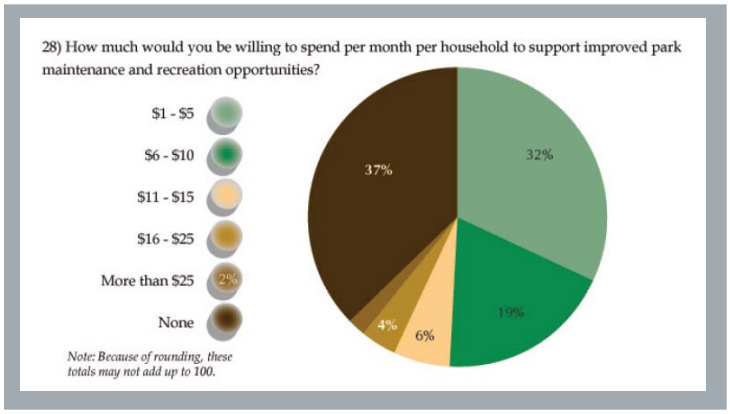


Figure 4.6 illustrates how much citizens would be willing to spend per month per household to support improved park maintenance and recreation opportunities. The highest response (37%) was "none," which is a significantly higher response than compared to other communities surveyed nationally. Thirty-two percent (32%) would be willing to contribute $1 - $5, while 19% answered $6 - $10. However, 63% of respondents are willing to contribute something, which indicates that a positive response is likely to a creative program soliciting monetary contributions, which could mean a significant increase in operating funds in a region of over 100,000 residents.

Figure 4.6: Willingness to Pay to Support Recreation Improvements



When asked if they would be willing to pay an entrance fee at state recreation areas, if the fee goes back into the facility rather than to the state's general fund, 68% of responses were yes. Compared to the previous question, this response may indicate that residents are more receptive to spending money on recreation when they are direct users and know where their money will be spent.

Analysis

With respect to the age of respondents and their willingness to pay entrance fees to state recreation sites (if the fee goes back into the facility), the 75+ age group was the most willing and 25 to 44 year-olds are least willing to pay entrance fees. Still, the margin between those who are most willing to pay and those least willing is only 8%. The age group who is most likely to spend money on a per month per household basis to support park maintenance and recreation opportunities is early retirees (55-64) and the least likely is the oldest age group (75+).

Respondent Demographics

The returned surveys were relatively even as percentage of the surveys distributed, which was based on the population of each county. Sullivan had 6% of the surveys; Susquehanna had 24% of the surveys; Tioga had 50% and Wyoming had 20% of the returned surveys.

The majority of respondents were males (57%). Reflective of the region's demographics, ages showing the greatest representation were among the 55-64 (31%), 45-54 (26%) and 65-74 (18%) age groups. The 35-44 age group followed behind at 14% of respondents. These patterns are very similar to the age distribution in other rural communities in the United States where many retirees move and where many people also raise families, but the younger age groups tend to leave after high school for better employment opportunities or to meet their lifestyle needs. In urban and suburban communities, there is generally a more even distribution of responses from the age groups in the 25-54 age groups. In this survey, the majority of respondents (56%) fall into the "older adult" citizen category. It is important to consider that the older

adults of today are quite different from those of past generations and those from northern Pennsylvania are no exception to the trend. Thirty-six percent (36%) of seniors are visiting parks on a monthly basis and nearly everyone responded that they participate in outdoor activities. As the "baby-boomers" enter this category, this much more active and adventurous group will be seeking a variety of recreation pursuits. Refer to the **Appendix** for an illustration of the gender and age groups of respondents.

The majority of respondents to the survey do not have children in the home, which correlates with the aging population of the region; 64% of respondents are couples with no children or empty-nesters **(see Appendix)**. Again, similar to the demographics of the region, of the households with children, a look at their ages reveals that 48% are between the ages of 12 to 18. Children ages 5 to 11 account for 34% and those under the age of 5 account for 18% of the total number of children noted in the survey.

Income levels were varied with 9% reporting an income under $20,000, 15% reporting an income of $20,000 to $34,999, 19% reporting an income of $35,000 to $49,999, 22% with an income of $50,000 to $74,999, 16% reporting an income between $75,000 and $99,999, and 18% with annual incomes over $100,000. The region's median income is $41,147 (2009 estimate), which is behind the Pennsylvania median income ($48,562). This type of information is particularly important when considering fees for programs and services and may indicate the need for a tiered fee system or scholarship program. Refer to the **Appendix** for an illustration of the total annual household incomes of the survey respondents.

Key Findings

This statistically-valid survey was randomly distributed to residents of Sullivan, Susquehanna, Tioga and Wyoming counties in the Northern Tier or Pennsylvania. The response rate was higher than average and residents were vocal in their responses, often commenting on questions where they felt like their answer did not touch on the real issues affecting the region. These comments and a compilation of all written answers to questions are found in the **Appendix**.

Within the four counties, residents from Tioga County are most likely to feel that their recreation interests are being met. Residents from Susquehanna County are least likely to feel that their recreation interests are being met, followed by Wyoming and Sullivan counties. Most residents who feel their recreation needs are being met also feel that existing recreation areas are beneficial and those whose needs are not being met are less likely to feel that existing recreation are beneficial.

All but nine respondents to the survey listed recreation activities that they participate in the outdoors, implying that there is a strong appreciation for the area's recreation resources and the opportunities they bring to residents. Forty-two percent (42%) of residents visit recreation areas at least once a month. Clearly, the existing state parks, game lands, greenways, lakes, rivers and streams are not just a potential tourist destination, but compose the place called home to many people who wish to preserve and protect it.

The most common recreation areas of respondents are in Tioga County, including Colton Point State Park, the PA Grand Canyon, Leonard Harrison State Park or Pine Creek. Outside of the four-county survey area, Lackawanna State Park is most popular, but it is primarily being visited by residents of Susquehanna and Wyoming Counties. From the responses, Tioga County is the most popular area for recreation pursuits, although the highest number of returned surveys also came from residents of Tioga County.

The results suggest that residents are travelling to the neares facilities for their recreation needs, whether they are fishing, hiking, or just enjoying nature.

The current recreation activities of area residents correspond closely to desires for new recreation amenities and support facilities. Nature trails, scenic vistas, nature centers, fishing areas, dedicated open space, camping areas and water access points were the top responses for new amenities. Hiking and walking, fishing, hunting, camping, biking and boating are also the most common activities in which local residents participate. With exception to hunting, all of these activities would be promoted by the addition of the facilities that residents desire (nature trails, scenic vistas, nature centers, fishing areas, dedicated open space, camping areas and water access points). Hunting is one of the top three activities participated in the region, but ranked in the middle of desired new recreation amenities. Residents may not see hunting as a priority because of existing game lands. However, among the written comments and for desired new amenities, ATV trails is most popular, which also have the potential to support access to new hunting grounds.

Seventy percent (70%) of respondents would support the expansion of recreation activities to attract tourism and revenue generation for the four-county region. Again, new hiking and walking activities and trails and fishing would receive the most support. The third most popular activity to promote tourism is bicycling and bike trails. Bicycling is the fifth most popular activity in the region and many respondents commented on the popularity and success of the local Rail Trails.

The popularity of fishing and other water activities may be promoted by more signage, better maintained, or better marked water access points, especially on the Susquehanna and Tioga rivers. Also, although half of the population agrees that water quality is good, nearly 40% are unsure of the wate quality. This statistic does not indicate a confidence that the area's waterways are the in the best form for promotional recreation.

While the majority of responses (61%) indicate that support facilities are adequate, restrooms, trails and water access points (as noted earlier) were indicated as most needed and therefore should be a priority in future planning. The majority of responses (68%) also indicate that signage is adequate, but when asked where improved informational and directional signs are needed, Hills Creek, Lackawanna and Salt Springs State Parks were listed most frequently.

Hills Creek, Salt Springs, Ives Run, Colton Point and Leonard Harrison State Parks and the Grand Canyon of Pennsylvania were listed as most in need of preservation. As some of the most visited parks in the region they are arguably most in danger of losing their draw without proper management. Consequently, Hills Creek and Salt Springs State Parks are most in need of identification (signs), since people may be engaging in activities that are increasing maintenance demands and putting pressure on the facilities there. For instance, unmarked trails could lead to the creation of undesignated trails, erosion, and unmarked parking or the lack of directional signs could result in people parking or driving in sensitive areas.

Residents are most likely to be informed about local recreation opportunities through websites, guidebooks and print media, but feel that radio and TV advertising is the best method to promote the area as a recreation destination. The name that people refer to the region as depends on the area within the region where that person resides. The most common answer, Endless Mountains, received 44% of replies, while Northern Tier was second with 31%. Residents of Sullivan, Wyoming and Susquehanna Counties refer to the region as Endless Mountains, whereas Tioga County residents are more likely to refer to the region as Northern Tier or Upstate PA. Because the four-county area is so extensive, marketing recreation opportunities within the area may not be a one-size-fits all approach.

Those residents who do not have natural gas leases on their property are roughly split on their willingness to developing conservation or preservation easements on their property to prevent drilling and preserve open space. Forty-seven percent (47%) of respondents would consider conservation or preservation easements while 53% would not consider them. With respect to finding alternative methods of recreation and natural resource protection, conservation easements seem to be the preferred method, since most residents are opposed (83%) to allowing public access on their property for recreation opportunities, many because of concerns of liability and lawsuits.

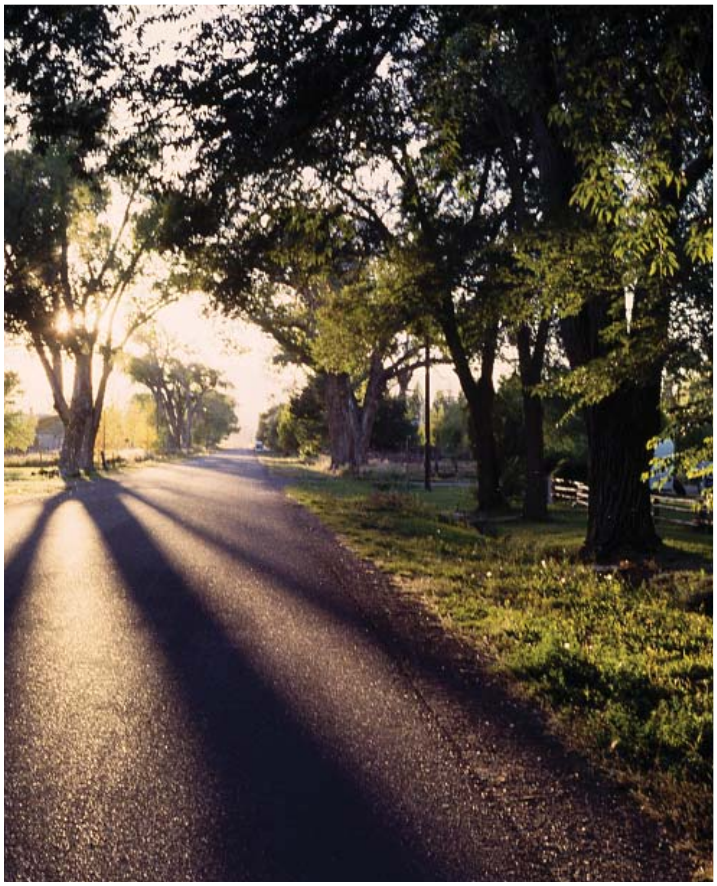
Very few recreation areas in the four-county region are operated by local, non-state, non-federal organizations. Of the 61% who support a regional recreation authority, 55% would support a dedicated fee or tax to support the authority. While 37% of responses indicate that they would not be willing to spend any money on a per month per household basis to support improved park maintenance and recreation opportunities, 63% are willing to contribute something. The most popular method of funding (68%) appears to be by entrance fee at state recreation sites, where fees go back into the facility rather than to the state's general fund. Responses suggest that residents are more receptive to spending money on recreation when

they are direct users and when they know where their money will be spent.

Based on the survey results, residents of the four-county region believe that existing recreation opportunities are important to their quality of life and are generally pleased with the variety of those opportunities, although the level of satisfaction varies by county. Respondents are also generally pleased with the quality and facilities of existing recreation areas, but the majority would support their expansion in order to attract tourism and revenue generation for the region. Resident's willingness to support the funding of that expansion, or the general maintenance and improvement of facilities is varied; approaching the public about dedicated fees, taxes or entrance fees will be met with strong feelings of both support and opposition.

5

INVENTORY & CONDITIONAL ANALYSIS



INVENTORY & CONDITIONAL ANALYSIS

Key Recreation Destinations, Corridors and Facilities

Introduction

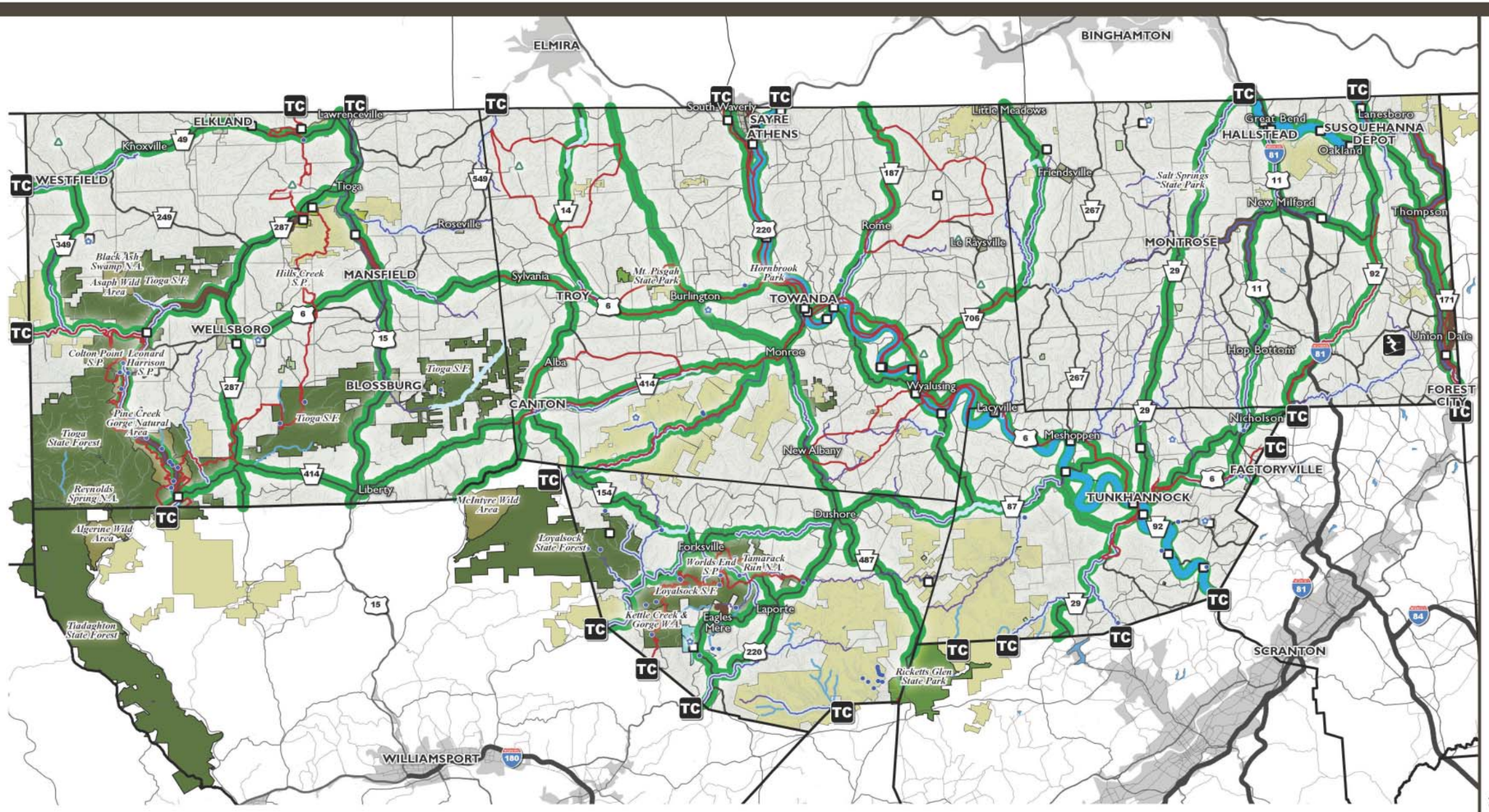
Open space and recreation is largely provided by the State of Pennsylvania in the Northern Tier. Each county contains a significant amount of land owned by the State, through State Forests, State Parks, State Game Lands or a combination of the three. These lands are in addition to Army Corps of Engineering lakes, Fish and Boat Commission boat launches, and various other amenities provided by other departments. Private entities also provide amenities such as campgrounds, trails, and open space. Larger regional lands and amenities are supported on the local level by township and borough parks.

It is important to note the high quality of park and recreation facilities that residents and visitors have come to expect, which is illustrated by the fact that the DCNR Bureau of State Parks received the 2009 National Gold Medal Award for excellence in the field of park and recreation management from the National Recreation and Park Association.

Figure 5.1 illustrates Map A, which depicts the geographic location of all of the open space, greenways and outdoor recreation sites in the Northern Tier.

NORTHERN TIER RECREATION FACILITIES

FACILITIES INVENTORY MAP



RECREATION FACILITIES & AMENITIES

- Federal Lands
- State Parks
- Wilderness/Natural Areas
- State Forest
- Regional Trail Connection
- Waterfalls
- Boat Launch
- Fishing Hot Spots
- Approved Trout Waterbodies
- Trail
- Snowmobile Trail
- Rail Trail
- State Game Lands
- County/Local Parks
- Private Conservancy Lands
- PA Fish & Boat Commission
- Elk Mountain Ski Resort
- Approved Trout Waterbodies
- Stocked Trout Streams
- Wilderness Trout Streams
- Water Trail
- Scenic Corridors

PRIMARY MAP DESCRIPTION

This map illustrates the the locations, types and names of the open space, greenway and outdoor recreation facilities within the Northern Tier Study Area. This map includes all of the facilities under the management of the federal, state and local governments as well as private entities. This map also serves as a visual tool in displaying the classifications of each facility, as well as a comprehensive view of the size and geographic locations of the facilities.

NORTHERN TIER REGION

Regional Location Map

NORTHERN TIER REGION

Study Area

The Northern Tier Study Area includes Tioga, Sullivan, Wyoming And Susquehanna Counties. Bradford County is shown as part of the contiguous analysis because facilities in Bradford are utilized by citizens of the region. However Bradford County is not a participating county of this Open Space, Greenways and Outdoor Recreation Plan.

N W E S

6 3 0 6

MILES

PREPARED BY

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER

Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

NORTHERN TIER PENNSYLVANIA

Open Space, Greenway and Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

March 2010

A

Inventory Process and Methodology

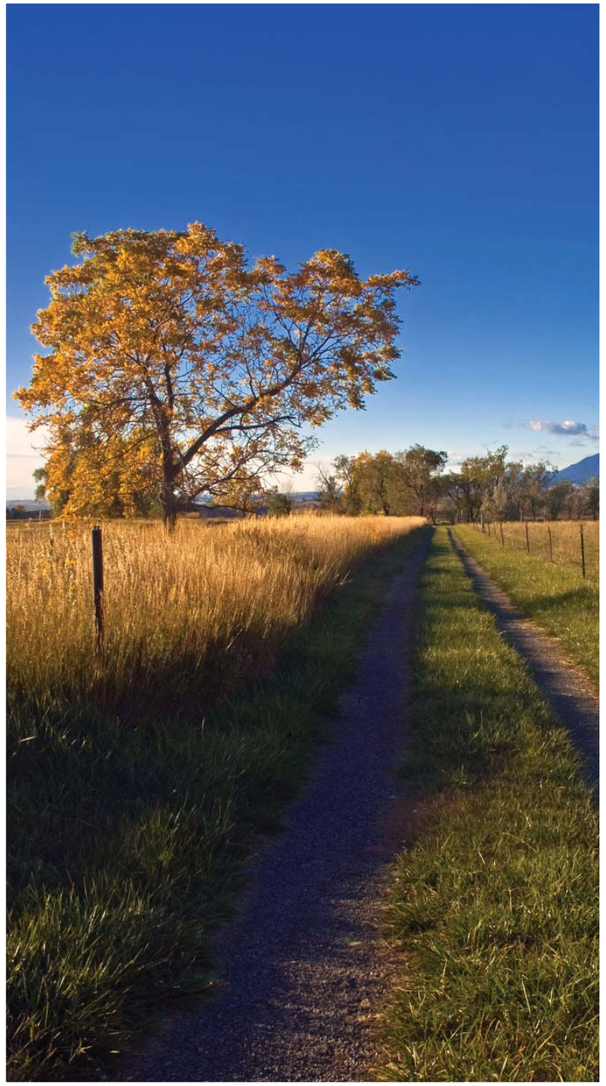
The inventory of the Northern Tier Open Space, Greenway and Outdoor Recreation system was completed and compiled in three steps:

- Preliminary mapping and identification of assets, based on GIS data provided.
- Review of preliminary mapping with staff and stakeholders to determine key destinations.
- Site visits and evaluation of the condition of outdoor recreation facilities (completed in July 2009).
- Processing and evaluating the results of site visit evaluations.

Conditional evaluations during the site visit in July of 2009 looked at access points, visibility, amenities and maintenance of existing outdoor recreation facilities. This visit included visits to key recreation destinations in each county to evaluate and determine the baseline condition and quality provided.

While the study team recognizes local parks provided by townships and boroughs do provide a level of service to the region, these facilities were not evaluated for conditional assessment or level of service. Local facilities offer a smaller service area that does not influence the region as a whole. Regional facilities are the focus of this study and were evaluated as such.

For a detailed description of the Inventory Process and Methodology, please refer to the **Appendix**.



Parks and Facilities - Inventory and Conditional Analysis

Introduction

Staff, advisory committee members and stakeholders identified key destinations in each county within the study area. These sites were visited to evaluate key facilities in each county, which was completed in July 2009. Each site visit included evaluation of the provided amenities, such as playgrounds, campgrounds, picnic pavilions, trails, etc. as well as evaluation of the level of maintenance. The following summarizes those evaluations and provides a cross-section of the various recreation opportunities available in the Northern Tier.

Sullivan County

Ricketts Glen State Park

Inventory

Ricketts Glen State Park is 13,050 acres in the southeastern portion of Sullivan County and falls within Columbia and Luzerne Counties as well. The park can be accessed via PA 487 in Sullivan County. This access point leads to the visitor center, campsites, Lake Jean with its swimming beach, boating and fishing, picnic areas, restrooms and multiple trails. Several trails lead to the waterfalls in the Glens Natural Area. Equestrians are also allowed on specific trails. Snowmobiling, cross-country skiing, snowshoeing, ice climbing, and ice fishing are allowed in the winter and hunting is permitted in the less developed area of the park.

Analysis

Ricketts Glen is a scenic park, known for its waterfalls. Facilities such as restrooms and visitor center are recent construction. In general, the park and its facilities are well maintained although trailhead parking for day visitors could have better signage. Additional road signs would also be beneficial directing visitors from US 220 to the park, as well as at the Hayfields trailhead, as it is currently not apparent this area is part of the park.

Worlds End State Park/Loyalsock State Forest

Inventory

Worlds End State Park (780 acres) is located within the Loyalsock State Forest (114,494 acres) in the western portion of Sullivan County. PA 154 traverses the park and connects with State Highway 87 to access Williamsport and Dushore. Originally constructed during the Civilian Conservation Corps (CCC) era, the park contains a visitor center, picnic areas, swimming area on Loyalsock Creek, chapel, restrooms, showers, camping areas (tent and cabin) and hiking trails. Hunting is permitted in specific areas of the park. Fishing, whitewater boating, snowmobiling, and cross-country skiing are also permitted. The Loyalsock Trail, a 59.28 mile trail from Loyalsockville to US 220 north of Laporte, as well as several other trails pass through the park into the state forest.

Several former CCC and logging camps are within the state forest and cabins located within the park are listed on the National Register of Historical Places. There are also several scenic vistas (e.g. High Knob, Canyon Vista and Wright's View), natural areas, as well as wildlife habitat within the forest. Backcountry camping, horseback riding in designated areas, hunting, fishing, snowmobiling and cross-country skiing are allowed.

Analysis

Facilities built in the CCC era have been updated and newer facilities have been added. Signage and wayfinding could be improved, particularly since there are vistas that visitors drive through the park to reach as their primary destination. Delineation between the state park and Loyalsock State Forest could also be improved.

Hunters Lake

Inventory

Hunters Lake is located off PA 42, southwest of Eagles Mere. The Fish and Boat Commission manages the 117 acre lake for public fishing and boating. The property includes approximately 2,000 acres of surrounding forest. The lake is stocked with trout and has several other species of fish as well. There is an accessible fishing pier and boat launch with parking. A second parking area is located south of the main parking area, next to the dam. Electric motors and un-powered boats are allowed on the lake.

Analysis

A few signs exist directing visitors to the lake, however signage could be improved. The lake appears to be underutilized for its size and provided amenities. The driveway from Brunnerdale Road to the parking at the fishing pier is steep, making it difficult to navigate with low clearance vehicles. Smoothing out the transition would ease navigation.

Susquehanna County

Salt Springs State Park

Inventory

Salt Springs State Park is located approximately 7 miles north of Montrose west of PA 29. The park is 405 acres, with an additional 300 acres to the south owned by the Friends of Salt Springs Park. The park features old growth hemlock forest along Fall Brook Gorge. There are three waterfalls on Fall Brook that visitors can hike to see. Once a homestead, the Wheaton House now provides interpretive materials and park offices, as well as offers environmental interpretation and programs. There are picnic areas, camping areas, camping cottages, hiking trails, fishing areas on Silver Creek and Fall Brook, as well as support amenities such as restrooms. Hunting is permitted in specific areas of the park and cross-country skiing and snowshoeing are allowed on the trails.

Analysis

Restroom facilities are aging, however according to staff they are planned to be updated. The homestead area of the park appeared to be well maintained, particularly since the Friends of Salt Springs Park handle most park operations. The trail visited during the site analysis could use better maintenance, as it would not be able to be followed easily without the trail markers. Additionally, signage and wayfinding to and within the park could be improved.

Susquehanna River

Inventory

The Susquehanna River, which has recently been designated as a National Recreation Trail, dips south into Susquehanna County north of Lanesboro and turns back north into New York State near Interstate 81. It returns to Pennsylvania in Bradford County and flows to the Chesapeake Bay. The section of the river flowing through the Northern Tier is known as the North Branch. The Susquehanna River is a designated water trail or blueway, with seven boat launches along its length in Susquehanna County. Boat launches vary from paved with paved parking to primitive and are operated by the Fish and Boat Commission. The river and its watershed are also managed through the Susquehanna River Basin Commission. EMHR has been designated as the water trail manager.

Analysis

Signage to boat launch 348, as well as signage at the boat launch would be beneficial. The river appears to be navigable the majority of the season by kayak and canoe. There are maps of the North Branch of the Susquehanna

River (the segment that goes through the Northern Tier) that identify access points that are useful, but must be purchased in the area or picked up at a State Welcome Center, which fails to attract visitors from outside the region. However, maps and guides for the Middle Branch Susquehanna River Trail (which is south of the Northern Tier region) , as well as several tributaries of the river, are available on the internet.

Endless Mountain Rail-Trail

Inventory

This rail-trail is currently under development. It begins in Montrose and generally follows PA 706 east on the former Delaware, Lackawanna & Western Railroad corridor. Portions of the trail are ballast surface, while other portions are grown over with mown vegetation. Additionally, a section of the corridor has been paved over with a private parking lot, where an ATV was seen using the trail in this area. The trail is intended for hiking, biking and horseback riding.

Analysis

The mown sections of the trail should have a more suitable surface for multi-modal use. Additional signage and wayfinding would be beneficial for visitors using the trail. The trail does pass by an elementary school, increasing its potential to be promoted and used for local travel. It is also important to maintain public control of the trail corridor, so as not to incur any additional ownership and management conflicts with private landowners.

Leonard Harrison State Park / Cotton Point State Park / Tioga State Forest

Inventory

Leonard Harrison State Park is a 585-acre state park on the east rim of the Pennsylvania Grand Canyon. The park is located approximately 10 miles west of Wellsboro on PA 660. Amenities located within the park include a campground with flush toilets and showers, trails, picnic areas and a gift shop with vending machines. Fishing, hunting and snowmobiling are allowed within the park. Pine Creek flows along the western border of the park, forming the Grand Canyon of Pennsylvania. A scenic overlook located at the end of PA 660 provides views of the canyon.

Colton Point State Park is 368 acres on the west rim of the Grand Canyon and was originally constructed during the CCC era. The park is located five miles south of US 6 at Ansonia on Colton Road. Amenities include campsites with vault toilets, picnic areas and trails. Hunting, fishing and snowmobiling are allowed in the park and users often seek out many of the scenic views throughout the park. Both parks have environmental education and interpretation as well as provide for wildlife watching.

These state parks are mostly surrounded by Tioga State Forest, a 159,466 acre state forest managed for timber, wildlife habitat and recreation. The amenities provided here include picnic areas, hiking and biking trails and designated roads that are open to snowmobiles. Three natural areas and one wild area have been designated within the forest.

Analysis

Although the parks were originally constructed during the CCC era, updates have been made to keep the facilities modern. The facilities and grounds appear to have been well maintained. Additional signage and wayfinding would be beneficial to promote key trails and destinations throughout the area.

Pine Creek Rail-Trail

Inventory

The Pine Creek Rail-Trail is a 60.5 mile trail from Ansonia south to Waterville. The trail follows Pine Creek through Tioga State Forest and Leonard Harrison State Park. Crushed limestone has been added to the rail bed to provide the trail surface. Hikers and bikers are allowed on the trail, as well as equestrians on a designated section. Port-o-lets are provided at the north end of the trail at the Marsh Creek Access Area.

Analysis

The trail appears to be well maintained. The planned extension from the Marsh Creek Access Area to Wellsboro Junction will be a beneficial connection to other regional trails and amenities. Additional signage and wayfinding in the Marsh Creek area would be helpful for visitors looking for the trail.

Tioga-Hammond Lakes

Inventory

Hammond Lake (685 surface acres) and Tioga Lake (498 surface acres), are located a few miles north of Mansfield. Hammond Lake has a boat launch, overnight mooring, fishing, picnic areas, swimming beach with shower facilities, Display Gardens with native plants, an archery trail, hiking trails and a Visitor Information Center. At the south end of Tioga Lake is Lambs Creek area, which contains picnic sites, a trail to Mansfield and water-skiing area. In addition, the Mid State Trail passes by Hammond Lake and continues north to Cowanesque Lake and New York. Hunting is allowed on the lands that surround the lakes.

Analysis

The lakes allow motorized boating, one of the few opportunities in the area, which likely draws visitors from a large portion of the Northern Tier region and beyond. The Mid State Trail is also a regional amenity that traverses the state from north to south, attracting recreation enthusiasts from throughout the state.

Wyoming County

Little Rocky Glen

Inventory

Little Rocky Glen is a 26-acre preserve owned by Countryside Conservancy, which allows public access. The preserve is located south of US 6 on Lithia Valley Road where it crosses Tunkhannock Creek. Hiking trails follow Tunkhannock Creek west from the road, which are supported by amenities such as a picnic shelter on the north branch of the trail and access via roadside pullouts used for parking. The preserve contains hemlock forest and a sandstone gorge the creek flows through. Fishing in the creek is allowed, but swimming and diving are not.

Analysis

Parking is on the gravel shoulder of a two-lane curvy road. Additional signage would provide better wayfinding to the preserve as well as warn motorists driving on the road of potential cars and pedestrians. The preserve was well maintained, including the trail.

Bike Route Y - US 6

Inventory

US 6 traverses Pennsylvania from Ohio to New York and has been designated as Bike Route Y for its entire length of 409 miles, as part of BicyclePA. Route maps can be found on the internet and the route is marked with periodic signs. US 6 in Wyoming County has approximately 2-3 foot wide shoulders.

Analysis

Safety improvements should be considered along this route, such as wider shoulders, bike lanes, larger/ additional signage and striping. The existing shoulders are narrow and often contain hazards for cyclists. Drivers would not expect to encounter cyclists on this road; therefore, additional signage and striping should be used to increase awareness.

Endless Mountains Nature Center

Inventory

The Endless Mountains Nature Center (EMNC) is a non-profit owned center open to the public during operating hours. Located 4.5 miles south of US 6 on Vosburg Road, the EMNC is within Camp Lackawanna along the Susquehanna River. The EMNC contains trails, a lodge with educational displays, restrooms, native plant garden and a bird feeding station. Camp Lackawanna is a private camp with lodges, a pavilion, cabins, lean-to's and tent camping sites that can be rented. The camp also has access to the river for fishing and non-motorized boating.

Analysis

Additional signage and wayfinding would be beneficial for visitors driving to the center. It is also unclear once reaching the grounds which facilities belong to the EMNC and Camp Lackawanna.

Key Findings

The Northern Tier region currently has many acres of state forests, parks and game lands. Facilities in these lands, particularly the parks, have generally been well maintained and are in good condition. However, given the current state of the economy and significant cuts to the state budget, these agencies may not be able to continue this high level of upkeep. The region heavily relies on these lands for its outdoor recreation.

Salt Springs State Park is unique in the state park system. It is currently managed and maintained by a non-profit group, the Friends of Salt Springs State Park. Since this is a volunteer group with limited resources, maintaining this large park is a daunting task.

The study area has many abandoned rail beds that could be used as trails. However, given that state resources are limited, funding for trail maintenance is often an issue. Therefore, action on a more local level will likely be needed to expand outdoor recreation opportunities. Champions for projects and partnerships between departments and organizations will be necessary to accomplish goals set forth in this study.

Signage and wayfinding in the region is an issue. Signage is not always consistent, or even present. With tourism being a major contributor to the Northern Tier economy, signage and wayfinding are important to visitors looking for amenities and destinations. Additionally, it is important to consider that the safety of some activities, such as biking, hiking and hunting, needs to be addressed and can be increased through the use of signage.

Natural Resources

Inventory and Analysis

The Northern Tier region is rich in the natural resources for which it has come to be known. Once fully exploited for its timber and coal, the region has largely recovered from the past and can once again be enjoyed for a wide variety of outdoor recreation opportunities and interests. Many areas are now protected through private and public acquisition, ensuring their preservation.

Geology and Topography

Part of the Appalachian Mountains, the Northern Tier region does not consist of true mountains, but is a dissected plateau named the Appalachian Plateau. The true mountains of the Appalachian chain lie to the east of the Delaware River. The region experienced moderate glaciation, as it was the southern border of the glacier's extent.

Glaciated Low Plateau areas, mostly in Susquehanna and Wyoming Counties, tend to have more rounded hills and valleys. Bedrock types vary, but are mainly sandstones, siltstones and glacial erosion and deposition. Erosion-resistant rock forms the hills, while more erosion prone soils formed by glacial deposits occur in the valleys. Intermixed along the margins of the Low Plateau are sections of High Plateau. These high uplands are separated from the Low Plateau by a steep-sloped, well-defined escarpment and are dissected by steep to shallow valleys.

Western Tioga and Sullivan Counties lie in the Deep Valleys Section. This section consists of many very deep, steep-sloped valleys separated by narrow, flat to sloping uplands. Deep valleys may be more than 1,000 feet from the top to the stream. Some valleys may appear to have stair-stepped sides, created by differences in erosion resistance of the rocks. Sandstones are resistant to erosion and form very steep slopes and flat steps. Shales are less resistant to erosion and form the sloping risers between steps, such as are characterized by the valleys formed by tributaries of the West Branch Susquehanna River. These tributaries continue to extend the valleys through erosion at their headwater areas. (data from PA DCNR Geologic Survey http://www.dcnr.state.pa.us/topogeo/map13/map13.aspx)

Soils

The Low Plateau areas have bedrock consisting of softer red and gray sandstone, siltstone and shale. High Plateau areas have bedrock consisting of red and gray sandstone and shale. Bedrock is overlain with Wisconsin glacial till, that is as much as 300 feet deep in some areas. Glaciers in the Northern Tier region were relatively thin and deposited more material than they scoured away. This glacial till is not suitable for crop farming, due to it being rocky and poorly drained.

Specific soil associations vary throughout the study area. Additional information about these associations can be found within each county's Natural Areas Inventory and through the USDA's Soil Survey program.

Vegetation

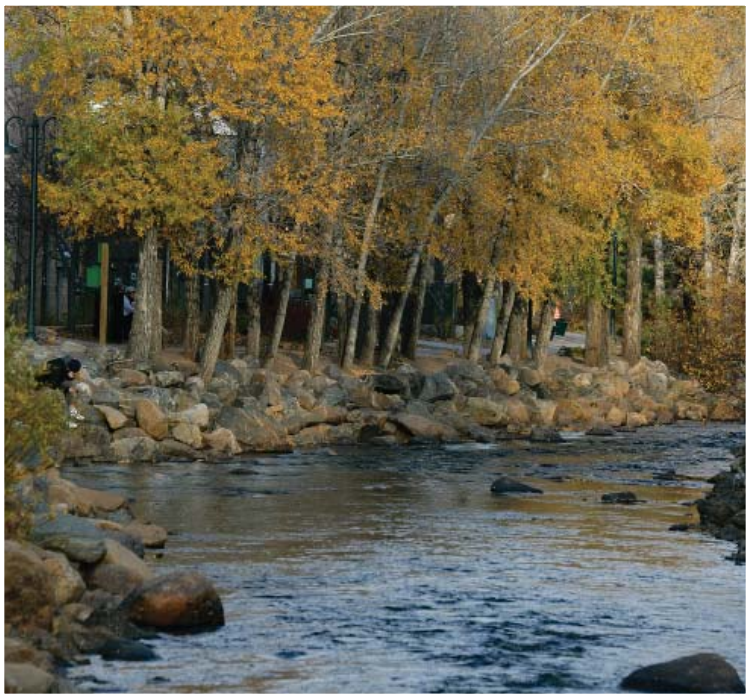
Vegetation is often associated with specific soil types. Due to similarities in the region, most of forests are Northern Hardwood, which favor moderately, well-drained soils. Appalachian Oak forests also occur in the study region and can be found in a broad range of soils. Timber harvesting over time, particularly clear-cutting, has changed the composition of the region's forests. Dominant species today include:

- Acer saccharum (sugar maple)
- Fagus grandifolia (American beech)
- Tsuga canadensis (eastern hemlock)
- Betula alleghaniensis (yellow birch)
- Acer rubrum (red maple)
- Betula lenta (sweet birch)
- Betula papyrifera (paper birch)
- Fraxinus americana (white ash)
- Quercus rubra (northern red oak)
- Prunus serotina (black cherry)
- Pinus strobus (white pine)
- Quercus alba (white oak)

- Carya cordiformis (bitternut hickory)
- Liriodendron tulipfera (tulip poplar)
- Quercus coccinea (scarlet oak)
- Quercus ilicifolia (scrub oak)
- Quercus montana (chestnut oak)
- Quercus velutina (black oak)

Some species of plants are dependent on large blocks of uninterrupted forest cover. The change in the composition of the region's forests after clear-cutting is evidence that human activity can alter the composition. Large blocks of uninterrupted forest should be protected where possible.

Glaciation of the region formed many different types of wetlands throughout the Northern Tier. Grass-like plants such as sedges, rushes and grasses dominate graminoid marshes. Graminoid marshes typically follow impoundments on a stream like beaver dams. Shrub swamps generally occur on mineral soils with an accumulation of peat moss and other organic matter. Shrubs fewer than 20 feet tall, such as blueberry, chokeberry, mountain holly, and alder dominate these wetlands. Ephemeral or vernal pools are wetlands that are nearly dry at times and host a variety of trees and shrubs, such as woolgrass, three-way sedge, pin oak, highbush blueberry and red maple.



Wetlands host a variety of plant species, as well as animal species. Many of these species only exist in the wetlands' unique habitats. Habitat, coupled with wetlands' ability to filter water, make these critical natural resources to protect. Refer to each county's Natural Areas Inventory for specific sites and their rankings for protection.

Water Resources

During glaciation, drainages were blocked creating many wetlands and lakes. Blockages also altered the courses of streams. Water resources, from the Susquehanna River to small unnamed lakes, abound throughout the region.

Rivers and streams in the study area may not provide the industrial transportation they might have at one time, but they are an important component of the ecosystem and provide a multitude of recreation opportunities. Several of these have dedicated conservationists and recreation enthusiasts, who through watershed associations have written Rivers Conservation Plans with the assistance of grants. One should refer to these plans for specific information about each individual watershed:

- Pine Creek Rivers Conservation Plan
- North Branch Susquehanna Rivers Conservation Plan
- Tunkhannock Creek Rivers Conservation Plan
- Upper Lackawanna Rivers Conservation Plan
- Bowmans Creek Rivers Conservation Plan
- Mehoopany Creek Rivers Conservation Plan

It is important to note that some streams in the study area have been affected by abandoned or acid mine drainage (AMD). Local groups are working to clean up these streams through grant monies and volunteer efforts. Stream water quality is also affected by runoff. Water quality in the study area is generally good at this time, with the exception of AMD affected waters (primarily in Tioga and Sullivan Counties). However, since the Susquehanna River flows into Chesapeake Bay, its watersheds are subject to regulations that ultimately affect the Bay.

Wildlife Habitat

Forests, wetlands, streams and lakes all provide vital wildlife habitat. Often even the slightest disturbance can affect a species and threaten its existence. Riparian buffers provide habitat, while protecting the habitat for other species. Riparian buffers are also critical to regulating stream temperature, a necessity for some fish species, as well as reducing runoff and soil loss.

Furthermore, buffers connect habitats together, creating wildlife corridors. Greenways and open space are a tool that can be used to create and protect these habitats. They can also be used to fill in the gaps and provide wildlife corridors between state owned forests, parks and game lands.

Extractive Resources

The Northern Tier's geologic make-up has made it a prime area for extracting resources from the ground. Northeast Pennsylvania was once rich in anthracite coal, a coal that is more pure, harder and of higher carbon content than other types of coal. The extraction of coal and transporting it was an extensive process that resulted in mines and railroads dotting the region. Evidence of this extraction can still be seen in the abandoned mines, tailings piles and railroad beds. While railroad beds offer opportunities in recreation as trails, mines can become constraints to recreation, as the acid drains into streams affecting the ability to fish in them.

Marcellus shale gas was recently discovered in Pennsylvania and the Northern Tier region. Estimates of how much gas the formation contains vary from 8 to more than 500 trillion cubic feet of natural gas. Wells being developed use a process called hydraulic fracturing and are often directional (horizontal). It is estimated at the time of this study that a large percentage of landowners have already signed leases with gas companies to allow wells on their property (well permitting is overseen by DEP).

It is unknown at this time what the true and full impact of Marcellus shale will be on the study area. Well sites and subsequent pipeline corridors offer both opportunities and constraints for open space and recreation. Pipeline corridors can often be used for trails through an agreement with the company owning the pipeline. However, these corridors also break up wildlife habitat and change the appearance of the landscape. Well sites house highly visible equipment, impact dark skies, and typically only allow certain activities near them. Additionally, environmental groups have voiced concerns about the effects of extraction process on water quality, although this is a new process and currently there is not sufficient data to make conclusions on the impacts. Cooperation and coordination will be vital to ensuring a desirable outcome.

Key Findings

The Northern Tier region contains many vital habitats and important wetlands. The forests, streams and mountains are also the resources that draw visitors to the region. Protection of these resources prior to development is necessary to continue to provide recreation resources for residents, to attract visitors and provide ecological benefit. Designation of greenways and open spaces will protect these resources, as well as provide outdoor recreation for the region. These greenways and open spaces should also be used to create connections between existing destinations and recreation amenities.

Transportation Analysis

Transportation facilities figure into the Northern Tier Greenway, Open Space and Recreation Plan in two basic ways:

1. Transportation facilities provide means for traveling to recreational facilities throughout the Northern Tier.
2. Transportation facilities are themselves an integral part of the region's outdoor recreation system, such as by serving as scenic byways for motorists or as bicycle routes.

Transportation Infrastructure

The Northern Tier is generally rural and motorized transport is by far the most frequently used means for accessing recreational facilities in the region. With the completion of the US Route 15 improvement project in Tioga County, and its future designation as I-99, the Northern Tier region will be "bookended" by two north-south interstate highways: I-99 to the west and I-81 to the east. A third north-south US highway, US Route 220, runs through Sullivan County. US Route 6 is the most prominent east-west highway and ties the region together, extending from Tioga County to Wyoming County, just skirting Susquehanna County to the north and Sullivan County to the south.

Especially given the presence of two interstate highways at both ends of the region, it is possible for visitors from the surrounding region, the Mid-Atlantic states and the larger Northeast, to gain access to the study area in a timely manner. The region is fortunate to have this larger transportation infrastructure in place, as it will be very difficult to advance major transportation improvement projects in the near future given Pennsylvania's fiscal climate and the current emphasis on addressing the state's dilapidated bridges. The vast majority of projects on the Northern Tier Transportation Improvement Plan (TIP) are bridge improvements and it has become increasingly difficult to justify capacity-adding projects. The Route 15 improvement project in Tioga County is the most significant example of a recent capacity-adding project in the region. However, even projects involving new roadway alignments of a smaller scope, such as the recently completed Route 6 bypass of Tunkhannock Borough, would also be likely difficult to advance in the foreseeable future.

Community and Stakeholder Input

The project team conducted many interviews and community meetings with stakeholders and residents from across the Northern Tier. Asked to list weaknesses and opportunities associated with the region's recreational facilities, there was very little mention of the need for major upgrades to transportation facilities. In some areas of the Northern Tier, further major improvements in the transportation infrastructure would likely be met with ambivalence. For example, in community meetings, residents in Tioga County expressed concern about being "Lewisburgized," by creating too much access. Moreover, in the recent past, residents in Sullivan County have signaled that major improvements on Route 220 were not desirable.

Transportation Infrastructure Planning Integration

On the other hand, comprehensive plans in Susquehanna County have called for improvements to key transportation routes. The Susquehanna County Comprehensive Plan (2003) indicates that improvements to Route 706 and Route 11 are top transportation priorities and specifies the addition of passing lanes on Route 706, particularly at Summit Hill. In general, development of a main east-west route through the county is sought. Also, improving the quality of roads, and the shoulders, were viewed as very important goals. The Northern Tier Coalition Comprehensive Plan (2005), a multi-municipal comprehensive plan for 12 municipalities in Susquehanna County, recommends upgrading Route 29, 267 and 706 to serve heavy truck traffic. The Plan further notes that Route 706 needs attention along its entire route to ensure access to the Northern Tier region. The Plan discourages the development of independent bike trails, but encourages "ancillary" bike paths in connection with upgrading highways such as Route 706.

It should therefore be noted that the NTRPDC has programmed an improvement project for adding a third lane to Route 706 through Montrose Borough to improve safety. Safety issues should be identified elsewhere along this corridor in order to determine other segments where improvements would be justified.

Comprehensive plans for the other counties in the study area were reviewed to identify transportation improvement projects intended to facilitate action for future planning or capital improvements. No such goals were identified in the Tioga County Comprehensive Plan (2005). The Wyoming County Comprehensive Plan was updated in 2005 and did include some transportation implementation goals. No recent plan is available for Sullivan County.

In its 2009-2035 Long Range Transportation Plan, NTRPDC identified 15 "corridors of regional significance" as a "framework for ongoing transportation planning activity." These are the most important roadways for the purpose of regional travel throughout the Northern Tier and should always receive attention when prioritizing improvements for the region. In the short term, the NTRPDC has indicated interest in removing "frustration factors" on key roadway segments, such as through providing truck climbing lanes and passing zones.

Alternative Transportation Providers

There are other transportation facilities in the region, but of much less significance for the purposes of accessing recreational facilities. There are three airports: Grand Canyon Airport at Wellsboro, Bradford County Airport in Towanda and the Skyhaven Airport in Tunkhannock. All are open for use by private aircraft, but not commercial flights.

Public transportation services are provided by the Endless Mountains Transportation Authority (EMTA). EMTA provides fixed-route and demand-response transit services in Bradford, Sullivan and Tioga Counties. Transit services should continue to be strongly encouraged, but it is not anticipated that a significant percentage of visitors to Northern Tier recreational facilities would use these services.

Roadways as Recreational Facilities

The second consideration of transportation facilities in the Northern Tier is as an integral part of the recreational experience. Many roadways in the Northern Tier pass through areas of great natural beauty and scenic interest. Two roadways in the study area are National Scenic Byways: a three-mile stretch of Route 6 (bypass) south of Tunkhannock Borough, known as the "Gateway to the Endless Mountains," and the 37-mile long "Viaduct Valley Way" on Route 92, extending from Route 6 just east of Tunkhannock to Susquehanna Depot.

National Scenic Byways are roads recognized as possessing at least one of the following six qualities: scenic, historic, cultural, natural, recreational and archaeological. The federal highway funding program (SAFETEA-LU) provides dedicated funding for projects on these roadways, including safety improvements to accommodate increased traffic and construction of pedestrian and bicycle facilities (80% federal funding is available for these projects). Corridor management plans must be prepared for these byways, including a strategy for identifying any safety issues and a signage plan to make the placement of signs more supportive of the visitor experience.

Northern Tier Scenic Corridors

Emulating the National Scenic Byways program, the NTRPDC has begun to identify "Northern Tier Scenic Corridors"; these are roadways that possess at least one of the six qualities found in the national scenic byways program. Northern Tier Scenic Corridors coincide with many of the Northern Tier "Corridors of Regional Significance" described in the Northern Tier Long Range Plan. Both of the national scenic byways found in the study area, US Route 6 and PA 92, are also Northern Tier Scenic Corridors.

Road Bicycling

Northern Tier Scenic Corridors are roadways that should be safe for use by the motoring public, as well as for use by bicyclists and pedestrians. Given the low traffic volumes and the inherent scenic qualities of these rural roadways, bicycling would be an especially desirable activity to encourage. Visitors and residents alike could use these roads not only for recreational bicycling, but also for traveling between recreational facilities in close proximity. There are several recent examples where roadways have been improved in a manner to benefit bicyclists, including the widening of shoulders on US Route 6 between Meshoppen and Russell Hill and the re-paving of US Route 11 with wider shoulders. To encourage long-distance bicycling, Pennsylvania has identified state roadways that can be used for regional trips. These roadways, collectively known as "BicyclePA" routes, traverse the state. However,

it is important to recognize that designation as a BicyclePA route does not indicate the presence of bike lanes, or even bike-compatible shoulders in all locations. Four roadways in the study area are BicyclePA routes:

- Route Y - follows US 6 the entirety of Wyoming and Tioga Counties
- Route L - follows SR 1009 and PA 171 through Susquehanna County
- Route G - follows US Route 15, PA 287, US 6, and the Pine Creek Trail in Tioga County
- Route J - follows PA 14 in Tioga County

Recreational Transportation Planning Integration

The strong interest in improving roadways for the use by bicyclists appears in many planning documents of the Northern Tier, and was repeatedly mentioned by stakeholders in this Plan. Following is a summary of planned or ongoing efforts to encourage bicycling facilities in the Northern Tier:

The Northern Tier Long Range Transportation Plan 2009-2035 (adopted 2008)

- Update bicycle-pedestrian action plan with PennDOT District bicycle-pedestrian coordinator
- Coordinate with PennDOT regarding placement of US 11 on BicyclePA network

Northern Tier Bicycle and Pedestrian Plan (2001)

- Sullivan - Widen shoulders on PA 154, PA 42, SR 3009 and SR 3002
- Susquehanna – Consider bicycle/ pedestrian needs in all PennDOT betterment projects
- Tioga – Improve shoulders on PA 660, PA 287, PA 362, SR 4037, SR 4039, and SR 4002
- Wyoming – Improve shoulders on US 6 and PA 92

Montrose Heritage Greenbelt Feasibility Study (2004)

- Seek shoulder improvements on PA 706, 29, and 167

Iroquois Trail Master Plan (2004)

- Update US 6, PA 29 and PA 92 from bike routes with "share the road" status to separated 8-foot paved paths

Wyoming County Comprehensive Plan (1996)

- Initiate plan for bike trails along Routes 29, 92, and 307

Related Community and Stakeholder Input

Stakeholder interviews and community meetings conducted for this Plan confirmed that the major concern about transportation facilities in the Northern Tier is poor shoulder conditions:

- Wyoming County staff – Although PA 92 is posted with "share the road" signs, it is too narrow with no shoulders
- Wyoming County residents – a major weakness is the lack of safe roadway cycling, since shoulders are comprised of gravel, in poor condition or are missing
- Tioga County stakeholders – bike lanes on the sides of highways are not safe
- Susquehanna County stakeholders – if shoulders could be expanded on scenic roads, these roads could be used as bike routes

A number of steps can be taken to improve safety for motorists on roadways in the Northern Tier. Upcoming "corridor safety analyses" planned by the NTRPDC should target Northern Tier scenic corridors to determine low-cost improvements that should be made to these roadways. Following is a list of the most effective low-cost safety measures:

- Centerline rumble strips
- Improved curve delineation
- Utility pole relocation
- Advanced curve warning markings

All of these measures were demonstrated to have reduced the crash rate by 35 to 50 percent in the Pennsylvania locations where these measures were installed (PennDOT, Evaluation of the Effectiveness of PennDOT's Low Cost Safety Improvement Program, November 2008).

Other measures installed by PennDOT were shown to decrease the crash rate by 20 to 30 percent, and should also be considered:

- Paving to improve skid resistance
- Close object delineation
- Shoulder rumble strips
- Tree removal
- Correcting shoulder drop-offs

However, the improvement with the greatest potential both for improving roadway safety and safety of bicyclists and pedestrians would be to improve and provide shoulders appropriate to the posted speed and volume of the roadway.

Analysis

Infrastructure Improvements

An analysis was conducted by the consultant team of all roadways identified as potential bicycle facilities in the region in order to estimate typical existing shoulder width and a recommended shoulder width. These roadways have been designated as either Northern Tier Scenic Corridors or "Corridors of Regional Significance" in the Northern Tier Long Range Transportation Plan, or recommended to serve as a designated bike route in the 2001 Northern Tier Bicycle and Pedestrian Plan. Designation of a roadway as either on the National Highway System or Federal Aid Primary system is also noted, as these roadways serve as the backbone of the regional highway system and should be able to safely accommodate higher volumes of traffic, at higher speeds, than other roadways in the region.

Recommended shoulder widths are taken from the PennDOT Statewide Bicycle & Pedestrian Master Plan, Bicycle Guidelines, April 1996. These guidelines are consistent with national recommended practices, such as Guide for the Development of Bicycle Facilities (American Association of Highway Transportation Officials, 1999). As stated in the AASHTO guide, "Adding or improving paved shoulders often can be the best way to accommodate bicyclists in rural areas and benefit motor vehicle traffic." Although not stated by the AASHTO Guide, a minimum 4-foot shoulder is also seen as the minimum shoulder width for accommodating pedestrians. The paving of shoulders is less critical to pedestrian movement than it is to bicyclist movement, but is still preferred where feasible.

The results of the shoulder analysis are shown in **Table 5.1**, in numerical order by County.

Table 5.1: Northern Tier Roadways Shoulder Analysis

Roadway	Classification	Designation*	Daily Volume	Speed Limit	Paved Shoulder Width	Recommended Shoulder Width
Tioga County						
US 6	Principal arterial	CRS/NTSC/NHS/ PA Bike Route Y	2800-7700	55 mph	8-10 ft west of Wellsboro; 4-6 ft east of Wellsboro	8 ft
PA 14	Minor arterial	CRS/NTSC/FAP/ PA Bike Route J	2200	55 mph	2-4 ft	6 ft
US 15	Principal arterial	CRS/NTSC/NHS	8,000-14,000	55 mph	8-10 ft	8 ft
PA 49	Minor arterial	CRS/NTSC/FAP	3400	55 mph	8-10 ft between Lawrenceville and Elkland; 2-4 ft west of Osceola	6 ft
PA 287	Minor arterial	CRS/NTSC/FAP/ PA Bike Route G	2700-8000 north of Wellsboro; 2200 south of Wellsboro	Typically 55 mph, but 45 mph sections	6-8 ft south of Tioga; 4-6 ft north of Wellsboro; 3-6 ft south of Wellsboro	6 ft
PA 328	Minor arterial	CRS/FAP	1900	55 mph	1-2 ft	4 ft
PA 349	Major collector	NTSC	850-1500	45 to 55 mph	0 ft on 45 mph section north of Sabinsville; typically 6-8 ft on 55 mph section south of Sabinsville	4 ft
PA 414 west of Morris	Major collector	CRS/NTSC	300	40 mph	No shoulder	4 ft
PA 414 from Morris to Liberty	Minor arterial	CRS/NTSC/FAP	2000	55 mph	4-6 ft	6 ft
PA 414 from Liberty to Bradford	Major collector	CRS/NTSC	450	40-55 mph	1-2 ft	4 ft
PA 660	Major collector	NT Bike Plan	500-800	40-45 mph	No shoulder	4 ft
Sullivan County						
PA 42	Major collector	NTSC/ NT Bike Plan	900-1100	55 mph	1-3 ft	4 ft
PA 87	Minor arterial	CRS/NTSC/FAP	750-1200	Typically 55 mph (45 mph section east of Dushore)	2-4 ft west of Hillsgrove; 4-6 ft between Hillsgrove and SR 4017; varies 2-6 ft east of SR 4017	4 ft
PA 154	Major collector	NTSC/ NT Bike Plan	400	40-45 mph	0-1 ft	4 ft
US 220	Minor arterial	CRS/NTSC/FAP	2200-2600	55 mph	8-10 ft south of LaPorte; 4-6 ft north of LaPorte	6 ft
PA 487	Major collector	NTSC	650-950	55 mph	0-2 ft	4 ft
SR 3009	Major collector	NT Bike Plan	350	40 mph	0 ft	14 ft lane
Wyoming County						
US 6	Principal Arterial	CRS/NTSC/NHS/PA Bike Route Y/NT Bike Plan	4400-14,000	55 mph	Some sections 8 ft and more, others 6 ft	8 ft
US 11	Major collector	CRS/NTSC/FAP	4500	45-55 mph	6-8 ft	6 ft
PA 29	Minor arterial	CRS/NTSC/FAP/ NT Bike Plan	7300 between Noxen and Tunkhannock; 3600 north of Tunkhannock	50-55 mph on north and south ends of County; 40-45 mph either side of Tunkhannock	4-6 ft south of Tunkhannock; 1-4 ft north of Tunkhannock	6 ft
PA 87	Minor arterial	CRS/NTSC/FAP	1000 west of Mehoopany; 4700 east of Mehoopany	45 mph	1-2 ft	4 ft west of Mehoopany, 6 ft east of Mehoopany
PA 92	Minor arterial	CRS/NTSC/FAP/NT Bike Plan	2600-4800	45 mph	0 ft south of Osterhout; 0-6 ft between Osterhout and Tunkhannock; 1-2 ft north of Dixon	6 ft
SR 3003	Major collector	NTSC	1000	35 mph	0 ft	14 ft lane
Susquehanna County						
US 11	Major collector	CRS/NTSC/FAP (FAP south of New Milford only)/ NT Bike Plan	1300 south of New Milford; 4900 north of New Milford	55 mph	0 ft south of Kingsley; 4 ft north of Kingsley	4 ft south of New Milford; 6 ft north of New Milford
PA 29	Minor arterial	CRS/NTSC/FAP	2900	40-55 mph	0-2 ft	6 ft
PA 29	Major collector	CRS/NTSC	2500	45-55 mph	0-2 ft	6 ft
PA 92	Major collector	NTSC	1000-1500	55 mph (35 mph in sections)	0 ft	4 ft
PA 92	Minor collector	NTSC	1300	40-45 mph	0 ft	4 ft
PA 167	Minor collector	CRS	300	35-45 mph	0 ft	4 ft
PA 167	Major collector	CRS	1100	40 mph	0 ft	4 ft
PA 171	Minor arterial	NTSC; PA Bike Route L	1000-2200 south of Lanesboro; 3100 west of Lanesboro	45 mph in sections, typically 55 mph	0-2 ft	4 ft
PA 492	Major collector	NTSC	1200-2100	40 mph	0 ft	4 ft
PA 706	Minor arterial	CRS/FAP	1600 west of Montrose; 3500 east of Montrose	45 mph	0-1 ft	4 ft west of Montrose; 6 ft east of Montrose
PA 858	Minor collector	NTSC	150-500	40-45 mph	0 ft	4 ft
SR 1009	Major collector	PA Bike Route L	350	35 mph	0 ft	14 ft lane

NTSC – Northern Tier Scenic Corridor, NHS – National Highway System, FAP – Federal Aid Primary System, NT Bike Plan – 2001 Northern Tier Bicycle and Pedestrian Plan, CRS – Northern Tier Long-Range Plan Corridor of Regional Significance

A minimum 4-foot shoulder is generally recommended for the safety and comfort of a bicyclist, with widths increasing to 6 feet for roadways with daily traffic volumes above 2000 and for higher speeds. Widths of 8 feet have been recommended for principal arterials. A width of 8 feet may also be considered for those roadways posted at higher speeds, even if below the level of principal arterial, for segments identified as particularly important to bicycle routes. However, for several roadways in the study area with unusually low traffic volumes and posted speeds of 35 mph, a wide travel lane (of 14 ft.) will suffice if shoulders are not feasible.

It should be noted that this analysis is restricted to a review of roadway conditions outside of towns and villages. Within towns, the bicycle compatibility of roadways may change from block to block, depending on the presence and use of on-street parking, variable travel lane width and other factors. Roadway conditions outside towns and villages are more accommodating to the needs of recreational bicyclists targeted by this study.

As indicated in **Table 5.1**, the majority of major roadways in the region do not meet the criteria for compatible bicycle facilities as defined in the Pennsylvania Bicycle Plan. There were 35 roadway segments analyzed (for several roadways, multiple segments were analyzed, based upon different volume or functional classification status). Of the 35, 12 segments met criteria. However, of these 12 segments, only 6 met bicycle-compatible criteria consistently.

Wayfinding

The need for improved wayfinding signage was cited often by Northern Tier stakeholders and residents as being a key issue in the region. The consultant team's site analysis confirms that there is a lack of a comprehensive wayfinding strategy in place, with relatively few attractions signed from major highways in the four counties.

Although this program is currently on hold due to a lack of funding, in the past local jurisdictions in Pennsylvania had the opportunity to participate in wayfinding signage place on an "ad hoc" basis. The State permitted one county, or multiple counties, to form a "Signing Region." As noted in the 2001 PennDOT document, PennDOT Toolbox for Development of a Wayfinding Signing Region, the intent was to create a systematic network of directional signs to guide motorists from major highways to major "cultural, historic or civic" attractions, and then back out to the major highways. The program includes a one-time sign fee as well as a potential annual maintenance fee, which may be cost prohibitive to local participants. All signing plans should begin at interstate highways or arterials.

Today, Pennsylvania is now taking a more systematic approach to wayfinding signage in the state. A state board, the Pennsylvania Logo Signing Trust, has recently been tasked with overseeing wayfinding signage strategy for all areas of the state. Seven signing regions across the state have been formed. Counties of the Northern Tier fall within two signing regions: Tioga County lies within the Pennsylvania Wilds Tourism Region, and Bradford, Sullivan, Wyoming and Susquehanna counties fall within the Northern Pennsylvania Mountains Tourism Region. The Trust has generated a document providing statewide criteria for the attractions eligible for signing. However, each region will have the ability to specify its own criteria, provided it is compatible with statewide criteria. Further, each region will have its own advisory board.

process of forming its regional advisory board. The Northeastern Pennsylvania Mountains Tourism Region has begun working through signing strategy issues and is further along in the process. In both cases, representatives of major recreational facilities in the region should seek a place on the regional advisory board in order to establish criteria that is compatible with the characteristics of major recreational facilities.

Partners and Resources

The most critical partner to aid in the implementation of the transportation recommendations of this plan will be PennDOT, given the importance of state roadways in traveling to recreational facilities and in bicycling and walking as recreational pursuits. A close partnership already exists between the NTRPDC and PennDOT; implementation of recommended improvements should be discussed on a periodic basis by the two agencies. Ultimately, high-priority improvements will need to be placed on the Northern Tier TIP.

For implementing wayfinding recommendations, the critical partnerships will take place with the two regional advisory boards being formed in the Northern Tier. This strategy will not require extensive resources, but will require coordination to ensure that key recreational facilities are deemed eligible for wayfinding.

Key Findings

Transportation facilities play two roles as part of this Plan: they provide the means for visitors to travel to recreational sites, and they are part of the region's recreational system, such as by serving as bicycle and pedestrian routes. A transportation infrastructure is in place to serve the basic needs of visitors to recreational facilities in the region. The interstate highways US Route 15 (soon to be designated I-99) and I-81 provide access to the western and eastern ends of the region, respectively. At interviews conducted for this study, stakeholders did not indicate a need for significant new transportation facilities or for improvements to existing facilities in order to access recreational sites in the study area. Further, given the existing funding climate in Pennsylvania, it would be difficult to program major roadway improvements.

Although major transportation improvements are not likely, area planning partners recognize the need for roadway safety improvements, and for the addition of passing and truck climbing lanes in key locations. Area stakeholders also recognize the need for improvements to better accommodate bicyclists and pedestrians. The 2001 Northern Tier Bike and Pedestrian Plan calls for improvements to key roadways on scenic corridors, or for roadways leading to recreational areas and to encourage bicycling. In most cases, improvements to roadway shoulders are seen as the best means for accommodating bicyclists. For this study, an analysis was conducted of shoulder width and condition on those roadways identified as most suitable for recreational bicycling (see **Table 5.1**). Of the 35 roadway segments identified, just 12 met criteria for roadway bicycle compatibility as presented in PennDOT Statewide Bicycle & Pedestrian Master Plan, Bicycle Guidelines, April 1996. Further, of those 12 segments, only six segments consistently met bicycle compatibility criteria.

On some corridors, separate bike trails have been recommended, such as along Routes 29 and 92 in Wyoming County. In Susquehanna County, the 2004 Montrose Heritage Greenbelt Feasibility Study calls for shoulder improvements along PA 706, 29, and 167.

6

SERVICES, OPERATIONS & MANAGEMENT ANALYSIS

SERVICES, OPERATIONS & MANAGEMENT ANALYSIS

Service Providers

The Northern Tier region is fortunate to have a variety of parks and open space providers that offer lands for both passive and active recreation. Tioga County, for example, has local parks that provide recreation experiences to people in Wellsboro and the local area. Other areas, like Sullivan County, have large state land holdings that offer trails and open spaces, as well as fishing and hunting areas for sportsmen.

State parks and lands are the largest provider of parks, outdoor recreation and open spaces in the Northern Tier. Table 6.1 illustrates the percentages of lands within each county that are state-owned.

Table 6.1: State-owned Recreation Lands by County

County	Percentage of Lands State-owned
Sullivan	37%
Tioga	25%
Wyoming	15%
Susquehanna	3%
Note: Bradford County	*8%*

The state lands provided are open to many uses including trail use, nature viewing, horseback riding, hunting, and fishing to name a few.

Alternative Providers

There are a number of alternative recreation providers in the region including private and nonprofit organizations. These include, but are not limited to the following:

Townships/Boroughs

Of the 166 municipalities in the study area, few currently provide open space or outdoor recreation opportunities. Townships generally focus on providing infrastructure and road maintenance with their limited budgets and staff. A few townships, such as Clinton Township, do provide parks with various amenities such as trails, picnic areas and water access. Boroughs vary in size throughout the study area.

Larger boroughs often have community parks with active recreation opportunities.

Land Trusts/Conservancies

Multiple land trusts operate in the study area and vary from national to local organizations. Most acquire land through both acquisition and easements. Some land trusts allow public access to their acquired lands and provide amenities such as trails, picnic areas, and parking. Others also provide environmental education programs. Land trusts typically have limited staff and rely on volunteers, grants and donations.

Private Camps

Private camps such as Camp Lackawanna can provide amenities such as campsites, picnic sites, trails, restrooms and showers. They may also provide environmental programs and education. These facilities can be used to supplement existing facilities if they are open to the public.

Providers by County

The Inventory and Conditional Analysis Section of this report further details the types of recreation activities that occur at inventoried recreation sites.

Sullivan County

Sullivan County is the second smallest county in terms of land area, yet provides a good variety of park and open space areas. As stated in **Table 6.1**, it provides the largest percentage of state lands (165 square miles) to the public. Following is a list of State Park, State Forests, State Game Lands and Fish and Boat Commission Lands that are provided in Sullivan County:

- Ricketts Glen State Park
- World's End State Park/Loyalsock State Forest
- Hunters Lake

Alternative Recreation Providers & Facilities

- Sullivan County Recreational Association (SCRA)- In addition to state lands, the SCRA facilitates active recreation (i.e. – athletics, fitness and group activities) activities and programs throughout the County. SCRA, founded in 2006, works to help county communities to improve their recreational facilities or create new venues. Its goal is to build a community and cultural facility for all County residents to enjoy. The SCRA has helped to improve current playing facilities throughout Sullivan County. For example, the group has worked with Laporte to build new fencing, dugouts and concessions in town. The Association is working with Elkland and Davidson Townships to provide new fields and support facilities.

- Dushore Borough - SCRA and Dushore staff indicated that Dushore has a small park within the borough. Park amenities include a basketball court, baseball field and tennis courts. Dushore at one time attempted to buy a soccer field but the selling price was prohibitive.

- Endless Mountains Cycling Club - Relative to other types of recreation at the individual level, biking has grown in prominence. The Tour de Shunk, a 102-mile bike race that takes place in September, has grown steadily throughout its eleven-year run. Riders come from as far away as Texas and Europe to compete in this annual event. With the increase of biking in the region, stakeholders indicate the need for better bike routes in the area. Further, they support other amenities that may be used by cyclists, like restrooms, roadside water fountains and retail shops that would support bicycling. Stakeholders envision that PennDOT would be a partner for enhancing cycling on state roadways.

Susquehanna County

Of the four county study area, Susquehanna County has the least percentage of state-owned recreation lands (3%) when compared to its total square mile area. In addition, water recreation resources like the Susquehanna River, meander through the County and affords boating and fishing opportunities.

In addition to State Game Lands located along Interstate 81 south of Hallstead, there are two major recreation areas in the County:

- Salt Springs State Park
- North Branch Susquehanna River

Alternative Recreation Providers & Facilities

The County has a diverse inventory of recreation areas for residents and guests to enjoy. From forests to historic museums, the County has a variety of passive and active recreation opportunities provided by private providers, including but not limited to:

- Elk Mountain Ski Resort - Elk Mountain history dates back to 1959, when it became one of Pennsylvania's first commercial ski areas. Today the resort promotes itself as one of Pennsylvania's premier ski resorts, with challenging and diverse terrain that features 27 trails. The resort is located in southeastern Susquehanna County, east of Interstate 81 along Rt 374.

- Old Mill Village Museum - One mile south of New Milford on Rt 848, this museum is open Saturday and Sunday from late May through early October except for holiday events. The facility features Civil War reenactment, historical education, and showcases artifacts from the 18th through the 20th century.

- The Rail-Trail Council of Northeastern Pennsylvania (RTC) - A non-profit corporation manages and has facilitated the creation of four trails in the County. One, the O&W Trail, is located outside of the study area, but runs parallel to the D&H Rail-Trail in Wayne and Lackawanna Counties. The rail-trails within the Northern Tier study area include:
    - D&H Rail-Trail – Runs from the Simpson Viaduct at Rt 171 north through Lanesboro to the New York State Border. The trail runs 38-miles along the old Delaware and Hudson Railroad line. This is not just a trail, is considered a prime greenway that runs along the Lackawanna and Susquehanna Rivers and services a wide variety of users, from runners to equestrians to snowmobiles. One important project along the D&H Rail-Trail is a dedicated portion that is designated as a "tree trail," commemorating fallen servicemen from the area. Located in the area of the Forest City Trailhead, near the D&H Rail-Trail trailhead. This portion of the trail features 53 different species of trees and planting and care has been a partnership between the RTC and the Mountain View Garden Club.
    - Endless Mountain Rail-Trail – this rail-trail is currently under development and is located in the Montrose area.

- Woodbourne Forest and Wildlife Preserve - The 600-acre preserve is located on PA 29 approximately 6 miles south of Montrose. Programs for naturalists of all ages are conducted through the season. Management is by the Nature Conservancy and Woodbourne's stewardship committee.

- Florence Shelly Preserve - The 357-acre preserve contains fields, woodlands, a stream and a glacial pond surrounded by a floating bog. An abundance of biologically diverse habitat can be found within the preserve along with walkways, a self-guided trail and observation platform. Guided walks are available May through October. The Nature Conservancy owns the preserve, which is operated by stewardship committee members.

Tioga County

Tioga County, not unlike Sullivan County, has a large percentage (25%) of its land area owned by the State of Pennsylvania's park, forest and recreation providers. Out of the County's 1,137 total square miles, 287 square miles are state-owned recreation lands. Tioga County contains the only federal land in the study area, owned by the Army Corps of Engineers. Adjacent to many of these properties

winds the Tioga River, home to many water-based recreation and whitewater activities.

Pennsylvania State Parks, Forests, Game Lands, federal lands and trails include:

- Leonard Harrison State Park
- Colton Point State Park
- Tioga State Forest
- Pine Creek Rail/Trail
- Tioga-Hammond Lakes
- State Game Lands 37, 208, 268

Alternative Recreation Providers & Facilities

Wellsboro Department of Parks and Recreation - Tioga County features the only municipal park and recreation provider that actively programs in the four-county study area. For such a large study area, this is very unique as in other parts of the country one would traditionally find municipalities as the primary park and recreation service providers. The Wellsboro Department of Parks and Recreation provides facilities and program to area residents including many special events, as well as operates and maintains six area parks in the Borough that encompass 497 acres of parkland. Following is a summary of Wellsboro park facilities (courtesy of www.wellsbororecreation.org):

- Packer Pool and Park – Includes lighted tennis courts, basketball court, volleyball courts, fitness courts, picnic pavilion, playground, Community Center with outdoor swimming pool, and passive areas. This facility is located on Queen Street near the Wellsboro Diner
- Woodland Park – Includes picnic pavilions, walking trails, barbeque pit, playground, basketball court, shuffleboard courts and passive areas. This facility is located on Bryden Street off of East Avenue
- Nessmuk Lake – The area is a cooperative effort between the Borough of Wellsboro, Soil Conservation Service (NRCS), and the Pennsylvania Fish Commission and the facility provides fishing, boating (electric motors only), picnic pavilion, group barbeque pit and archery range. This facility is located on PA 287 on the Wellsboro and Delmar Township border
- Hamilton Lake – Provides fishing and boating (electric motors only). This facility is located on Round Top Road off of US 6
- Upper Meade Street Recreational Area – Includes a softball complex, Senior Little League, police training pistol range. This facility is located on Meade Street
- Charleston Street Complex – Includes Little League baseball and softball fields, restrooms and a concession stand. This facility is located on Charleston Street
- Wynken, Blynken & Nod "On the Green" – This facility is located in the center of Wellsboro across from the Tioga County Courthouse and is characterized by a greenspace that contains a fountain in a passive park setting

Wyoming County

Wyoming County has the smallest land area of the four counties being studied. With 405 square miles of land, 15% is state-owned lands. The County has the distinction of being the only county in the study area that does not have a State Park. While this may be the case, State Game Lands make up a large portion of the southwestern portion of the county and there is a variety of other recreation amenities available through alternative providers. Additionally, the state provides cycling opportunities, such as Bike Route "Y" along US 6 –a designated bike route that traverses from Factoryville to the Wyoming/Bradford County line.

Alternative Recreation Providers & Facilities

Wyoming County is fortunate to have many water and land trail corridors as well as bike routes for public use. These areas create opportunities for hikers and bikers, as well as fishing and wildlife viewing. Alternative providers and facilities include but are not limited to:

- Endless Mountains Nature Center (EMNC) – A non-profit nature center located along the Susquehanna River within Camp Lackwanna that includes a private camping facility, trails, lodge and other natural areas

- Howland Preserve – Formerly known as the Riverside Farm, this 667-acre preserve is owned by the North Branch Land Trust and is adjacent to the Camp Lackawanna property, which the NBLT holds a conservation easement on. The preserve is open to the public for passive recreation; the NBLT is developing a working plan for the property
- Little Rocky Glen – A 26-acre preserve owned by the Countryside Conservancy that offers hiking trails, nature viewing and fishing along Tunkhannock Creek

Special Events, Programs and Services

Core Services

The consultant team has reviewed and analyzed the special events, programs and services provided throughout the Northern Tier, focusing on passive and individual recreation and leisure opportunities. A variety of government agencies, community organizations, non-profits, schools and other groups offer these programs to both Northern Tier residents and visitors. There is significant potential for revenue generation from these programs through various user fees and taxes, which can enhance the region's tourism economy. This analysis will explore those services currently being offered, the demand and potential for the provision of new and expanded services and identify coordinated processes that can help facilitate implementation of recommendations.

**Due to the large amount of special events, programs and services provided throughout the region not all are listed, but a representative sampling has been provided for discussion of the analysis. Refer to the Northern Tier Scenic Corridor Inventory for additional information.*

Arts and Culture

While all counties provide programs that relate to art and culture, Sullivan and Tioga Counties provide the most. These programs offer a variety of options, including learning new skills, watching performances and buying and selling of residents' crafts. Sullivan County has a large list of programs that include: a juried Art Expo, the Eagles Mere Flower Show, a children's art camp and a number of fairs each year for arts, craft and antiques. Tioga County is also host to numerous plays and musicals each year, has a spring craft fair and holds an Artisan Workshop series that teaches a variety of skills, including wood carving, watercolors and poetry. Wyoming and Susquehanna Counties also provide a few art and cultural programs as part of their many annual festivals and fairs. Wyoming County's Deitrich Theater hosts art classes, concerts and plays. Susquehanna County hosts an Artist's Open House Weekend and is also home to the Endless Mountains Theater Company, which has a summer camp and performs various plays and musicals.

Analysis

Sullivan and Tioga counties should consider expanding the types of programs that are well-attended and seek input on what other programs residents and visitors would like to see. Wyoming and Susquehanna Counties should look for opportunities to add art and cultural programs and all four counties should consider public-private partnerships and collaboration with local townships and boroughs municipalities to aid in financing these programs. Finally, each of the counties and the region as a whole should expand the marketing efforts to promote these activities.

Outdoor Recreation Programs

Residents of the Northern Tier have many outdoor recreation programs available to them, allowing them to fully take advantage of the region's natural resources, scenery, state-owned lands and extensive trail systems. In Sullivan County, outdoor recreation programs and trips include Overnight Backpacking Adventure, the Bessie Miller/Neil Shatto Fishing Derby, a Sailing Regatta, the Tour de Shunk, and instructional classes for soccer, swimming and softball. Tioga County provides winter weekend programs that include ice skating, ice fishing, cross-country skiing, snowshoeing and sledding, hikes that explore the night sky and geocaching programs. Wyoming County is the most urbanized county in the region and has fewer outdoor recreation programs, but does host a Sporting Clays Shoot and is home to the Endless Mountains Nature

Center, as well as Camp Lackawanna. In Susquehanna County, Salt Springs State Park, and Woodbourne and Florence Shelly Preserves provide educational programs.

Analysis

Based on the large number of older adults in the Northern Tier region, all four counties should consider adding programs that respond to the needs of this changing population. While Sullivan and Tioga counties should look to increase those activities that are well-attended, Wyoming and Susquehanna counties should consider adding more outdoor recreation programs by finding opportunities to collaborate, both regionally and locally. Additionally, Susquehanna County should look to improve access to their public lands and increase public facilities, including parking, rest and comfort stops, as reviewed in the Community and Stakeholder Input section.

According to the Community Survey, from the 93 activities that people listed as their form of recreation in local parks, the following ten were most popular:

1. Hiking/Walking (276 responses)
2. Fishing (178)
3. Hunting (147)
4. Camping (96)
5. Biking (84)
6. Boating (60)
7. Picnicking/cook-outs (58)
8. Swimming (53)
9. ATV riding (33)
10. Skiing (32)

Therefore, the counties and local organizations should look to provide additional programming and special events that focus on these activities.

Heritage-based Programs

All four counties showcase their rich histories with a variety of heritage-based programs. Sullivan County hosts tributes to the Pacific Victory (WWII), WWI, and the Korean War and holds a military heritage weekend and freedom festival. Additionally, individual municipalities such as Sonestown and Dushore celebrate the history of their respective communities. The Black Powder Shoot and Rendezvous is held in Tioga County and includes camping with blacksmiths and gunsmiths, in addition to Tioga County Early Days, the Fabulous 1890's weekend and the Utenin Diahoga-Native American Gathering. In Wyoming County, residents can learn about historic skills such as chair caning, spinning and carving at Tunkhannock Founders' Day. They can also participate in historic community walks and train excursions during Nicholson Bridge Days. Finally, in Susquehanna County, residents and tourists are welcomed to the French Azilum Historic Site, which contains over 20 acres of an original French settlement. Old Mill Village Museum in Susquehanna County also hosts a variety of events and historical displays.

Analysis

Historical sites and festivals provide great opportunities for residents and tourists to better connect to the community and understand the events and people that shaped it. Given the region's aging population and existing draw for heritage tourism (i.e. - traveling to experience the places, artifacts and activities that authentically represent the stories and people of the past and present, including cultural, historic and natural resources), this is a program area that should be expanded upon in order to increase the length of visitors stays, as well as taxes and revenue gained. As a region, the Northern Tier should focus on creating a collaborative marketing program to promote these programs both internal and external to the region. Additionally, the region would benefit from developing additional lodging opportunities to increase attendance at these programs and improve sales tax revenue.

Agritourism

The four Northern Tier counties offer events relating to agritourism, typically around wine, dairy and maple syrup. Both Sullivan and Tioga counties have annual Apple and Cheese Festivals. Wyoming County has a Cheese Festival and a Grape Festival, while Susquehanna County provides a tour of the Sap House to learn about the making of maple syrup. From a regional perspective, all four counties lie within the NEPA (Northeast Pennsylvania) Wine Country, which provides a comprehensive guide of all of the area's wineries and vineyards.

Analysis

With the amount of farmland in the region, there are great opportunities to increase the opportunities for agritourism. As previously mentioned, an increase in the amount of lodging available will help bring additional visitors and increase the amount of time and money they spend in the Northern Tier. Additionally, the four counties should collaborate and better market these opportunities (similar to the NEPA Wine Country program) to potential visitors and residents. Moreover, local Northern Tier businesses and special events providers have felt that the recent trend for "stay-cations" has been beneficial to the region's summer tourism and event attendance because travelers and families are staying closer to home and looking for more affordable recreation opportunities.

Special Events and Festivals

Throughout the Northern Tier, there are many special events and festivals that cover a wide variety of themes. In Sullivan County, events include a 4th of July Firecracker Breakfast, the annual turtle race, various church festivals, the Taste Full Event and the Flaming Foliage Festival. Tioga County starts the year off with Quest Fest, celebrating the many winter activities of the Pennsylvania Wilds and continues the year with the Maple Festival Weekend, the Annual Chili Cook-off, Westfield Days, the Tioga County Fair and the Crafton Street Block Party. Events including a County Fair, the Triton Carnival, the Nicholson Fire Company Carnival and the Rotary Harvest Festival are all located in Wyoming County. Finally, Susquehanna County's festivals include: Fiber Festival, Agricultural Field Days, October Festival and Bluegrass Festival.

Analysis

According to William Gartner, author of Trends in Outdoor Recreation, Leisure and Tourism, the parks and recreation industry has seen a rapid increase in the demand for and number of special events and festivals, ranging from arts, culture, sports and tourism in recent years. Influences impacting these trends may include increases in population, mobility and travel. Additionally, ties to corporate sponsors, philanthropic causes, and marketing opportunities, the retirement and diverse interests of the

Baby Boomers, and desires of urban-based consumers to get away to rural and resort areas are all potential contributors to the growing demand for special events.

As previously mentioned, the Northern Tier would benefit from increased lodging opportunities to encourage tourists to participate in the regions many special events and festivals. Additionally, the tourism groups in the community should collaborate to identify the levels of attendance, both of residents and visitors, as well as the economic impact of existing events and festivals. This data could be used to champion additional community and regional events.

Special Events, Programs and Services - Key Findings

Municipalities and organizations within the Northern Tier provide a multitude programs and services that promote the natural resources and history of the region. These events and activities are generally considered passive recreation activities and include arts and culture, outdoor recreation programs, heritage-based programs, agritourism and special events and festivals. Each county provides a variety of events, as shown in **Table 6.2.**

The Northern Tier has many existing resources that create a strong framework on which to continue to provide well-attended, successful programs, services and special events. A priority should be made to increase tourism within the region. The entire region would benefit by collaborating resources and creating comprehensive marketing and signage programs. These initiatives will help promote and increase attendance at the programs that are already in place, thereby bringing more people to the region. Creating more four-season amenities and activities, while increasing lodging opportunities will encourage visitors to stay longer and come back more often, increasing revenue through retail spending, room and sales taxes. Additionally, the Northern Tier should look to extend the agricultural and historical themes of the region by increasing their agritourism and heritage-tourism based programs. These programs help connect residents and visitors alike to the community and reflect the rural character that is so important to residents of the region.

Table 6.2: Programs, Services and Special Events Offered*

	Sullivan	Susquehanna	Tioga	Wyoming	Regional
Arts and Culture					
Concerts	x	x	x	x	x
Arts/Crafts/Antiques	x	x	x	x	
Plays/Musicals	x	x	x	x	
Educational	x	x	x	x	
Outdoor Recreation Programs					
Organized Races	x	x	x		
Activity-specific Events	x	x	x	x	x
Educational	x	x	x	x	
Camps	x	x	x	x	
Heritage-based Programs					
Historic Sites	x	x		x	x
Historic Festivals	x	x	x	x	
Agritourism					
Local Harvest Tours/Events	x	x	x	x	x
Special Events and Festivals					
Festivals/Carnivals/Parades	x	x	x	x	x

* See narrative in this section for specific examples of programs, services and special events offered in each county.

Finally, it is important to increase promotion of the existing programs and amenities in the Northern Tier. Outdoor recreation, such as fishing, hunting and wildlife viewing are existing activities that are extremely popular and need to be more highly marketed. However, increased use and declining operations and maintenance funding makes these recreation resources and amenities increasingly difficult to maintain. The amount of public land across these four counties can create a financial burden when it comes to maintaining infrastructure and keeping these areas accessible, therefore additional and creative means should be explored to create sustainable operations and management of these resources and facilities (see Funding and Resources Analysis Section of the report).

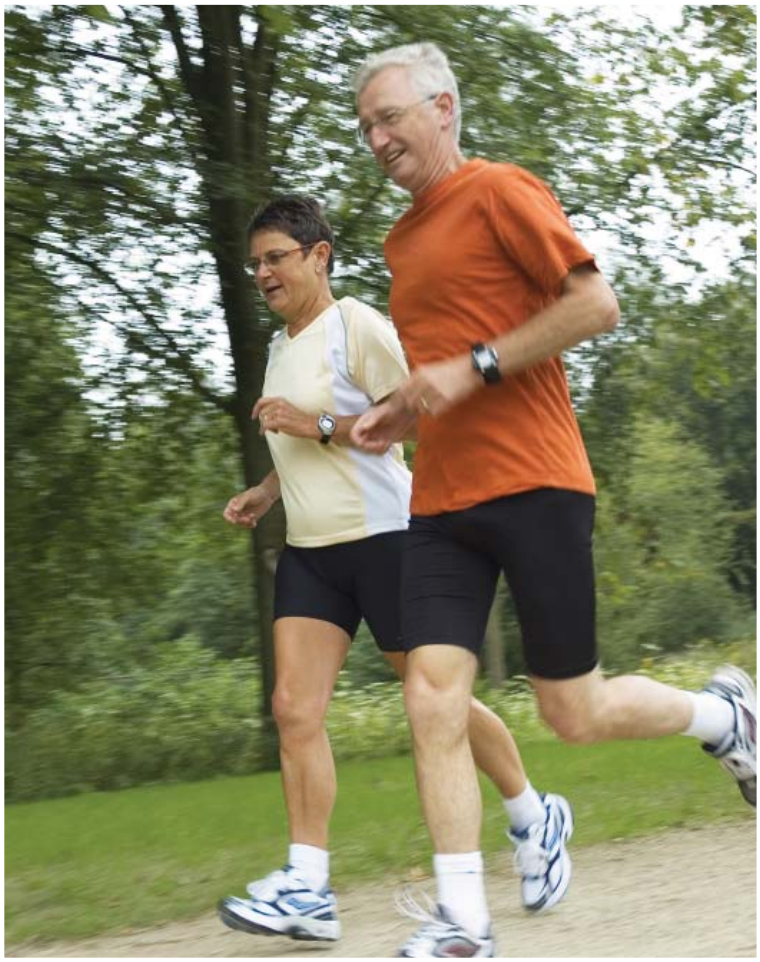
Park and Recreation Trends

State and Local Participation Trends

Every five years Pennsylvania's Department of Conservation and Natural Resources (DCNR) prepares a five year Statewide Recreation Plan. The previously completed plan was done in 2004 and covered the years 2004 to 2008; the Department recently completed its next plan for the years 2009 to 2013. As part of both plans, DCNR conducted citizen surveys and tabulated them Statewide and by region; these findings have been invaluable to the Northern Tier Greenways Master Plan and many of them are incorporated in this section of the report.

While the surveys supplied excellent data on participation and preferences, they are not directly comparable in all ways, due to changes in geographical groupings and in some terminology. The 2004-2008 Plan tabulated responses by 11 regions, of which the five-county Northern Tier was one. In the most recent plan (2009-2013), the number of regions has been reduced to six, plus the State's two major cities of Philadelphia and Pittsburgh.

In the 2009 analysis, data from Tioga County was included in the North Central Area along with 11 other counties bordering New York State and stretching west to Erie. Data



from Bradford, Sullivan, Wyoming, and Susquehanna Counties is included in the North East Area, along with 10 other counties stretching east to the State line and south to the Lehigh Valley. There were also some changes in terminology, and in these cases categories form both the 2004 and 2008 surveys have been included in **Table 6.3**. Also, active recreation opportunities, such as basketball, golf, tennis, softball, football, baseball, soccer, were popular among respondents, but not included in this analysis because they are outside of the scope of this master plan. Tabulations from the 2009 Statewide survey (**Table 6.3**) indicate that by far the single most important recreation activity in which Pennsylvanians participated in both years was walking for pleasure or fitness. Other trail/street/road activities in which more that 10% of the respondents participated were jogging (21%), hiking and backpacking (17%), bicycling (25%), and driving for pleasure (52%).

Table 6.3: Trends in Pennsylvania's Outdoor Recreation Participation Rates

	Pennsylvania	Pennsylvania
Activity	**2008-2009**	**2002-2003**
Walking for pleasure or fitness	84.0%	66.8%
Picnicking	57.0%	41.5%
Sightseeing or driving for pleasure	52.0%	52.9%
Swimming	52.0%	48.1%
Nature Watching	NA	49.3%
Visit natural or wilderness areas	NA	43.5%
Wildlife Watching	43.0%	19.3%
Nature Walks	NA	32.3%
Bird Watching	31.0%	17.1%
Bicycling	25.0%	23.4%
Fishing	24.0%	27.9%
Nature Study	21.0%	NA
Jogging	21.0%	27.4%
Sledding	20.0%	23.9%
Sports Shooting	20.0%	5.9%
Hiking	17.0%	30.3%
Camping	17.0%	24.2%
Canoeing or Kayaking	13%/10%	9.2%
Hunting	13.0%	10.7%
Motor Boating	12.0%	21.5%
Downhill Skiing or Snow Boarding	10.0%	11.4%
Mountain Biking	9.0%	6.6%
ATVing	9.0%	5.5%
Ice Skating	8.0%	10.2%
Four-Wheel Driving	8.0%	5.6%
Horseback Riding	6.0%	6.5%
Rollerblading or Skateboarding	5.0%	8.1%
Cross-Country Skiing	5.0%	2.1%
Snowmobiling	4.0%	3.7%
Water-Skiing	3.0%	2.9%
Off-Road Motorcycling	2.0%	3.7%

Source: Pennsylvania's Recreation Plan 2004-2008, Department of Conservation and Natural Resources: Outdoor Recreation in Pennsylvania Resident Survey, August 2009, Department of Recreation, Park & Tourism Management, Pennsylvania State University

Most popular of the water-based activities were swimming (52%), fishing (24%), canoeing (13%), power boating (12%), and kayaking and tubing with 10% each.

The most popular winter activities were downhill skiing or snowboarding (20%) and sledding or tubing (10%), while rifle and handgun shooting ranked high among individual sports. The most popular land-based activities were hunting (13%), camping (17%), picnicking (57%) and dog walking (33%). Viewing and outdoor education activities in which more than 10% of the respondents participated in included birding (31%), nature study (21%), wildlife viewing (43%), fish viewing (13%) and night sky viewing (35%). Generally, participation rates relevant to the study area, the North East and North Central regions, reflected those throughout the State. For example, walking attracted over 80% of the residents, and picnicking, driving, swimming, and wildlife viewing were among the other most popular activities. There were several areas in which participation rates in the North Central and North East regions were substantially above those of the State, including fishing, camping, hiking and backpacking and hunting. Activities in which respondents from the North Central region had particularly high participation rates were rifle and handgun shooting, canoeing, power boating and ATV riding.

Table 6.4 summarizes the favorite activities of respondents Statewide, how many days they engaged in these activities and how much time they spent traveling to those activities. Walking again attracted the largest number of respondents (920), who participated in this activity an average of 128 days per year and normally traveled 21 minutes to engage in this activity. Traditional outdoor activities like fishing, camping and boating, although popular, had among the lowest average participation days of these favorite outdoor activities, which could be attributed to the greater time commitment that they require. However, due to the long travel times to participate in these activities, opportunities exist for the development of businesses that feed, house and provide other services to these sportsmen.

Table 6.4: Favorite Outdoor Recreation Activities

Activity	Number of Respondents	Days in Past Year	Normal Travel Time (minutes)	Maximum Travel Time (minutes)
Walking	920	128	21	123
Fishing	664	28	223	456
Camping	446	18	221	695
Bicycling	412	49	46	100
Hiking and Backpacking	386	28	75	278
Swimming	379	47	79	120
Hunting	362	21	68	265
Golf	282	37	37	271
Picnicking	169	13	43	108
Dog Walking	157	208	16	47
Jogging/Running	150	127	21	80
Boating	127	20	148	304
Birding/Bird Watching	114	163	82	199
Downhill Skiing/Snowboarding	113	11	96	201
Driving for pleasure	108	58	647	820
Visiting Historic Sites	107	11	235	868
Baseball	101	48	51	75

Source: Outdoor Recreation in Pennsylvania Resident Survey, August 2009, Department of Recreation, Park & Tourism Management, Pennsylvania State University

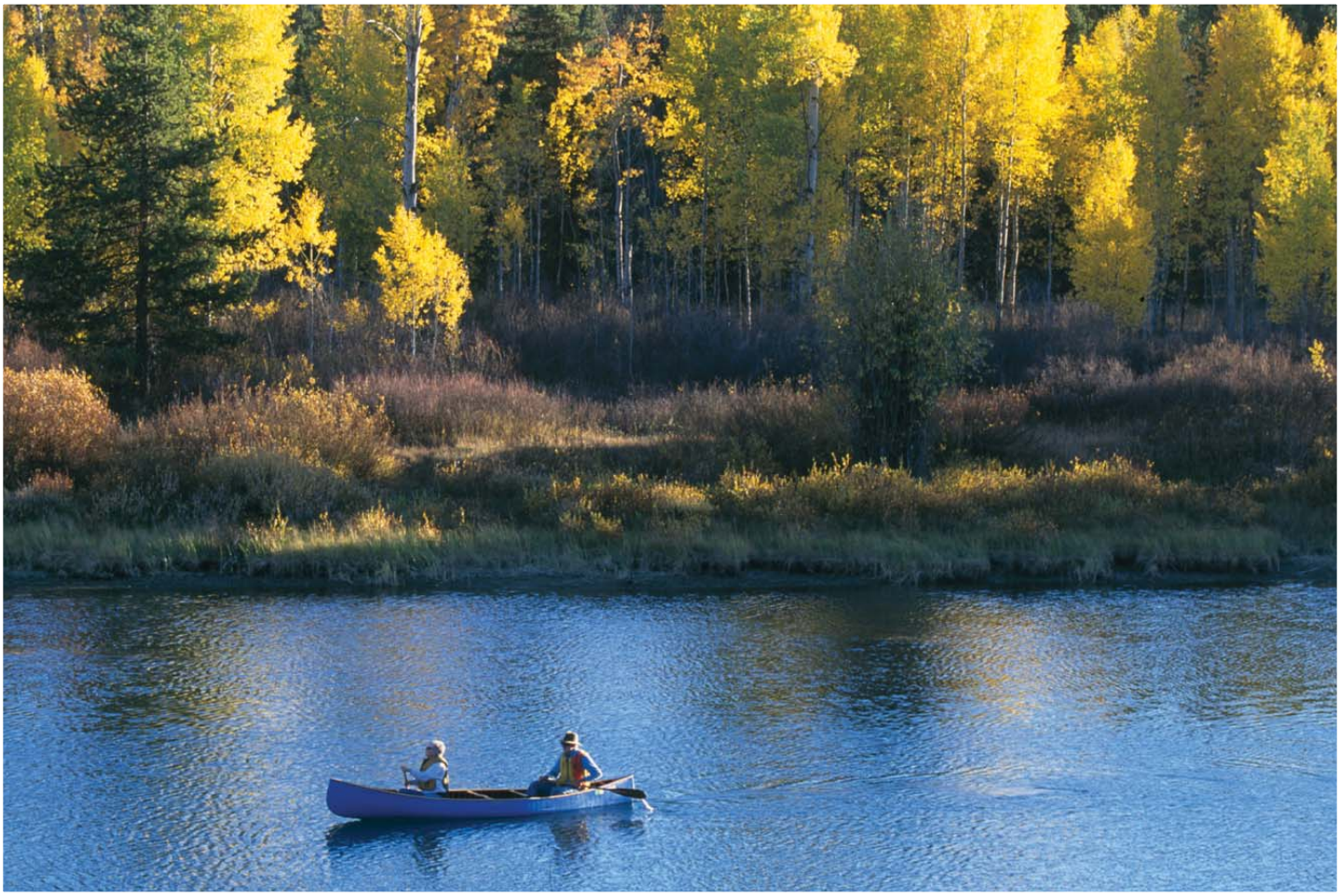


Table 6.5 shows the opinions that residents of the North East and North Central regions hold about the number and quality of recreation facilities in their area. The Statewide tabulations of the responses to this question showed a need for more and better bike paths and lanes, dog parks, rental cabins, nature inns and lodges, and wildlife viewing areas. Generally, respondents were more concerned about the number of facilities that are available than about the condition of existing facilities.

North Central and Northeast residents generally agreed on the need for more and better bike paths, dog parks and wildlife viewing areas, but were less concerned about the need for nature inns and rental cabins. Residents of the North East region were generally less satisfied with the number and quality of recreation facilities than residents of the North Central region. This may be in part attributable to the more suburbanized character of much of the North East region, and the greater distances that respondent must travel to reach outdoor amenities.

Additional concerns about the number of facilities in the North East were environmental education areas, natural or wild areas, heritage areas, skateboard and rollerblade areas, fish viewing areas, and rifle and handgun areas. Concerns about quality were voiced about environmental education areas, fish viewing areas, and skateboard and rollerblade areas. Of least concern in the North East were the number of scenic drives, off road motorcycling trails, primitive camping areas and four wheel driving trails.

Residents of the North Central region felt that there were an inadequate number of bike lanes, dog parks, environmental education areas, rifle and handgun ranges, fish viewing areas, and ATV trails. These residents also felt that the quality of same facilities could be improved. Of least concern in the North Central region were the number of scenic drives, campgrounds with hookups, picnic areas, snowmobile trails, as well as hiking and backpacking trails.

Table 6.5: Recreation Area and Facility Needs

	North East Region		North Central Region	
Facility	**Number Should be Increased (%)**	**Quality Should be Improved (%)**	**Number Should be Increased (%)**	**Quality Should be Improved (%)**
Bike Lanes	74.1%	62.2%	62.0%	52.3%
Dog Parks	70.5%	61.5%	60.8%	51.5%
Wildlife Viewing Areas	69.3%	57.1%	55.1%	45.7%
Environmental Education Areas	64.8%	51.6%	58.1%	45.7%
Bicycle Paths	64.7%	53.3%	48.5%	32.4%
Fish Viewing Areas	62.9%	52.4%	56.5%	49.2%
Natural or Wild Areas	60.6%	46.7%	45.6%	35.8%
Heritage/Historic Areas	59.8%	46.4%	38.3%	32.1%
Skateboard/Rollerblade Areas	57.9%	52.8%	55.2%	47.8%
Rifle/Handgun Ranges	57.0%	40.8%	56.6%	48.9%
Nature Inns/Lodges	56.4%	44.8%	41.9%	29.8%
Rental Cabins	55.8%	42.5%	49.9%	32.0%
ATV Trails	55.0%	42.9%	52.6%	42.9%
Rock Climbing Areas	54.9%	47.1%	48.1%	32.2%
Mountain Bike Trails	53.6%	39.8%	40.6%	27.2%
Horseshoe Pits	53.2%	45.2%	47.3%	34.6%
Walking Paths	52.2%	36.2%	40.6%	25.3%
Picnic Areas	51.7%	42.9%	34.2%	29.9%
Jogging/Fitness Trails	51.1%	38.5%	35.7%	21.4%
Water Trails	49.5%	40.4%	42.6%	36.1%
Equestrian Trails	49.4%	37.6%	34.5%	23.9%
Campgrounds with Hookup	49.4%	41.6%	30.9%	32.5%
Snowmobile Trails	49.0%	37.6%	35.1%	24.2%
Hiking and Backpacking Trails	48.7%	33.2%	35.8%	27.1%
Lake/Stream Swimming Area	48.3%	40.2%	39.3%	37.0%
Four-Wheel Driving Trails	47.6%	41.9%	39.3%	34.3%
Primitive Camping Areas	45.1%	32.8%	40.1%	30.5%
Off-Road Motorcycling Trails	44.3%	39.0%	39.8%	31.7%
Scenic Drives/Byways	44.2%	41.2%	26.4%	26.5%

Source: Outdoor Recreation in Pennsylvania Resident Survey, August 2009, Department of Recreation, Park & Tourism Management, Pennsylvania State University

National Park and Recreation Trends

Activity-Based Programming Trends

Less Time for Recreation – Americans have less leisure time now than ever before which has led to changes in recreation patterns. People have less unstructured time after taking care of their daily responsibilities, which means recreation activities are moving towards unstructured, individual, and drop-in programs. Participation in structured and commitment-based programmed activities has decreased, although fitness programs with both indoor and outdoor exercise continue to increase in popularity.

- Arts and Culture - Art and cultural leisure experiences create a positive social environment and bridge differences in user groups. They also provide alternatives to traditional outdoor activities. Festivals offer opportunities to provide diverse cultural experiences to residents as well as tourists. According to the Americans for the Arts, arts, cultural and heritage tourists spend more and stay longer than other tourists.

- Extreme Sports and Activities - Participation in recreation has shifted over the past couple of years and the demand for "extreme" sports has been increasing, especially with youth and young adults. Sports such as BMX, in-line skating, rock climbing, mountain biking, ATVing and skateboarding are favorites. Many of these types of opportunities can be accommodated within park and recreation facilities and programs.

- Passive Recreation - Passive outdoor recreation activities, such as picnicking, sightseeing or nature watching remain popular, with exercise walking being the number one activity for Americans. Walking is easily accessible, unstructured, inexpensive and can be done in groups of people of all ages and physical fitness levels. Most of these activities can be accommodated with parks, open space and trail facilities.

- Fitness and Obesity - Since we spend less time exercising and participating in outdoor recreation, the number of overweight and obese Americans has increased drastically. In 1990, there were only ten states where less than 10% of the population was obese and the remaining states had 10-14%. In 2008, not a single state has less than 15% obesity rate. In fact only Colorado has less than 20%, and 32 states have rates equal or greater than 25% and six states over 30% of the population are obese. These daunting statistics show the need for accessible parks and recreation facilities and for providing programs that teach and show our youth and young adults how to better integrate outdoor recreation and physical activity into their daily lives.

Demographic-Based Programming and Participation Trends

As illustrated in the Demographics and Community Profile Section of the report, when compared to the State of Pennsylvania and the United States, the Northern Tier study area's population is projected to be older than both. For example, the projected median age for 2014 is as follows: Northern Tier study area – 42.9 years; State of Pennsylvania – 41.1 years; United States – 37.2 years. This data indicates that park and recreation providers within the Northern Tier needs to position its facilities, programs and services to accommodate an aging population. However, these agencies and organizations should not do so without working to meeting the needs of the younger population, which make up a large portion of the visitors to the area, and as a means to keep younger residents in the region.

Youth - Participation in out-of-school activities and programs offer support for youth and working families, as well as benefitting youth socially, emotionally and academically. Youth involvement in recreation programs has been proven to decrease juvenile crime and violence, reduce drug use, cut smoking, and alcohol abuse and decrease teen pregnancy. Although not the focus of this study, it is important to recognize that alternative providers provide the region's youth with opportunities to participate in active recreation opportunities, such as basketball, soccer and baseball over

individual activities. However, organized, after-school activities, and outdoor recreation programs targeted to school-age children in communities around the country could fill the fitness void that is growing wider in schools.

Although today's youth continue to participate in outdoor activities, they are still not meeting recommended weekly activity levels. Even with higher overall outdoor recreation participation and a higher percentage of participants that take part in an outdoor activity at least twice a week (37%) than other age groups, outdoor activity among youth makes up only a small portion of the CDC recommended "60 minutes of physical activity on most, preferably all, days of the week". Although the quantity of activity is low, the most popular types of outdoor activities that youth do participate in involve a vigorous amount of activity and often take place in community and regional parks, open space areas and on trails.

Favorite Outdoor Activities of American Youth (Age 6-17) by Number of Outings:

1. Bicycling
2. Running / Jogging / Trail Running
3. Skateboarding
4. Fishing
5. Wildlife Viewing

Young Adults - Unfortunately, national trends for outdoor activity show that young adults are even less active than youth. The frequency of outdoor activity starts to drop off from youth to young adulthood (around age 18) – the percentage of young adults who take part in outdoor activities twice a week or more drops to 25% for young adults, a 30% decrease from youth rates. The types of activities young adults participate in are the same, but there is a drastic decline in the number of outings. Just as with youth participants, young adults are not meeting CDC recommended activity levels. Collaborations among state, county, local and community recreation providers in the Northern Tier will be very important to engaging this portion of the population in healthy and active outdoor recreation opportunities.

Favorite Outdoor Activities of Young Adult Americans (Age 18-24) by Number of Outings:

1. Running / Jogging / Trail Running
2. Bicycling
3. Fishing
4. Skateboarding
5. Wildlife Viewing

Older Adults - Older Americans' leisure time is increasingly being spent doing physical activities, in educational classes, partaking in adventure travel and attending sporting events. These trends may be the result of the fact that for many, retirement is starting earlier than it has in the past. Approximately 70% of the current retired population entered retirement before the age of 65. These new retirees are younger, healthier, and have more wealth to spend for the services they want. These trends may explain the changing demands, nationally, from traditional low-cost social services to more active recreation experiences and programming for which older residents are willing to pay.

Those 65 and older are mainly interested in passive recreation activities (i.e. nature walks, bird watching), group social activities, and volunteering. In contrast, Baby Boomers (45-64) prefer small group or individualized active recreation opportunities (i.e. day trips, hiking, fitness). While older Americans leisure time is becoming more active, they are still the age group with the lowest percentage of people meeting the recommended activity levels. Therefore, targeted marketing and promotion of these types of activities should be considered when communicating with and working to engage older adults in outdoor recreation activities.

Parks and Recreation Facility Trends

The current national trend is toward a "one-stop" facility with a wide variety of amenities to serve all ages. Large, multi-purpose regional parks and centers help the park and recreation agencies to increase cost recovery, promote retention, and encourage cross-use.
Facilities and amenities that are becoming more common include:

- Walking paths and trails
- Nature centers, outdoor recreation and education centers
- Regional playgrounds for all ages of youth
- Dog parks
- BMX tracks
- Cultural art facilities
- Multi-purpose, recreation centers (65,000 to 125,000+ sq. ft.) for all ages and abilities
- Leisure and therapeutic pools
- Weight and cardiovascular equipment
- Interactive game rooms
- In-line hockey and skate parks
- Indoor walking tracks
- Climbing walls
- Indoor soccer

Key Findings

Americans are less active today than ever before. In order to decrease the astronomical obesity rates, the emphasis should be on promoting outdoor activities as an alternative to traditional forms of exercise. Both parents and children should be targeted in an informational campaign explaining the current state of affairs of health and how outdoor activities can help remedy and provide a fun, enjoyable way for youth to stay fit and healthy. Schools and the internet should be the primary avenues for distributing information. The activity levels for adults of all ages in Pennsylvania generally reflect nationwide averages, including the trend of decreasing physical activity with age. This is particularly relevant to the Northern Tier with its aging population. In 2009, 30% of the region was over the age of 55 and projections show this number will increase to 33% by 2014. The projected median age of 42.9 for residents in the Northern Tier in 2014 is more than 5.5 years higher than that of the United States as a whole.

Older adults are a group with physical fitness levels that vary greatly between individuals and have conditions that vary in type and severity. When promoting physical activity and outdoor recreation for this population, a range of activities beneficial to all abilities should be included. Additionally, activities that can help promote specific health benefits should be incorporated. Regular physical exercise is inexpensive, has no harmful side effects, can be shared with others and can prevent or improve the illnesses many Americans suffer from, including heart disease, high blood pressure, diabetes, obesity, back pain, osteoporosis and psychological problems.

Current generations, born and bred in prosperity, are looking for an amenity-rich and meaningful outdoor recreation experience, increasing the need for programs, facilities and infrastructure. Lands, programs, services and facilities will have to be expanded to accommodate the increasing number of park and recreation users, both residents and visitors to the region. Facilities will need to be programmed to meet the varying demands of users as well. Accommodating multiple age groups at once will attract family-oriented populations. Additionally, flexible facilities that can accommodate varying forms of recreation activity such as outdoor recreation (walking, hiking, biking, ATVing, etc.), environmental and nature programs, and arts and cultural activities will meet the desires of a diverse population.

Management and Operations Analysis

State Lands

The primary owner and manager of parks, open space and outdoor recreation in the Northern Tier is the State of Pennsylvania. A majority of State regulation and operation falls under the Department of Conservation and Natural Resources. DCNR includes the following agencies:

- State Forest
- State Park
- Geological Survey
- Recreation and Conservation
- Wild Resource Conservation Program

Other state agencies that are engaged in management and operation of state lands include:

- Department of Environmental Protection
- State Game Commission (State Game Lands)
- State Fish & Boat Commission

All counties within the study area have State Game Lands. The largest concentration of these multi-use recreation lands are in Wyoming and Sullivan Counties. These lands are used for both hunting and other leisure opportunities.

Analysis

The strong presence of state-managed recreation facilities and lands is somewhat of a challenge when, in some circumstances, they are the only provider of public open space and recreation in certain areas. In times of tight budgets, as the state is currently encountering, services and operations are cut, leaving users with limited county, municipal or private recreation options. Only Tioga (Wellsboro, Department of Parks & Recreation) and Sullivan (Sullivan County and Dushore Recreation Associations) Counties have a local-government alternative to state-owned facilities.

The ripple effect of tight budgets is being felt throughout the study area. In Susquehanna County for example, a Friends group is primarily overseeing the management and operations of Salt Springs State Park, due to budgetary constraints at the state level. At Ricketts Glen State Park in Sullivan County, as well as many other state parks, operations and maintenance positions are not being filled due to lack of funds.

Use of State Game Lands for multiple recreation activities occurs, but is a concern due to the potential for safety issues and user conflicts. These lands are used for hunting as well as for other passive uses, like trail walking, hiking and wildlife viewing. While there are advisories posted on the Game Commission website and at physical locations, these non-conforming uses could pose a hazard for those not aware of trails located on active hunting lands. Stakeholder input included the fact that State Games Lands are not used to their highest potential due to restricted uses. Shared usage through controlled management and policies is desired.

Sullivan County

Sullivan County is primarily dependent on state recreation areas for the provision of parks, open space, and trails. Located within these state-managed areas are state parks, natural areas, boat ramps, hunting areas, picnicking, trails and camping. These areas are managed by a variety of state agencies, including the Pennsylvania DCNR, the Pennsylvania Game Commission and the Pennsylvania Fish & Boat Commission.

The SCRA does facilitate redevelopment and enhancement of recreation to townships located within the County. The group's goal in the future is to develop a community and cultural facility for Sullivan County residents. The property for this new facility will be adjacent to the Sullivan County High School.

In addition to state and the SCRA, The Nature Conservancy, as well as several local and regional conservancies, plays a role in preserving areas in the Endless Mountains landscape. The Endless Mountains span 2,800 miles across Bradford, Sullivan, Susquehanna and Wyoming Counties in the Northern Tier (The Nature Conservancy). The groups work with state and local governments to find lands to preserve as well as recommend uses that are conducive with the landscape.

Analysis

State lands cover a wide area of the county; over 37%. This coverage provides county residents with many opportunities to recreate. While these opportunities abound, discussions with stakeholders indicate that local residents do not tend to use these facilities and that tourists and visitors are the primary users. For example, State Park officials indicate that World's End State Park had 300,000 visitors and Ricketts Glen State Park had 700,000 visitors last year. This attendance placed Ricketts Glen in the top ten visited in the state. However, given the limited lodging in the area, the Park's ten modern cabins located on site are rented out at least a year in advance.

As natural gas exploration and drilling occurs, companies will need to create pipeline corridors throughout the region. As a way to enhance connectivity throughout the county, stakeholders feel that trails and greenways could be create alongside pipeline areas. This may be a positive way to use land already disturbed by pipeline placement. Additionally, trails on abandoned rail lines may be used to further enhance connectivity.

Susquehanna County

Susquehanna County has the greatest variety of recreation land managers in the study area. Further, the county is afforded the best highway access (Interstate 81) for people trying to access parks, trails and open space. From state-owned snowmobile trail corridors from Forest City north to the New York state line, to the 600-acre Woodbourne Forest and Wildlife Preserve owned by the Nature Conservancy, the County hosts a variety of recreation opportunities available for public use.

State recreation lands account for 3% of county land area, far less than the other three counties in the study area. In addition to these lands, other state-managed boat ramps (use requires a Fish and Boat Commission permit) are located in the northeastern part of the county. These areas are managed by the Pennsylvania Fish & Boat Commission. The lack of state lands and parks creates a dependence upon not only private recreation providers in the county, but could drive some tourism and leisure service dollars outside of Pennsylvania and into adjacent New York State.

Analysis

The County has a low percentage of state lands when compared to other counties in the study area. This has created a greater dependence on other forms of recreational opportunities, both public and privately provided. It has also created a greater awareness of what forms of leisure activities may be missing or needing enhancement, like public swimming access and trail connections.

Natural gas exploration has grown in Susquehanna County and has created challenges and opportunities. Natural gas impacts will continue to grow as more drilling occurs. Residents and community leaders recognize that impacts could influence the landscape permanently. Stakeholders indicated concerns over impacts to state lands and how visual impacts can be minimized. Conversely, some see pipeline areas as opportunities to create new trail corridors for public use.

Tioga County

Tioga County, the second most populated county in the study area, has many passive and active recreation sites. The county is also fortunate to have Wellsboro provide park and recreation activities to both borough and county residents. The Borough also hosts outdoor special events, like the "Dickens of a Christmas Celebration" and Laurel Festival 10K Foot Race that draws people from the region.

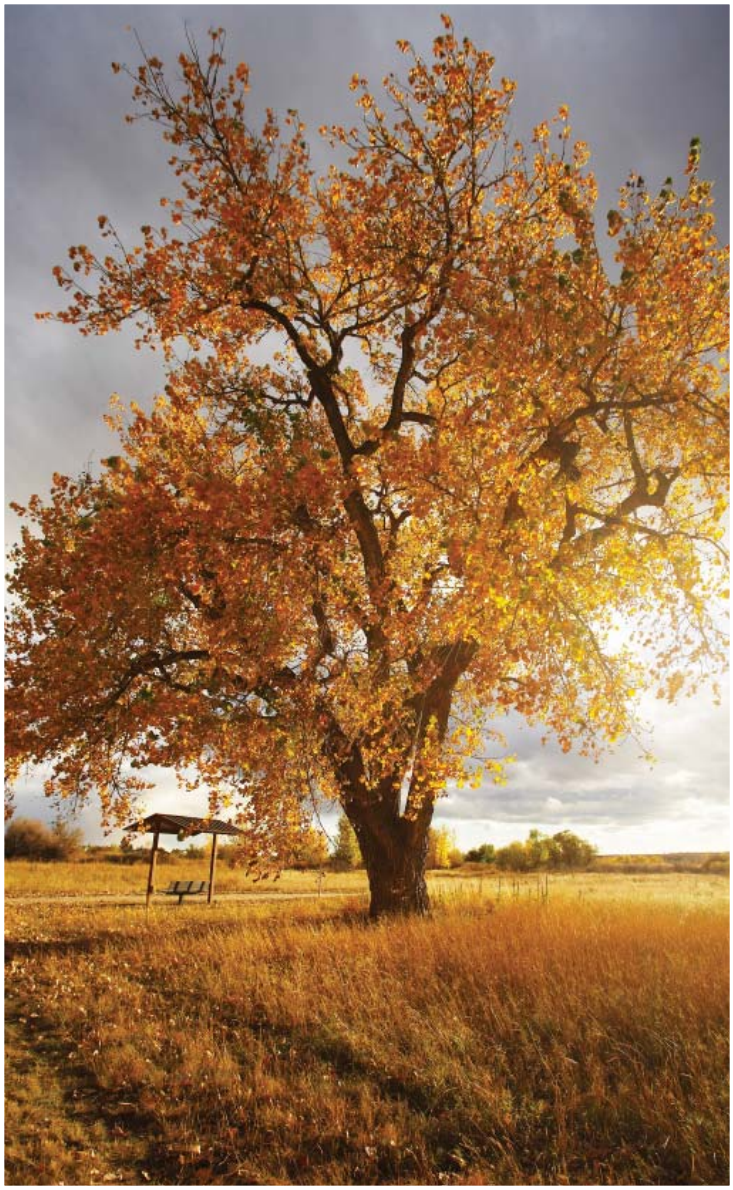
Like the other counties in the study area, Tioga County has many state recreation lands available for use. In addition to state parks and lands, Tioga County has numerous boat ramp areas, picnic sites and camping. Many of these sites are located within the state parks. Others are located at Pennsylvania Fish & Boat Commission managed lakes. Stakeholders and state personnel indicate that a major concern is the limited of dollars available for capital improvements as well as for staffing and operations. This has affected access to certain park areas that have bridge and trail areas that are unsafe to use.

According to stakeholder comments, communication between outdoor recreation providers and the public is a shortfall throughout the county. People who visit the state recreation areas tend to be from out of town and not locals. Marketing what is available to the local community has not been priority.

Analysis

Tioga County is fortunate to have municipal and state park, open space, and outdoor recreation providers. This allows for a variety of both active and passive recreation opportunities for residents and visitors. This structure is more typical of counties studied nationally and provides greater accessibility and a balance of neighborhood, community and regional recreation opportunities and facilities.

As in other counties in the study area, the state budget crisis is of great concern. State facilities are operating with less staffing capacity and these shortfalls are affecting services. Further, due to lack of needed capital improvements, some areas within state parks, forests and game lands have become safety concerns based on staff comments.



Communication between state agencies, the Borough of Wellsboro and the community has been a challenge. Stakeholder input indicated that citizens of the county and the Northern Tier tend to not widely participate in many park and outdoor recreation activities and programs provided by local agencies. This can lead to an absence of stewardship and less public involvement for volunteering, park cleanups, and other public functions.

Wyoming County

Wyoming County is home to a large State Game Lands area. The location makes it convenient to both Sullivan and Bradford Counties' residents. In addition to these lands, the state works with The Nature Conservancy to preserve areas within the county. Additionally, numerous boat ramps, managed by the Pennsylvania Fish & Boat Commission, are located throughout the county. Many of these boat launch areas are located along the Susquehanna River, with others located at Lake Winola and Stevens Lake.

Stakeholder meetings indicated that there is a core group in the county that understand the economic and health benefits of outdoor recreation, parks and greenways. However, most citizens tend to be neutral regarding its benefits. County leaders are attempting to educate residents that the area would be a great destination for heritage and recreation tourism.

Analysis

Wyoming County has no state parks and has limited recreational opportunities in the northern part of the county. The County's predominant outdoor recreation resource is the area's numerous lakes, as well as the Susquehanna River. Those interested in pursuing park, open space, or trail activities must travel to nearby counties to utilize these types of facilities.

Community leaders and stakeholders recognize the economic benefits that recreation and heritage tourism would provide to the region. The challenge is educating county residents that investment in recreation would provide long-term benefits. In addition to this challenge, lodging in Wyoming County is limited so any type of lodging or bed tax that would go into tourism promotion would be limited.

7

ECONOMIC, FINANCIAL & RESOURCE ANALYSIS

ECONOMIC, FINANCIAL & RESOURCE ANALYSIS

Economic Benefits Analysis

The Trust for Public Land's report, "The Benefits of Parks: Why America Needs More City Parks and Open Space," makes the following observations about the health, economic, environmental, and social benefits of parks and open space:

- Physical activity makes people healthier
- Physical activity increases with access to parks
- Contact with the natural world improves physical and physiological health
- Increases both residential and commercial property values
- Adds value to the community and economic development efforts
- Enhances the benefits of tourism
- Trees are effective in improving air quality and act as natural air conditioners
- Trees assist with storm water control and erosion
- Provides recreational opportunities for all ages
- Creates stable neighborhoods and strong communities

As one can see there are many benefits associated with the provision of parks, outdoor recreation and open space facilities and amenities. For the purpose of this master plan, the consultant team's analysis will primarily focus on the economic benefits associated with the provision of these facilities, amenities and associated programming for the Northern Tier region.

Economic Benefits

The economic benefits of investment in outdoor recreation include tourism development, direct spending by participants in recreation activities and increased tax revenue. These benefits can be substantial, considering that three quarters of Americans participate in bicycling, camping, hunting, paddling, hiking, snow sports or wildlife viewing. According to a 2006 report by the Outdoor Industry Foundation, Southwick Associates and Harris Interactive, outdoor recreation supports one in every 20 U.S. jobs, generates $88 billion in state and federal tax revenue, and stimulates 8% of total consumer expenditures.

This analysis of economic benefit is built upon the assumption that current residents of the Northern Tier who spend money on recreation activities within the Northern Tier are not substantially increasing revenue to the region, because those dollars likely would have been spent within the region on other goods and services. The major economic impact that will result from increased spending on recreation activities will result from visitors who come from other parts of Pennsylvania and throughout the United States. This section of the report addresses those likely impacts.

Investment in parks, recreation, and greenways should (if properly marketed) result in increased tourism. It is helpful to review the impact that tourism currently has on the State and the Northern Tier region in order to understand the potential future impact that increased visitation will have. D.K. Shifflet & Associates Ltd. recently prepared a report for the Pennsylvania's Tourism Office entitled "The Economic Impact of Travel and Tourism in Pennsylvania –Travel Year 2007." This section summarizes some of the key findings of that report.

Table 7.1 summarizes the total visitor spending in Pennsylvania in 2007 for business and leisure travelers. It shows that visitor spending added over $27 billion to the State's economy in that year, accounting for just under 5% of that economy. Of this, 28.1% was spent by business travelers, and almost 72% (approximately $20 billion) was spent by leisure travelers. Sectors that received the major benefits of these visitor expenditures were transportation, accommodations, retail trade, amusement and recreation, and eating and drinking establishments.

	2007	% of Total
Total Visitor Spending	$27,813,000,000	
Business	$7,813,000,000	28.1%
Leisure	$20,001,000,000	71.9%

Source: The Economic Impact of Travel and Tourism in Pennsylvania

Travel Year 2007, prepared by Global Insight for Pennsylvania Tourism Office, Department of Community and Economic Development

The report also shows the dollar amount spent by visitors on goods and services by sector within the Northern Tier counties, as well as the percent of each county's economy that are attributable to visitors. Tioga County experienced the greatest impact from tourism, with 3.2% of its economy attributable to it. Sullivan and Susquehanna Counties associated 2% and 2.5%, respectively, of their economy coming from that source. Less than 2% of the total economy of both Bradford and Wyoming counties was attributable to tourism.

Table 7.2 summarizes these impacts by spending catego-

Table 7.2: Visitor Spending by Northern Tier Region County and Category of Spending, 2007(millions $)

Spending Category	Bradford	Sullivan	Susquehanna	Tioga	Wyoming	Northern Tier
Transportation	18.41	1.37	8.83	12.85	8.91	50.37
Food & Beverage	23.33	1.47	15.65	24.41	11.56	76.42
Lodging	3.94	1.09	4.84	16.2	5.39	31.46
Shopping	25.82	1.06	4.63	15.13	9.55	56.19
Entertainment	4.48	0.64	1.78	5.64	1.19	13.73
Other	4.22	0.34	2.75	4.69	2.2	14.2
Total	80.2	5.97	38.48	78.92	38.8	242.37
Share of County Economy	1.6%	2.0%	2.5%	3.2%	1.9%	NA

Source: The Economic Impact of Travel and Tourism in Pennsylvania - Travel Year 2007, prepared by Global Insight for Pennsylvania Tourism Office, Department of Community and Economic Development

ries. The total amount spent in 2007 in the Northern Tier was just over $242 million, with the largest amount going to Bradford ($80 million) and Tioga ($79 million) Counties. Susquehanna and Wyoming Counties both had over $38 million in visitor spending, while Sullivan had just under $6 million. The greatest expenditures were again in food and beverage, shopping, transportation and lodging

Table 7.3 summarizes employment generated by tourism

by county for the Northern Tier. Direct employment is the number of jobs attributed to businesses that directly provide goods and services to visitors. Indirect jobs (the supplier effect) are benefits to those who supply goods and services to those who directly provide goods and services to visitors. Induced impacts (the multiplier or income effect) are impacts of visitor generated wages as they continue to cycle through the local economy.

The data indicates that there were 3,471 jobs in the Northern Tier that were directly attributable to tourism. These jobs in turn accounted for an additional 1,851 indirect or induced jobs, for a total of 5,322 tourism-related jobs. Bradford and Tioga counties both had over 1,100 jobs in the tourist economy. Just over 600 jobs were induced by those direct jobs in each county. Bradford and Tioga counties had about 65% of the tourism-related jobs in the region, while Susquehanna and Wyoming counties had about 32% of tourism related employment.

Table 7.3: Northern Tier Tourism Employment by

County	Direct	Indirect and Induced	Total
Bradford	1,149	612	1,761
Sullivan	85	46	131
Susquehanna	551	294	845
Tioga	1,130	603	1,733
Wyoming	556	296	852
Northern Tier Total	3,471	1,851	5,322

Table 7.4 summarizes direct, indirect and induced, and total wages attributable to tourism in the Northern Tier in 2007. Tourism brought in over $165 million in total wages, with Bradford receiving the greatest benefit, (over $54 million). Tioga County saw the second greatest benefit from these visitors with just under $54 million. Susquehanna and Wyoming counties both had more than $26 million, while Sullivan had the least wages generated ($4 million).

Table 7.4: Tourism Wages by Northern Tier Region

County	Direct	Indirect and Induced	Total
Bradford	$30,904,484	$23,773,619	$54,678,103
Sullivan	$2,296,843	$1,766,872	$4,063,715
Susquehanna	$14,828,765	$11,407,192	$26,235,957
Tioga	$30,412,768	$23,395,360	$53,808,128
Wyoming	$14,952,711	$11,502,539	$26,455,250
Northern Tier Total	$93,395,571	$71,845,582	$165,241,153

Tourism also had a substantial impact on county tax bases. **Table 7.5** summarizes this impact, and shows that total tourism taxes generated in the Northern Tier was over $61 million in 2007. Of this, $23 million went to State and local governments. Bradford and Tioga counties generated almost $8 million each for state and local government, while Susquehanna and Wyoming generated close to $4 million each.

Table 7.5: Tourism Tax Impact by Northern Tier

County	Federal	State/Local	Total
Bradford	$12,351,401	$7,702,331	$20,053,732
Sullivan	$917,965	$596,247	$1,514,212
Susquehanna	$5,926,519	$3,784,367	$9,710,886
Tioga	$12,154,880	$7,949,586	$20,104,466
Wyoming	$5,976,056	$3,831,076	$9,807,132
Northern Tier Total	$37,326,821	$23,863,607	$61,190,428

Source: The Economic Impact of Travel and Tourism in Pennsylvania - Travel Year 2007,prepared by Global Insight for Pennsylvania Tourism Office, Department of Community and Economic Development

Other Economic Benefits

Effects on Commercial Development

Many types of recreation generate a demand for goods and services that participants need or find useful. This occurs most often in instances when participants have traveled far from home and need food, lodging or equipment to support them in the short term. For instance, hunting, fishing, or camping attracts many participants from several hundred miles, and many of these recreation participants will require goods and services during their time away from home. Hotels, eating and drinking establishments, stores, and outfitters are potential growth businesses in areas that attract outdoor participants such as these.

In addition, trail development in other parts of the country has resulted in increased business for existing retailers and the arrival of new retailers. A survey conducted one year after the opening of the Missouri River State Trail showed that 61 businesses reported that the Trail had had a positive effect on their business, and 11 businesses said that the Trail had been an important factor in their decision to establish a business at that location. In addition, in Indianapolis, a decision to extend the existing Monon Trail has spurred redevelopment aging older town centers on its route.

Impacts on Property Values

The National Recreation and Park Association (NRPA) commissioned a study entitled The Impact of Parks and Open Space on Property Values and the Property Tax Base. Conclusions of the report were that public park land often increases the value of nearby properties, and therefore increases property taxes as well. Moreover, the municipality avoids the cost of providing services to a residential development that would have otherwise located on that land. The report also noted that a 20% increase in value for properties that are adjacent to parkland is "a reasonable starting point," although the actual gain in value will depend upon size, maintenance and proximity to the park.

In 2005 the Wharton School of the University of Pennsylvania conducted a study of the results of the "greening" of the Kensington neighborhood in Philadelphia. Findings were that greening vacant land increased property values as much as 30% and that tree plantings caused nearby property values to rise up to 10%. In addition, there are fewer crimes in Philadelphia neighborhoods where there is a significant amount of well maintained open space than in those neighborhoods with little or no vegetation.

Environmental Impacts

Air quality is not as prominent of an issue in the Northern Tier as it is in the more urbanized areas of the State. However, increased walking and bicycling and decreased use of automobiles should nonetheless have a positive effect on air quality. By providing an alternative to the use of fossil fuels for transport, bicycling and walking will help to maintain the region's air quality and increase its attractiveness as a place to live, work and play.

Health Benefits

A study published the Health Promotion Practice Journal in 2004 concluded that every $1 spent on trail development resulted in $2.94 of public health benefits because of increased physical activity. Another recent study by the National Park Service compared people who have a sedentary lifestyle to those who exercise regularly. Those who exercise had 14% fewer healthcare claims, spent 30% fewer days in the hospital and had 41% fewer claims greater than $5,000. Regular exercise, including hiking and bicycling, helps with both cardio-vascular conditioning and the regeneration of bone mass. Furthermore, participation in physical activity and exercise can result in better physical fitness, a decrease in obesity and reductions in direct and indirect costs of illness and disease.

The survey undertaken for the 2009 Statewide Recreation Plan asked residents what type of physical activities they participated in, how often they participated, how long they participated, and what they felt the health benefits of this activity were. Parks and trails account for over one third of the outdoor physical activity in which Pennsylvanians engage. Respondents also felt that outdoor physical activity reduced their stress levels and improved their mental health, in addition to improving their physical fitness and physical health.

Financial and Resource Analysis

Budget and Funding Overview

There are a variety of agencies that fund park and recreation projects within the Northern Tier study area. In order to comprehend the role each of these agencies play in providing funding opportunities, it is important to understand the state budgeting process, current funding trends of relevant agencies, and options for future funding sources.

Given the current economic trends and the economic condition of Pennsylvania and the United States, funding for parks and recreation facilities is becoming tighter and more difficult to obtain. In this type of economic environment, it will be imperative for the NTRDPC and its partners to understand the different types of funding that is available, as well as how to secure it to fund park and recreation projects within the Northern Tier region.

Pennsylvania State Budgeting Process

The state budget process evolved throughout the Twentieth Century into what it is today. Currently, the state budget can be classified as program budgeting which is a form of budgeting that focuses on a series of stated objectives. Each of the objectives must be achieved through activities that are either wholly or partially underwritten by state revenues. The budget must also substantiate each planned expense by explaining their desired outcomes. Overall, the state budget process is intended to identify the results of each planned government program and the effects of these programs on the citizens and environment of Pennsylvania.

The Commonwealth of Pennsylvania operates on a July 1- June 30 fiscal year (FY). The State's budget preparation and approval begins in the early fall of the previous year and is approved by the Governor in the late summer of the following year. The Pennsylvania annual budget process is comprised of four major states: preparation, approval, execution and audit. This complex process begins with the preparation phase during which State Agencies prepare budget requests in August and submit them to the Secretary of the Budget in early October. The Office of the Budget reviews agency budget requests from October through January. The Governor reviews the requests in order to make final budget decisions and compile The Governor's Executive Budget in January. By early February, the Governor presents his annual budget address to a joint session of the General Assembly.

After receiving the Governor's Executive Budget, the General Assembly begins the approval phase of the budget process. The House and Senate appropriations committees begin this phase by reviewing agency requests for funding. Then, the General Assembly generates the passage of the General Appropriation Bill, individual bills, and any additional revenue measures. The legislative approval phase is concluded by the General Assembly presenting the bills to the Governor for approval in conjunction with the official revised revenue estimates.

State agencies and Office of the Budget are responsible for the execution phase of the Pennsylvania annual budget process. The Office of the Budget is responsible for approving individual agency spending plans which are referred to as "rebudgets." Each agency is then responsible for implementing the rebudgets, operating within allocated resources, and producing the results stated in the Governor's Executive Budget.

The audit phase of the budget occurs after the close of the formal fiscal year and is the last phase of the annual budget process. This phase of the process includes a financial audit, review of program performance, and evaluations of selected programs. The state Auditor General also performs a financial post audit.

2008-2010 State Budgeting Process and Outcomes

Over the past year, the United States economy has experienced the worst economic downturn since The Great Depression. In addition to the national economy, the current economic recession has severely affected state and local economies. Despite predictions of a multi-billion dollar deficit by members of the Pennsylvania General Assembly,

Governor Ed Rendell signed a $28.3 billion General Fund Budget for FY 2008-2009 on July 4, 2008. Although the Governor reduced FY 2008-2009 spending to $27.4 billion in December of 2008, it was not enough to make up for the $3 billion tax revenue shortfall in the state's General Fund Budget for FY 2008-2009.

After 101 days of budget impasse, the FY 2009-2010 General Fund Budget of $27.799 billion was signed on October 9, 2009. In order to account for the previous and predicted budget shortfalls, many agencies face FY 2009-2010 with major fund reductions. In particular, as shown in **Table 7.6**, the Department of Community & Economic Development is faced with a 53% reduction in funding and the Department of Conservation and Natural Resources is faced with a 19% reduction in funding as compared to FY 2008-2009. Based on feedback from state employees, stakeholders

Table 7.6: Pennsylvania General Fund - Historical Analysis by Agency (Amounts in Thousands)

	2009-10	Difference from 2008-09	2008-09	% Change 2009-10 vs. 2008-09	The Most Recent Fiscal Year 2009-10 Approximates
Public Welfare	8,727,833	(698,524)	9,426,357	-7%	2005-06
Education	10,161,925	(604,091)	10,766,016	-6%	2006-07
Community and Economic Development	264,848	(302,671)	567,519	-53%	1997-98
Environmental Protection	159,056	(58,459)	217,515	-27%	1996-97
Executive Offices	204,486	(38,552)	243,038	-16%	1999-00
Health	239,999	(32,939)	272,938	-12%	2003-04
State System of Higher Education	465,197	(31,971)	497,168	-6%	2005-06
Judiciary	276,860	(30,281)	307,141	-10%	2005-06
Labor and Industry	92,070	(28,581)	120,651	-24%	2003-04
Legislature	299,026	(25,659)	324,685	-8%	2003-04
Conservation and Natural Resources	92,369	(21,000)	113,369	-19%	2003-04
Higher Education Assistance Agency	455,170	(17,703)	472,873	-4%	2007-08
Military and Veterans Affairs	111,276	(15,724)	127,000	-12%	2003-04
Historical and Museum Commission	22,719	(9,177)	31,896	-29%	1994-95
Agriculture	67,830	(8,255)	76,085	-11%	2003-04
Attorney General	86,522	(7,987)	94,509	-8%	2005-06
Emergency Management Agency	15,494	(6,647)	22,141	-30%	1999-00
Auditor General	48,303	(6,217)	54,520	-11%	2002-03
State	9,823	(2,642)	12,465	-21%	2006-07
Thaddeus Stevens College of Technology	8,550	(1,743)	10,293	-17%	2003-04
Housing Finance Agency	11,000	(1,234)	12,234	-10%	2005-06
Health Care Cost Containment Council	2,844	(909)	3,753	-24%	1996-97
Transportation	11,013	(708)	11,721	-6%	2008-09
Governor's Office	6,900	(393)	7,293	-5%	1997-98
Securities Commission	1,400	(382)	1,782	-21%	1981-82
Lieutenant Governor's Office	1,075	(353)	1,428	-25%	2003-04
State Ethics Commission	1,980	(215)	2,195	-10%	2006-07
Tax Equalization Board	1,159	(48)	1,207	-4%	1990-91
Environmental Hearing Board	1,708	(2)	1,710	0%	2008-09
State Police	182,664	359	182,305	0%	2008-09
General Services	120,175	2,307	117,868	2%	2007-08
Probation and Parole	117,664	6,059	111,605	5%	2008-09
Insurance	123,635	6,203	117,432	5%	2008-09
Corrections	1,612,329	6,824	1,605,505	0%	2008-09
Revenue	198,602	17,092	181,510	9%	2007-08
Treasury	975,153	19,805	955,348	2%	2008-09

and on site analysis of existing park conditions, State Parks have been well-funded in the past. Up until now, parks have been able to upgrade and modernize facilities and keep an adequate amount of staff to maintain them. Given that visitors and tourism a large part of the regional economy and revenue generation for the area, it will be imperative for local and state agencies to continue quality maintenance for park and recreational facilities within the area. Improper maintenance and upkeep of these facilities will likely result in a negative impact on the regional economy.

Agencies Providing Parks, Recreation, Trails and Open Space Facilities, Programs and Services

There are a variety of agencies that are currently fund and operate parks, trails, and open space within the Northern Tier area. Of those agencies, four have been historically and are currently being funded by the state. These include the Department of Conservation and Natural Resources (DCNR), the Department of Environmental Protection, the Department of Agriculture, and the Department of Community and Economic Development (Tourism Promotion Assistance).

The Department of Conservation and Natural Resources
was established to conserve and maintain Pennsylvania's natural resources. There are several bureaus within the Department including the Wild Resource Conservation Program, Bureau of State Forests, Bureau of State Parks, Bureau of Topographic and Geological Survey and the Bureau of Recreation and Conservation. These bureaus work with the DCNR to maintain and preserve all state parks and state forest land. They also provide technical assistance to benefit state outdoor recreation amenities and services, as well as providing information on ecological and geological resources and establishing community conservation partnerships.

The Department of Environmental Protection
is another state agency that is funded and operates within the Northern Tier area. This agency is responsible for administering state environmental laws and regulations. Responsibilities of the Department include ensuring safe drinking water, preventing pollution, monitoring water quality in rivers and streams, and supporting community renewal/revitalization efforts.

The Susquehanna River Basin Commission
formed in 1970 to coordinate water resources efforts between Pennsylvania, New York, Maryland and the federal government, is a federal agency that operates partially within the Northern Tier under the umbrella of the Department of Environmental Protection. The Commission serves as the agency who guides the conservation, development, and administration of the water resources within the 27,510 square

mile Susquehanna River Basin. The Commission is partially funded by the Pennsylvania General Fund, as well as by the federal government and the other states within the Commission.

The Department of Agriculture
is another state agency that helps to encourage, protect, and promote agriculture and related industries. There are over 7.8 million acres of agricultural lands within the state of Pennsylvania. This agency strives to provide consumer protection for farm families through a variety of inspection services. The Department's Clean and Green Program (ACT 319) is designed to preserve agricultural and forest land. This program provides a real estate tax benefit to the owners of 10 acres or more of this type of land by taxing the land on its use value, rather than its fair market value under the conditions that their land is only devoted to agricultural use, as an agricultural reserve, or as a forest reserve. Although the land owner is not obligated under the agricultural use or forest reserve use to open their land to the public, it may be required of the land owner to provide public access to their land if it is designated as an agricultural reserve.

The Department of Community and Economic Development
is another agency that is funded by the state. The goal of the Department is to "foster opportunities for businesses and communities to succeed and thrive in a global economy, thereby enabling Pennsylvanians to achieve a superior quality of life." A program within the Department that is applicable to this study is Tourism Promotion Assistance Grant Program. This Program provides funding to supplement existing local destination marketing efforts by designated Tourism Promotion Agencies. Through this program, grants can cover a variety of expenses (i.e. advertising, public relations, printing, postage, brochures) that are associated with marketing a destination.

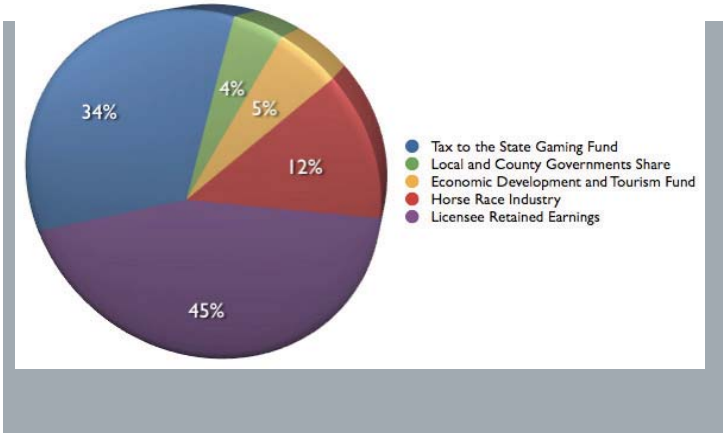
The Pennsylvania Game Commission and the Fish and Boat Commission
are additional agencies that are independently funded and operate within the Northern Tier area. For more than 100 years, the Pennsylvania Game Commission has protected and conserved wildlife and has promoted wildlife management programs throughout the state. Currently, this agency does not receive appropriations through the state. The Commission is funded primarily through hunting and furtaker license sales, state game lands timber, revenue generated through mineral, oil, and gas procurement, and by the federal excise tax on sporting arms and ammunition.

Another user-funded agency that operates in the Northern Tier area is the Fish and Boat Commission. The mission of this agency is to protect, conserve, and enhance the Commonwealth's aquatic resources and to provide fishing and boating opportunities throughout the state. The Commission operates out of two special funds: the Fish Fund and the Boat Fund. The Fish Fund consists mostly of revenue obtained through fishing licenses and fees as well as federal funds obtained from taxes on fishing related items. The Boat Fund consists of revenue obtained through boat registration and titling fees, refunds on liquid fuel taxes used by boats, and some federal aid.

The Pennsylvania Gaming Control Board
is an additional user-funded agency created in 2004 to supervise the development of a slots casino industry within the state. The Board is funded directly by its users and by licensing and permit fees. In addition to providing a significant revenue source for the state, this agency provides assistance to the horse racing industry, provides property tax relief, a variety of economic opportunities, and enhances tourism and the quality of life in communities across the state. More specifically, for every dollar spent at a slot machine, 55¢ is returned to Pennsylvanians. **Figure 7.1** shows a specific breakdown of this revenue return.

Figure 7.1: Taxation Breakdown from Slot Machine

Revenue (provided by the Pennsylvania Gaming Control Board website)



Relevant Agencies - Current Funding Levels

Following are a series of tables that show current funding levels for agencies relevant to park and recreation projects within the Northern Tier Study Area. Fiscal years 2008-2009 and 2009-2010 have been analyzed to show trends in funding over the past two years. Also shown are funding levels and current capital improvement projects for applicable operations and maintenance programs within each agency.

Overall, current funding levels are down significantly, with the exception of a few agencies of which their funding either remained the same or increased slightly. With the majority of funding levels down considerably and the current state of the national economy, it will be both challenging and competitive to secure funding for park and recreation projects within the next few years. On the other hand, there is still public need and demand for park and recreation projects and there are still numerous funding programs and opportunities available at local, state, regional and national levels.

Table 7.7: Current Funding for the Department of Environmental Protection (Amounts in Thousands)

	FY 2008-2009	FY 2009-2010	Increase / Decrease
Funding High	$217,515		
Funding Low		$159,056	-$58,459
Applicable Operations and Maintenance Programs			
Program Management	$37,664	$32,694	-$4,970
General Government Operations	$17,742	$14,445	-$3,297
Environmental Protection Operations	$98,544	$85,069	-$13,475
Safe Water	$11,000	$0	-$11,000
Current Capital Improvement Projects			
$650 Million Alternative Energy Investment Fund	Spurs the development of alternative energy resources, includes incentives for solar technology, improvements to homes and businesses to conserve energy.		
Annual Flood Protection Project Inspections	Conducted in conjunction with the Bureau of Waterways Engineering and the U.S. Army Corps of Engineers. Includes daily monitoring by project operators and an annual detailed safety inspection by trained engineering staff.		

Table 7.8: Current Funding for the Department of Conservation and Natural Resources (Amounts in Thousands)

	FY 2008-2009	FY 2009-2010	Increase / Decrease
Funding High	$113,369		
Funding Low		$92,369	-$21,000
Applicable Operations and Maintenance Programs			
General	$21,493	$19,850	-$1,643
State Parks	$59,638	$50,378	-$9,260
State Forests	$16,907	$17,146	$239
Current Capital Improvement Projects			
Gunter Valley Reservoir	Dam work to repair structural issues, Franklin County		
TreeVitalize	Tree plantings (seedlings) along Harrisburg Greenbelt		
Chapman State Park	Large scale rehabilitation including new facilities, restrooms, beach house/concession stand, campground wash houses.		

Table 7.9: Current Funding for the Department of Community and Economic Development (Amounts in Thousands)

	FY 2008-2009	FY 2009-2010	Increase / Decrease
Funding High	$567,519		
Funding Low		$264,848	-$302,671
Applicable Operations and Maintenance Programs			
Tourism Promotion Assistance	$6,677	$8,000	$1,323
Land Use Planning Assistance	$3,747	$375	-$3,372
Current Capital Improvement Projects			
City of Coatesville – Urban Center Revitalization Plan	Streetscapes, pedestrian & parking projects, roadway realignments, train station deck, parking garages, Brandywine Creek Riverwalk, 20,000 SF Activity Center.		
Sinking Spring Borough – Corridor Study	Along Route 422 in Wernersville, Robesonia and Sinking Spring and South Heidelberg, Lower Heidelberg and Heidelberg townships.		
Perry County	Develop a countywide greenway, open space, park and recreation plan.		
Tri-County Regional Planning Commission – Comprehensive Plan	Preparation of a multi-municipal comprehensive plan with emphasis on resource protection, rural growth management and rural transportation improvements for Halifax Borough and Halifax, Rush, Jefferson, and Wayne townships.		

Table 7.10: Current Funding for the Susquehanna River Basin Commission (Amounts in Thousands)

	FY 2008-2009	FY 2009-2010	Increase / Decrease
Funding High	$988,000		
Funding Low		$667,000	-$321,000
Applicable Operations and Maintenance Programs			
This agency operates on its own or teams up with other agencies, no programs	N/A	N/A	N/A
Current Capital Improvement Projects			
Whitney Point Lake Feasibility Study	A study and construction rehabilitation of Whitney Point lake. This is a joint project with the Army Corps of Engineers and is within the Susquehanna River Watershed. This reservoir provides flood control for the valley along the lower Tioughnioga River, the lower Chenango River, and the Susquehanna River downstream of Binghamton.		
Bear Run AMD Restoration Project (Pennsylvania Watershed Renaissance Initiative)	Assisted with the completion of the Phase I treatment system and Phase II design, and collected.		
Section 729 Low Flow Management Study	A joint project with USACE (and The Nature Conservancy) to determine flow needs of the aquatic ecosystem while allowing for water use demands to be met.		

Note: This agency is a multi-state agency and receives a portion of its funding from the Pennsylvania General Fund through the Department of Environmental Protection. Funding shown in this table refers to funding supplied by the General Fund only.

Table 7.11: Current Funding for the Fish and Boat Commission (amounts in thousands)			
	FY 2008-2009	FY 2009-2010	Increase / Decrease
Funding High	$17,000		
Funding Low		$17,000	$0
Applicable Operations and Maintenance Programs			
Not Available			
Current Capital Improvement Projects			
Not Available			

Note: The Fish and Boat Commission website claims they do not receive funding from the state, but the General Fund has allocated money to the Commission by way of the Atlantic State Marine Fisheries Commission for FY 2008-2009 and FY 2009-2010.

Potential Future Funding Sources

A variety of revenue sources can be used by the Northern Tier Regional Planning and Development Commission to fund its facilities, services and expenditures. These include general property and sales taxes, state grants, gaming revenue, fees associated with licenses and permits, hotel occupancy taxes, marketing and customer service, user fees, and through the development of a Regional Recreational Authority.

The sufficiency and consistency of park and recreation funding have been unsteady whether the general economy is doing well or poorly. Some of the factors underlying the problem are:

- unpredictable fluctuations in the economy
- rising operation and maintenance costs
- increasing land values
- aging infrastructure
- increased regulatory requirements
- increased cost of doing business
- shifts in societal demands

Traditional Funding

Marketing and Customer Service

There may be untapped market opportunities for improving and increasing services to the Northern Tier region. The goal is to win "customers" and retain their loyalty. Understanding its area's needs and desires, the NTRDPC can learn how to tailor its offerings to provide better services to local residents and visitors.

A market opportunity could also involve improving services for existing participants so as to increase the number of participants in the base or the amount of use by repeat customers. Doing so could be as simple as improving communication with current and potential user groups (residents and visitors) to better inform the current and potential users about offerings. Or it may require greater analysis of options involving expansion of service hours or level of services provided. An important aspect is the determination of appropriate user fees. Too high a fee could limit participation, whereas setting fees too low could mean passing up opportunities to defray costs and improve value.

User Fees

User fees are charges to those who utilize park and recreation programs through facility admission fees, facility and equipment rental fees, licensing and permits fees, etc. The state does not currently charge for river access or use of State Parks, State Game Lands, or State Forest lands. In the community survey, 68% of respondents would be willing to pay an entrance fee at state recreation areas if they were ensured the fee went directly back to the facility. Being the primary regional park and recreation organizations in the area, the Commission should look at the market demand for these facilities and charge accordingly. The Commission should create a tiered fee system which is structured by classification as residents, visitors, non-profit

organizations and seniors. This philosophy is quite progressive and reflects the philosophy that those who benefit from these amenities and resources should pay for their continued maintenance.

Some potential program areas for the State of Pennsylvania to increase or establish programs with user fees in order to increase revenue include access fees to State Forests, State Parks, and State Game Lands. Other options may include charging outfitter fees and fees for boating access. However, given the historical open access and current lack of fee policies, new fee or pay station facilities would need to be developed and appropriate staff will be required to implement the required fees.

General Obligation Bonds

Bonds are debt obligations of a state or local government entities that are usually self-imposed by means of a public referendum. Bond funds may be used to support conservation, the development of park and recreation projects, and the procurement of open space. In 2008, several Pennsylvania counties passed bond referenda supporting open space purchases, farmland, and parks and recreation projects. Examples include:

- Adams County - $10 million for purchasing open space, farmland, and recreational lands
- Newton Township (Bucks County) - $13.6 million /.1 percent earned income tax increase for open space preservation
- Upper Dublin Township (Montgomery County) - $30 million for the acquisition of land and/or easements to protect natural and cultural resources

Within the four counties of the Northern Tier study area, there are 166 townships and boroughs.

In the future, given a strong educational campaign and rebound in the economy, township or county bond referendums could be an option for securing funds for the development and/or rehabilitation of park and recreational facilities within the Northern Tier region as well.

Hotel Occupancy Tax

This 6 percent state tax is applied to room rental charges for the same person renting a room for periods less than 30 days. Proposing an increase to this tax that would be directly dedicated to the benefit of park and recreation facilities within the Northern Tier is a viable option due to the amount of tourists visit the area and benefit from the region's park and recreation amenities.

Dedicated Sales or Property Tax

Many of the county and local government agencies within the Northern Tier Study Area presently do not have a steady funding source that could be dedicated for to the development and management park facilities and recreation amenities. The lack of adequate capital investment threatens the ability of these agencies to provide community-based recreation opportunities and facilities that compliment the existing state-owned lands and facilities. A dedicated sales or property tax would generate stable annual funding to support the ongoing capital needs of the communities within the area.

Gaming Revenue

Numerous benefits have been documented with legalizing gaming within the Commonwealth. Benefits include living wage job creation, revenues to lower property taxes for homeowners, and reinvigoration of the state's horse racing industry. Between October 2008 and October 2009, gross gaming revenue has increased 31.97 percent overall. Currently, this revenue funds economic development projects, road improvements, health and safety projects, community improvements and tourism. Given the growing revenue being gained from this source, there is potential to lobby to have a portion of this dedicated to parks, trails and open space.

Benefit Assessment Districts

These are separate units of government that manage specific resources within defined boundaries. Districts vary in size, encompassing single cities or several counties. They can be established by local governments or by voter initiative, depending on state laws and regulations.

As self-financing legal entities they have the ability to raise a predictable stream of money, such as taxes, user fees or bonds, directly from the people who benefit from the services and are often created specifically for parks and recreation.

The use of these special assessment districts to help pay for parks and recreation is becoming increasingly prominent throughout the country and has a long history in the Western United States. Benefit assessments can be used to fund capital improvements, land acquisition and related long-term debt service, as well as the costs of on-going maintenance.

Impact Fees

Impact fees are charges assessed by local governments against new development projects that attempt to recover the cost incurred by government in providing the public facilities required to serve new development. Impact fees are only used to fund facilities, such as roads, schools, and parks, that are directly associated with the new development. They may be used to pay the proportionate share of the cost of public facilities that benefit the new development; however, impact fees cannot be used to correct existing deficiencies in public facilities.

Federal Funding

Community Development Block Grants (CDBG)

Although the program funds housing, public facilities, economic development and community projects, recreation could be a minor component of the project. For example, a mini-park could be constructed on land purchased through the housing project which services primarily low to moderate income individuals. The program is administered through the Pennsylvania Department of Community and Economic Development.

Land & Water Conservation Fund

For many years since the mid 1960's, the Land and Water Conservation Fund (LWCF) program provided funds for outdoor recreation acquisition and development. However, over the last few years the funding has been extremely limited. The program is administered through the Pennsylvania Department of Conservation and Natural Resources.

National Recreational Trails Program

The program was initiated through the TEA-21 legislation. Funds are awarded for the construction of trails and support facilities with an emphasis for the construction of multi-use trails such as biking, hiking, equestrian, motorized, etc. The program is administered through the Pennsylvania Department of Conservation and Natural Resources.

Rehabilitation Service Programs

This program is available through the US Department of Education, Office of Special Education and Rehabilitative Services. The intent of the program is to provide individuals with disabilities with recreational activities and related experiences that can be expected to aid in their employment, mobility, socialization, independence, and community integration. Specific project activities may include: camping, hiking, water skiing, and horseback riding. Historically, applications are due in September of each year.

Transportation Enhancement Funds

This program was created by the federal Transportation Equity Act for the 21st Century (TEA-21) and is related to transportation activities. The activities funded through the Transportation Enhancements program are property acquisition, development of trails including hiking and biking, landscaping including trees, signage, and restoration of historic structures, safety education activities for pedestrians and bicyclists, and projects to reduce collisions of vehicles with wildlife. This program also contains provisions for tourist and welcome center facilities which are included under "scenic or historic highway programs".

State Funding

Growing Greener Grants

Provided by the Department of Conservation and Natural Resources through the Department of Environmental Protection, these grants are designed clean up and restore the Pennsylvania environment by providing funding for watershed restoration, preserving open space, investing in parks and recreation, reclaiming abandoned mines and wells, and upgrading sewer and drinking water systems. Growing Greener Grants usually require a match of 50%, either cash or in-kind contributions. DCNR uses Growing Greener funds to augment the already successful and highly requested Community Conservation Partnership grant programs, including Community Grants, River Grants, Rails-to-Trails Grants, Land Trust Grants, and Heritage Park Grants.

Community Grants - cover rehabilitation and development of park, recreation, and conservation projects.

River Grants - are available for conserving and enhancing river resources.

Rails-to-Trails Grants - are designed for the planning, acquisition, and development of rail-trail corridors.

Land Trust Grants - are for the acquisition and preservation of open space and natural areas that are to remain available for public access/use. Areas which are habitat to threatened species are given priority.

Heritage Park Grants - preserve and enhance natural, historic, cultural, and recreation resources through fostering public-private partnerships. The idea behind these grants is to stimulate local and state economic development through heritage tourism. These grants include funding for planning, implementation, studies, and for hiring employees.

C2P2 (Community Conservation Partnerships Program) Grants

C2P2 includes a wide variety of grant options funded by the state designed to meet local recreation and conservation needs which include Planning and Technical Assistance Grants, Technical Assistance Programs, Acquisition and Development Grants, and assistance with federally funded projects. Following are descriptions of these grant categories:

- Community Grants- cover rehabilitation and development of park, recreation, and conservation projects.
- River Grants- are available for conserving and enhancing river resources.
- Rails-to-Trails Grants- are designed for the planning, acquisition, and development of rail-trail corridors.
- Land Trust Grants- are for the acquisition and preservation of open space and natural areas that are to remain available for public access/use. Areas which are habitat to threatened species are given priority.
- Planning and Technical Assistance Grants- are available for Circuit Riders, Comprehensive Plans for Parks, Recreation, and Open Space, Conservation/Sound Land Use, Peer-to-Peer Technical Assistance, Greenways, County Natural Areas Inventories, Rails-to-Trails, and River Conservation projects.
- The Technical Assistance Program- provides groups interested in conservation of parks, recreation and open space with educational

services including consultations, workshops, and publications.

- Acquisition and Development Grants- include the Community Grant Program which is exclusive for municipalities of 5,000 or less for park rehabilitation and development and the Snowmobile and All Terrain Vehicle (ATV) trail renovation, construction, and maintenance program. The Acquisition and Development Grants also includes the Rails-to-Trails Grant Program.

C2P2 also includes two federally funded projects, the Pennsylvania Recreational Trails Program and the Land and Water Conservation Fund Program which were mentioned previously under Federal Funding section of this report.

Boating Facility Grant Program

This Program has been created by the Pennsylvania Fish and Boat Commission to provide grants for planning, acquisition, development, expansion and rehabilitation of public boating facilities throughout the state. These grant funds are available to county and municipal governments that have or will have the capability to provide boat access facilities that are open and available for use by the public.

Local Municipal Resources and Development Program (LMRDP)

This grant program is provided through the Department of Community and Economic Development to municipalities and non-profit entities to improve the quality of life within Pennsylvania communities. The $5,000 to $25,000 grants cover projects that include construction or rehabilitation of infrastructure, buildings, acquisition of land/structures, revitalization or construction of community facilities, purchase or upgrade of machinery or equipment, planning of community assets, public safety improvements, crime prevention projects, recreation, and training.

Community Revitalization Program (CRP)

This grant program is similar to LMRDP in the type of projects the program covers and that it is provided through the

Department of Community and Economic Development. Although the funding range is set for LMRDP, the funding for CRP can vary. Eligible entities include local governments, municipal or redevelopment authorities/agencies, industrial authorities/agencies, and non-profit and community organizations engaged in activities consistent with the program.

Keystone Opportunity Zone (KOZ)

This program provides an opportunity to develop land with reduced state and local taxes. Within the state of Pennsylvania, there is more than 46,000 acres of developable land that is available for purchase mainly in underdeveloped and underutilized areas. The idea behind designating land as a Keystone Opportunity Zone is to generate development and economic growth in areas where little or none of the two has existed previously.

There are twelve regional Keystone Opportunity Zones including a zone for the Northern Tier. The Northern Tier KOZ is administered through the Northern Tier Regional Planning and Development Commission which lists the each of the available properties within the regional KOZ. Priority consideration for funding by Department of Community and Economic Development programs as well as community building initiatives is taken into account for projects within Keystone Opportunity Zones.

Regional Funding

gram - The set-aside portion of the county hotel room tax specific to the support of tourism-related cultural, historical and recreational assets is to be used to help underwrite the expense of three types of projects: 1. Special Events, exhibits and publicity initiatives, and historical preservation projects that will increase tourism to an area/attraction. 2. Marketing and promotional projects. 3. Wayfinding aides by the county or the county's cultural, historical, and recreational organizations for the purpose of increasing tourism and overnight stays.

Alternative Funding Mechanisms

Fundraising

Local fundraising is a mechanism that has worked effectively for park and recreation providers around the country. Although a vast amount of local effort is involved, this mechanism typically generates a vast amount of support and publicity. Local businesses, organizations, and private individuals can pledge funding over a specific period of time.

The NTRDPC members and partners should play an active role in fundraising for regional parks and recreation amenities. Commission members could play a vital role in providing guidance, expertise, advocacy, political support, fundraising efforts, and to represent various parks and recreation facilities within the region.

The Commission can be a more proactive entity by initiating a variety of fundraising tasks, such as establishing a Friends of the Northern Tier Parks, Greenways and Open Space nonprofit or collaborating with an existing nonprofit to send direct mail letters, promoting sponsorship of programs and naming rights, seeking in-kind donations, hosting special events (i.e.– fundraiser dinners, events to honor volunteers, silent auctions, and themed socials), and soliciting charitable donations of money and lands.

Grants

Grants are available to park and recreation agencies from both public and private sources. Grant opportunities exist

for a wide variety of purposes including parks and recreation. The Commission should look for the alignment between their funding requests and the funding objectives of various organizations. The request for funds should provide a solid basis for a positive response from the funder. There are numerous sources of information and assistance available to grant-seekers. Initial efforts should be on state, local, and regional foundations. The Pennsylvania Recreation and Park Society can provide further information on potential public and private funding sources.

Corporate Sponsorships

Another opportunity for revenue generation and a growing trend in parks and recreation is the development of a corporate sponsorship program. Developing a corporate sponsorship program, with a focus on natural gas companies, could greatly supplement existing funding and revenue sources for the Northern Tier park and recreation providers. Naming rights for the development of new facilities and programs are a few of the ways this type of program could support parks and recreation facilities in the area. These sponsorship opportunities should be offered with a tiered level of benefits, should quantify marketing exposure for each level, bundle packages on a system-wide level, and bundle the assets of sponsors (i.e. - money, marketing, and product supply).

Regional Recreation Authority

Currently, very few recreation areas in the four-county region are operated by local, non-state or non-federal organizations. The establishment of a Regional Recreation Authority is an additional funding option for the Northern Tier that would be supported by a dedicated tax or funding source. Similar to Benefit Assessment Districts, although on a larger scale, development of a Regional Recreation Authority would provide more local recreation programs and facilities that are operated by a regional recreational authority in order to reduce the dependence on state recreation facilities. Results from the community survey state, "Of the 61% who support a regional recreation authority, 55% would support a dedicated fee or tax to support the authority". An option in establishing a Regional Recreation Authority may be to research KOZ properties within the region as a way of acquiring, developing and operating parks and recreation facilities locally rather than depending on the state.

8

GIS MAPPING & LEVEL OF SERVICE (LOS) ANALYSIS

GIS MAPPING & LEVEL OF SERVICE (LOS) ANALYSIS

GIS-Based Inventory and Level of Service (LOS) Analysis Methodology

A project of this nature lends itself well to a digital, Geographic Information System (GIS)-based property and primary asset inventory. GIS permits the rapid assembly of mapped materials and spatial analysis related to the region's parks and recreation facilities, properties, demographics, etc.

GIS Data Gathering Process

The Norris Design project team received preliminary GIS base data through Sullivan, Susquehanna, Tioga and Wyoming Counties, as well as the state data clearinghouse - Pennsylvania Spatial Data Access (PASDA). These entities were able to supply the team with primary GIS-based data layers that included, but were not limited to the following:

- Political Boundaries
- Transportation Networks
- Public Land Locations
- Water-based Recreation Locations
- Trail/Greenway-based Recreation Locations
- Topography
- Aerial Photography

Base data was augmented by the consultant team to enhance the data provided. Additional layers included:

- Supplemental Digital Elevation Models (DEM)
- Latitude/longitude coordinates for waterfalls within the area
- US Census Bureau demographic tracts

A detailed asset inventory database of this data gathering effort was compiled and will be provided to the NTRDPC as a final deliverable of the Master Plan in an ArcGIS-ready Personal Geodatabase formatted with legend-specific ArcMap Layers. The consultant team completed the inventory and submitted it to the Advisory Committee for review and approval. The asset inventory is current as of August 2009.

The Norris Design team assembled the data layers within ESRI's ArcMap™ 9.3.1 software. ArcMap was employed

for all spatial data management, digitization and analysis. The use of this software is widely accepted and is standard for most GIS-based projects.

GIS Analysis

Following the primary data gathering process, the data was used to generate a series of additional GIS-based analytical layers and maps used to determine radius-based Level of Service (LOS) coverage for outdoor recreation facilities for each location. The LOS analysis included the cumulative relationship of each facility's location, service area and conditional assessment scores. This analysis has resulted in a variety of maps detailing the region's cumulative and average LOS, displayed in terms of the percentage of the potential scoring maximum.

Conditional assessment scores are based on a variety of factors including quantities and types of amenities, level of development and level of maintenance. Scores range from 1 to 5, with 1 being significantly below average and 5 being significantly above average. For example, state parks typically contain developed campgrounds, restrooms, parking areas, picnic areas, trails and paved roads that are all well maintained earning them a conditional score of 5 out of 5. Bike routes in the region generally lack support amenities, are poorly signed and have limited space dedicated for cyclists earning them a conditional score of 2 out of 5.

Level of Service (LOS) Methodology

The consultant team used a "value-based" approach to assess the existing Level of Service (LOS). This model is not static; it evolves as the region changes. The consultant team incorporated all of the information gathered through the community input (focus groups, staff and stakeholder meetings), inventory, conditional assessments and spatial analysis to measure the Level of Service currently being provided to the Northern Tier region. The LOS analysis included the cumulative relationship of each facility's location, service area and conditional assessment scores; resulting in data reflecting the cumulative and average LOS across the Northern Tier region.

In the recommendations phase of the project, information gained from the stakeholder and community input as well as demographics analysis will be used to establish and prioritize improvements, potential re-purposing and new facilities that are recommended to increase the Level of Service and best meet the current and future needs of the region.

A list of policy criteria for these standards includes, but is not limited to the following:

- Population served
- Accessibility (ADA, bicycle, pedestrian, transit, and automobile)
- Environmental and natural resources
- Land use requirements
- Park and recreation development and maintenance
- Parks, trails and open space system connectivity
- Service area

For additional detailed information regarding the Level of Service Methodology, please see the **Appendix**.

Mapping and Level of Service Analysis

Overview – Level of Service and Spatial Analysis Methodology

Cumulative Level of Service Methodology

Cumulative Level of Service maps were created by graphically illustrating the cumulative scores for each park in the conditional assessment and inventory performed by the Norris Design team. The cumulative scores for each component were used to create a percent evaluation of each park or facilities' total maximum score (i.e. - 60% out of 100% = adequate).

These maps illustrate the cumulative Level of Service (LOS) provided to the different geographic areas of the study area based on the overall conditional assessment of parks and recreational facilities and the overlay of these facilities' service areas (see GIS Analysis Section of the report). Areas with higher LOS (green) have a greater quantity and quality of parks and recreational facilities. Areas with lower LOS (red) have less access to adequate parks and recreational facilities, based on their geographic location.

One item to note is that while a geographic area may have many facilities within proximity to it, if the cumulative quality (conditional assessment) of the multiple facilities is low then the overall area will have a lower level of service. The same also applies if an area has a higher density of adequate or above adequate parks, then the overall LOS in the area in proximity to those parks will be high.

Average Level of Service Methodology

The inset on the Cumulative Level of Service maps illustrate the Average Level of Service across the various geographic areas of the study area, based on the highest possible cumulative conditional assessment score in comparison with the actual cumulative conditional assessment of all facilities for each area. The analysis provides a simplified view of the general (average) level of service, regardless of concentrations from multiple, neighboring recreation locations.

Areas where the average falls below the desired LOS should be targeted for potential improvements to increase the quality of existing parks and recreation facilities and/or creation of additional recreation locations. However, it is important to note that deficient areas may also fall within locations where improved or additional services are not required or justified – such as industrial or agricultural areas.

Table 8.1 illustrates the average conditional assessment provided to each facility within the study area's open space, greenway and outdoor recreation system.

Table 8.1: Northern Tier Conditional Assessment Scores

Classification	County	Acres	Quantity	Miles	Conditional Score (out of 5)	Radius (Miles)	% with LOS
Federal Land - Corps of Engineers	Sullivan						0%
	Susquehanna						0%
	Tioga	8,488			5	35	100%
	Wyoming						20%
Federal Land - Other	Sullivan						0%
	Susquehanna						0%
	Tioga	54			4	20	35%
	Wyoming						0%
State Land - Wild Natural Areas	Sullivan	2,730			5	35	100%
	Susquehanna						20%
	Tioga	16,707			5	35	100%
	Wyoming						80%
State Land - State Parks	Sullivan	2,599			5	35	100%
	Susquehanna	689			3	35	100%
	Tioga	1,361			5	35	100%
	Wyoming						100%
State Land - State Forests	Sullivan	38,652			4	20	100%
	Susquehanna						10%
	Tioga	139,958			4	20	100%
	Wyoming						35%
State Land - State Game Lands	Sullivan	61,252			3	15	100%
	Susquehanna	14,385			3	15	90%
	Tioga	25,517			3	15	100%
	Wyoming	37,959			3	15	80%
County Lands	Sullivan						0%
	Susquehanna						0%
	Tioga	1			3	5	6%
	Wyoming						0%
Private Conservancy Lands	Sullivan						0%
	Susquehanna	1,817			3	5	30%
	Tioga	591			3	5	20%
	Wyoming	187			3	5	40%
Boat Launch	Sullivan		5		3	15	100%
	Susquehanna		12		3	15	100%
	Tioga		12		3	15	95%
	Wyoming		11		3	15	100%
Fishing Hot Spot	Sullivan						30%
	Susquehanna		1		3	15	85%
	Tioga		9		3	15	90%
	Wyoming		4		3	15	98%
Approved, Stocked or Wilderness Trout Water Body	Sullivan		22		3	15	100%
	Susquehanna		23		3	15	100%
	Tioga		24		3	15	100%
	Wyoming		20		3	15	100%

Table 8.1:Cont.

Classification	County	Acres	Quantity	Miles	Conditional Score (out of 5)	Radius (Miles)	% with LOS
Water Trail	Sullivan						50%
	Susquehanna			16.0	4	20	95%
	Tioga			2.3	4	20	50%
	Wyoming			39.0	4	20	100%
Rail Trail	Sullivan			2.0	4	20	100%
	Susquehanna			45.0	4	20	100%
	Tioga			32.5	4	20	100%
	Wyoming						40%
Snowmobile Trail	Sullivan*				4	20	100%
	Susquehanna*			70.0	4	20	100%
	Tioga*				4	20	100%
	Wyoming						100%
Trails *Principal Corridors/Networks	Sullivan			45.0	4	15	100%
	Susquehanna			50.0	4	15	100%
	Tioga			100.0	4	15	100%
	Wyoming			62.0	4	15	100%
Waterfalls	Sullivan		37		4	15	100%
	Susquehanna		2		4	15	90%
	Tioga		19		4	15	95%
	Wyoming		6		4	15	100%
Scenic Corridors/Byways/Bike Routes	Sullivan			115.0	2-3	15	100%
	Susquehanna			192.0	2-3	15	100%
	Tioga			255.0	2-3	15	100%
	Wyoming			144.0	2-3	15	100%

**Roads and trails within specific properties are known to accommodate snowmobile traffic. These properties are accounted for as a whole rather than linear miles of trail.*

Mapping – Level of Service and Spatial Analysis

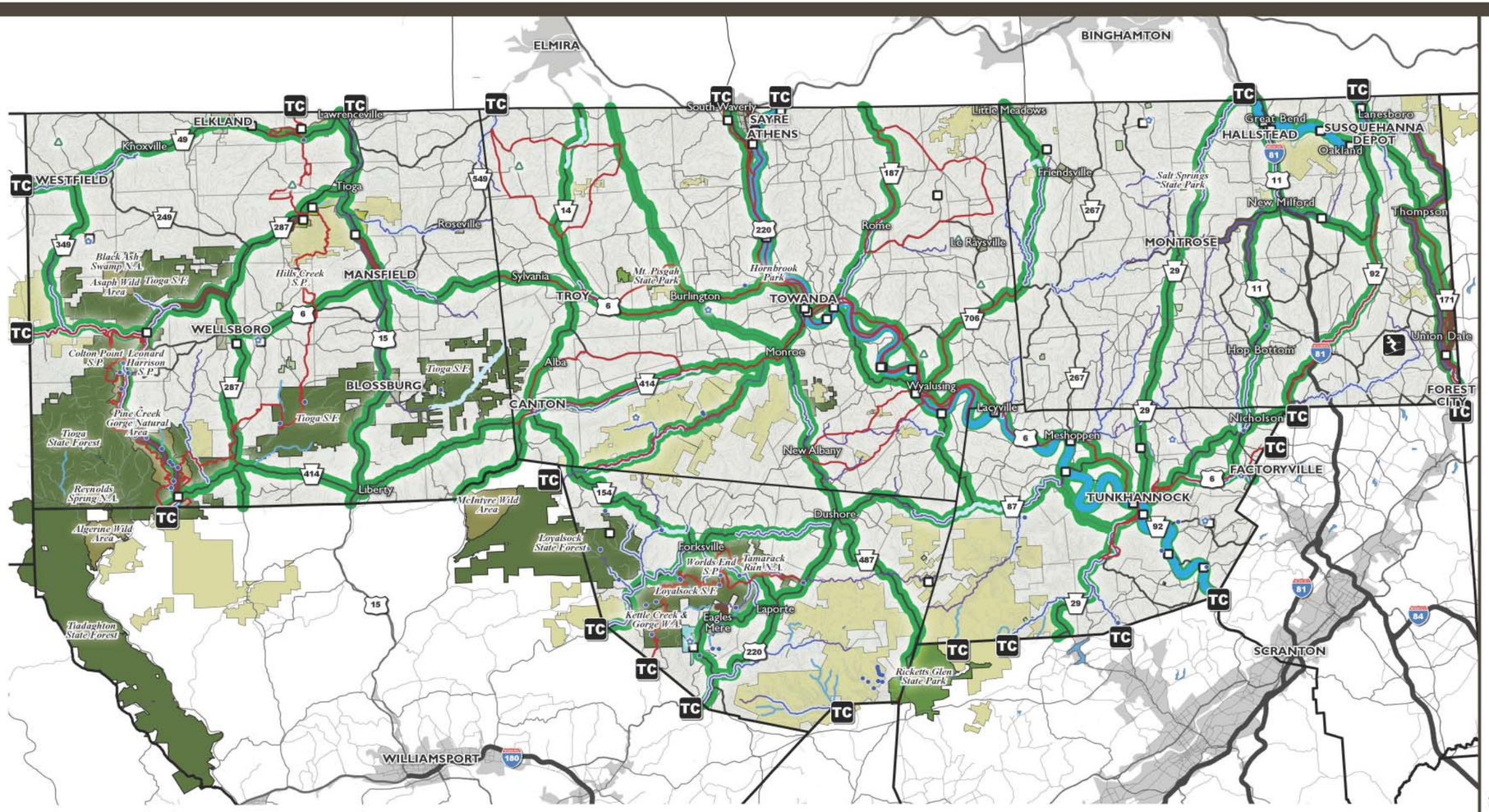
Maps A-E - Northern Tier Resource Inventory – Existing Conditions

Map A

Serves as a quick reference regarding the locations, types and names of the open space, greenway and outdoor recreation facilities within the study area. This map includes all of the facilities under the management of the federal, state and local governments, as well as selected private entities. This map also serves as a visual tool in displaying the classifications of each facility, as well as a comprehensive view of the size and geographic locations of the facilities. In looking at both public lands and facilities, Tioga County has the highest concentration of recreation facilities and amenities, followed by Sullivan and Wyoming Counties. Susquehanna County has the fewest facilities and little public land with a concentration of facilities around the Susquehanna River.

NORTHERN TIER RECREATION FACILITIES

FACILITIES INVENTORY MAP



RECREATION FACILITIES & AMENITIES

- Federal Lands
- State Parks
- Wilderness/Natural Areas
- State Forest
- Regional Trail Connection
- Waterfalls
- Boat Launch
- Fishing Hot Spots
- Approved Trout Waterbodies
- Trail
- Snowmobile Trail
- Rail Trail
- State Game Lands
- County/Local Parks
- Private Conservancy Lands
- PA Fish & Boat Commission
- Elk Mountain Ski Resort
- Approved Trout Waterbodies
- Stocked Trout Streams
- Wilderness Trout Streams
- Water Trail
- Scenic Corridors

PRIMARY MAP DESCRIPTION

This map illustrates the the locations, types and names of the open space, greenway and outdoor recreation facilities within the Northern Tier Study Area. This map includes all of the facilities under the management of the federal, state and local governments as well as private entities. This map also serves as a visual tool in displaying the classifications of each facility, as well as a comprehensive view of the size and geographic locations of the facilities.

NORTHERN TIER REGION

Regional Location Map

NORTHERN TIER REGION

Study Area

The Northern Tier Study Area includes Tioga, Sullivan, Wyoming And Susquehanna Counties. Bradford County is shown as part of the contiguous analysis because facilities in Bradford are utilized by citizens of the region. However Bradford County is not a participating county of this Open Space, Greenways and Outdoor Recreation Plan.

N W E S

6 3 0 6

MILES

PREPARED BY

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER

Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

NORTHERN TIER PENNSYLVANIA

Open Space, Greenway and Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

March 2010

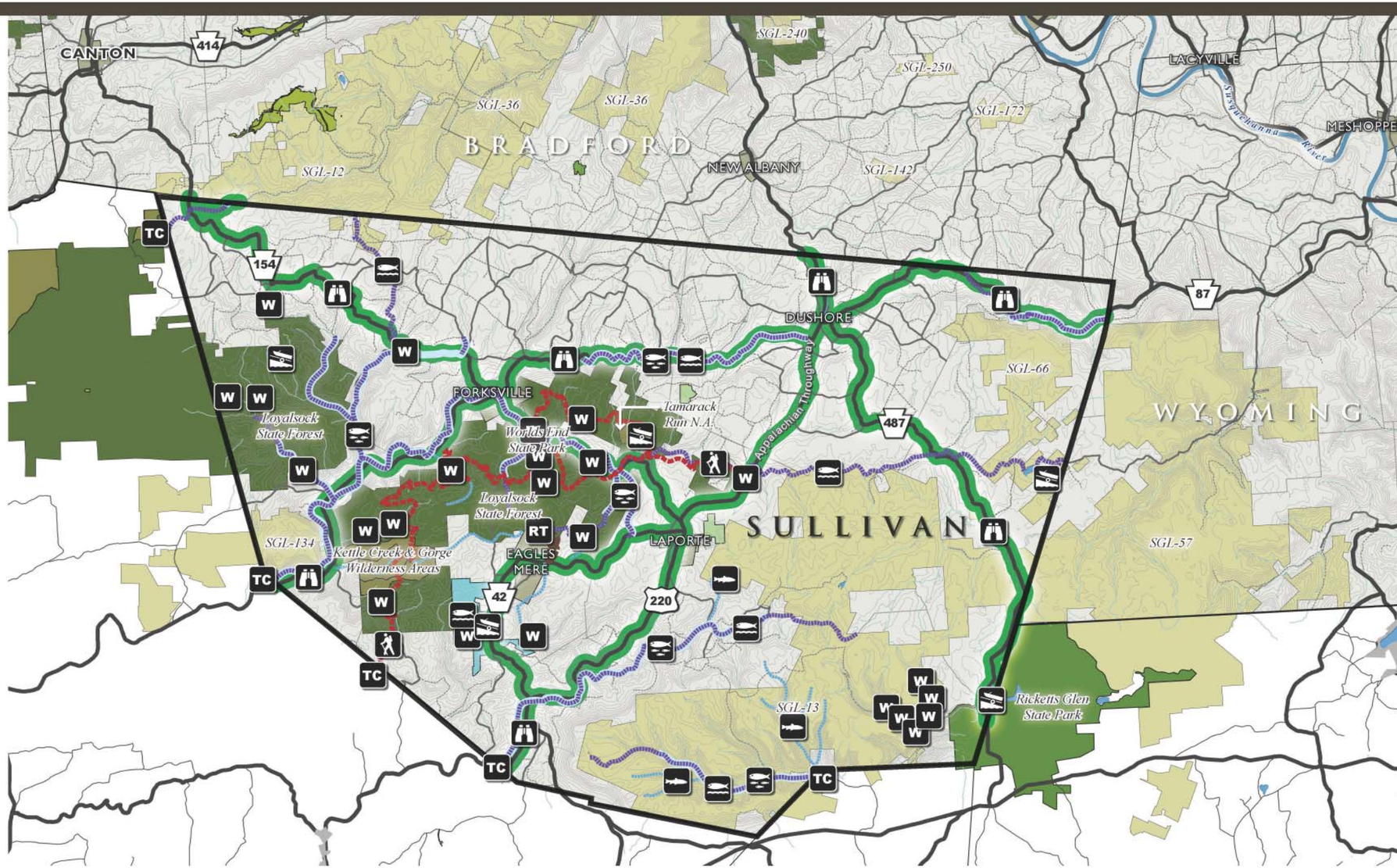
A

Map B

Sullivan County has the highest concentration of state lands at 37% of the county. Resources include State Game Lands 13, 66 and 134; Ricketts Glen and Worlds End State Parks; Loyalsock State Forest; the Loyalsock Trail; Hunters Lake; and several waterfalls, scenic routes, lakes, trout creeks and local trails. These resources are generally concentrated in the southern three-fourths of the county.

SULLIVAN COUNTY RECREATION FACILITIES

COUNTY INVENTORY MAP



N
W E
S

2 1 0 2
MILES

PREPARED BY:

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER:

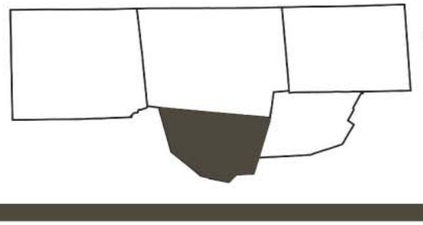
Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

PRIMARY MAP DESCRIPTION

This map illustrates the cumulative Level of Service (LOS) provided to the different geographic areas of the Northern Tier Study Area, based on the overall conditional assessment of recreation facilities and the overlay of these facilities' service areas. Areas with higher LOS (green) have a greater quantity and quality of parks and recreational facilities. Areas with lower LOS (red) have less access to adequate parks and recreational facilities, based on their geographic location.

COUNTY KEY



RECREATION FACILITIES & AMENITIES

- Federal Lands
- State Parks
- Wilderness/Natural Areas
- State Forest
- Waterfalls
- Boat Launch
- Trail
- Snowmobile Trail
- Rail Trail
- Scenic Corridors
- State Game Lands
- County/Local Parks
- Private Conservancy Lands
- PA Fish & Boat Commission
- Regional Trail Connection
- Fishing Hot Spot
- Water Trail
- Approved Trout Waterbodies
- Stocked Trout Streams
- Wilderness Trout Streams

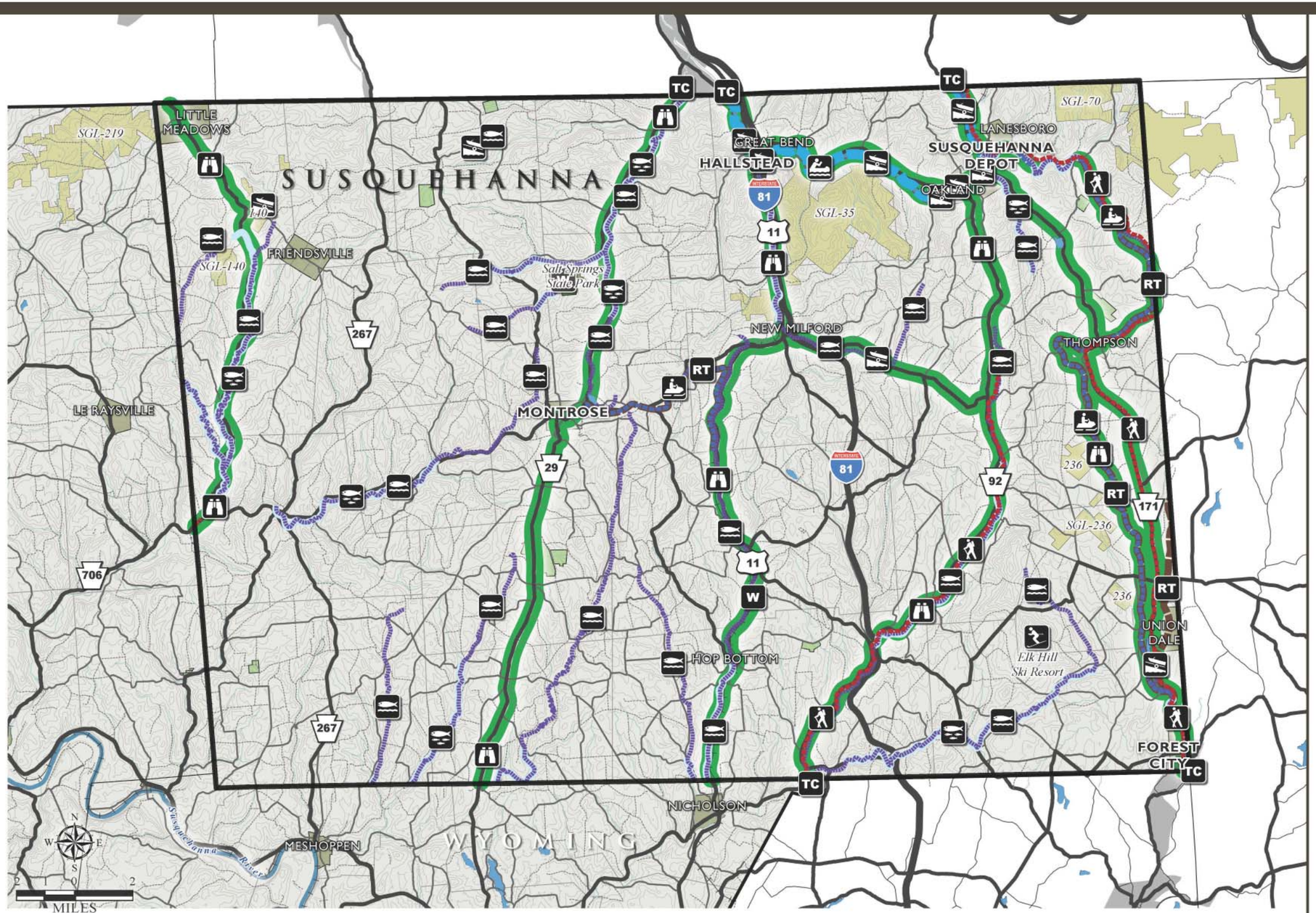
NORTHERN TIER
PENNSYLVANIA
Open Space, Greenway and Outdoor Recreation Plan
Sullivan, Susquehanna, Tioga and Wyoming Counties
March 2010

Map C

Susquehanna County has the lowest concentration of state lands at 3% of the county. The County contains State Game Lands 35, 70, 140, 175 and 236, as well as Salt Springs State Park. Susquehanna County also has two rail-trails, several scenic routes, trout waters, private conservancy lands and a ski resort. The majority of these resources are located east of Montrose.

SUSQUEHANNA COUNTY RECREATION FACILITIES

COUNTY INVENTORY MAP



RECREATION FACILITIES & AMENITIES

- Federal Lands
- State Parks
- Wilderness/Natural Areas
- State Forest
- Waterfalls
- Boat Launch
- Trail
- Snowmobile Trail
- Rail Trail
- Scenic Corridors
- State Game Lands
- County/Local Parks
- Private Conservancy Lands
- Regional Trail Connection
- Elk Mountain Ski Resort
- Fishing Hot Spot
- Water Trail
- Approved Trout Waterbodies
- Stocked Trout Streams
- Wilderness Trout Streams

PREPARED BY

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER

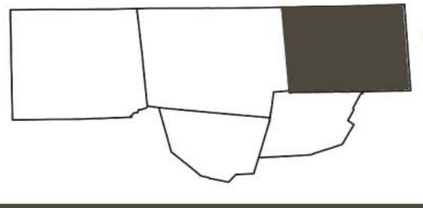
Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

PRIMARY MAP DESCRIPTION

This map illustrates the cumulative Level of Service (LOS) provided to the different geographic areas of the Northern Tier Study Area, based on the overall conditional assessment of recreation facilities and the overlay of these facilities' service areas. Areas with higher LOS (green) have a greater quantity and quality of parks and recreational facilities. Areas with lower LOS (red) have less access to adequate parks and recreational facilities, based on their geographic location.

COUNTY KEY



NORTHERN TIER PENNSYLVANIA

Open Space, Greenway and Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

March 2010

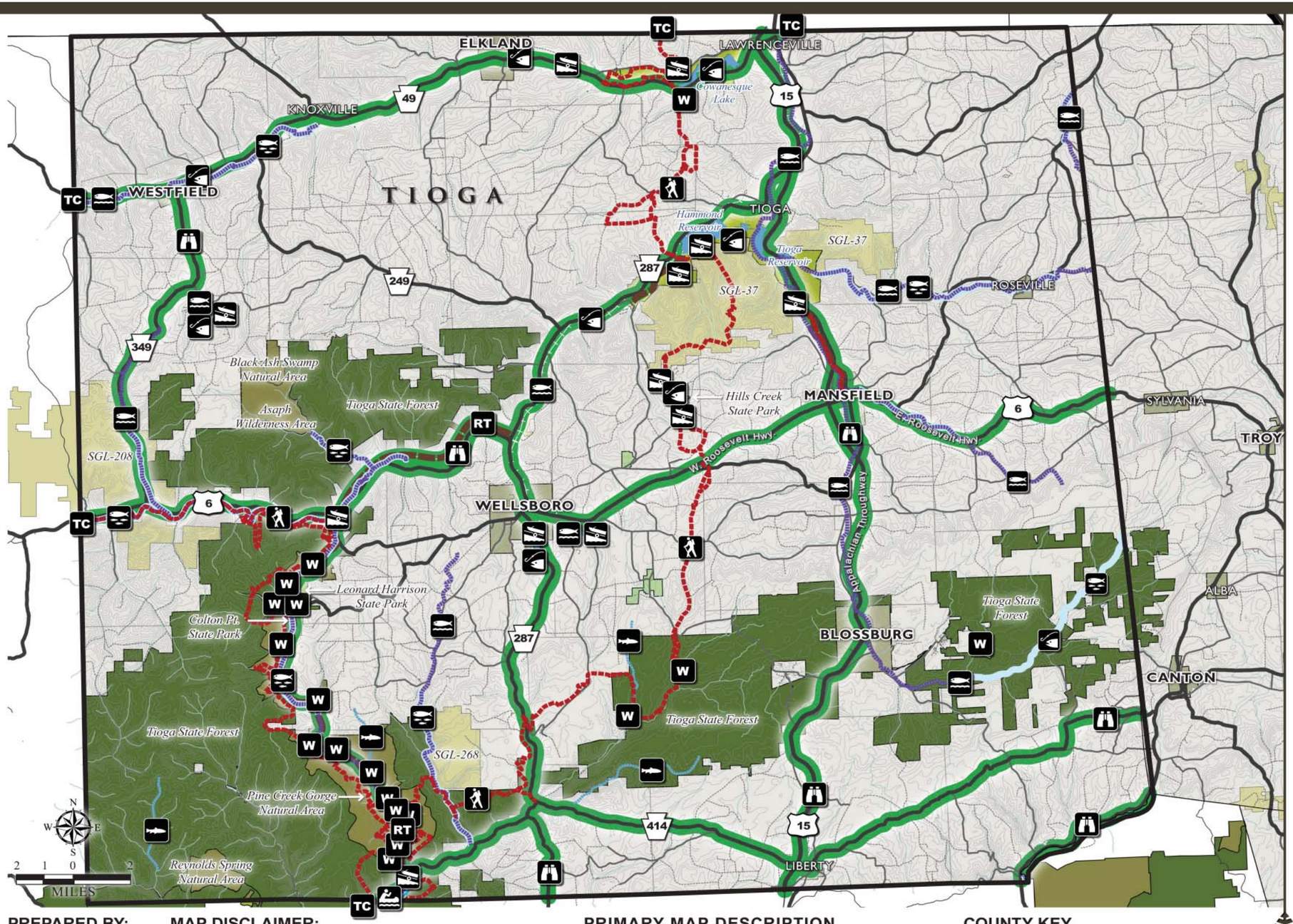
C

Map D

Tioga County contains the large state forest tracts within the study area. State forests, combined with other state lands, comprise 25% of the county. Unique to the study area, Tioga County also contains federal land and lakes (Cowanesque and Hammond Lakes and Tioga Reservoir) owned by the Army Corps of Engineers. The County also contains Tioga and Tiadaghton State Forests; Leonard Harrison, Colton Point, and Hills Creek State Parks; State Game Lands 37, 208 and 268; Mid-State and Pine Creek Trails; and several waterfalls, lakes, scenic routes, trout waters and local trails.

TIOGA COUNTY RECREATION FACILITIES

COUNTY INVENTORY MAP



RECREATION FACILITIES & AMENITIES

- Federal Lands
- State Parks
- Wilderness/Natural Areas
- State Forest
- Waterfalls
- Boat Launch
- Trail
- Snowmobile Trail
- Rail Trail
- Scenic Corridors
- State Game Lands
- County/Local Parks
- Private Conservancy Lands
- Regional Trail Connection
- Fishing Hot Spot
- Water Trail
- Approved Trout Waterbodies
- Stocked Trout Streams
- Wilderness Trout Streams

PREPARED BY:

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER:

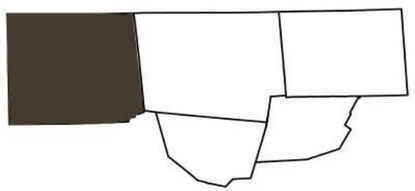
Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

PRIMARY MAP DESCRIPTION

This map illustrates the cumulative Level of Service (LOS) provided to the different geographic areas of the Northern Tier Study Area, based on the overall conditional assessment of recreation facilities and the overlay of these facilities' service areas. Areas with higher LOS (green) have a greater quantity and quality of parks and recreational facilities. Areas with lower LOS (red) have less access to adequate parks and recreational facilities, based on their geographic location.

COUNTY KEY



NORTHERN TIER PENNSYLVANIA
Open Space, Greenway and Outdoor Recreation Plan
Sullivan, Susquehanna, Tioga and Wyoming Counties
March 2010

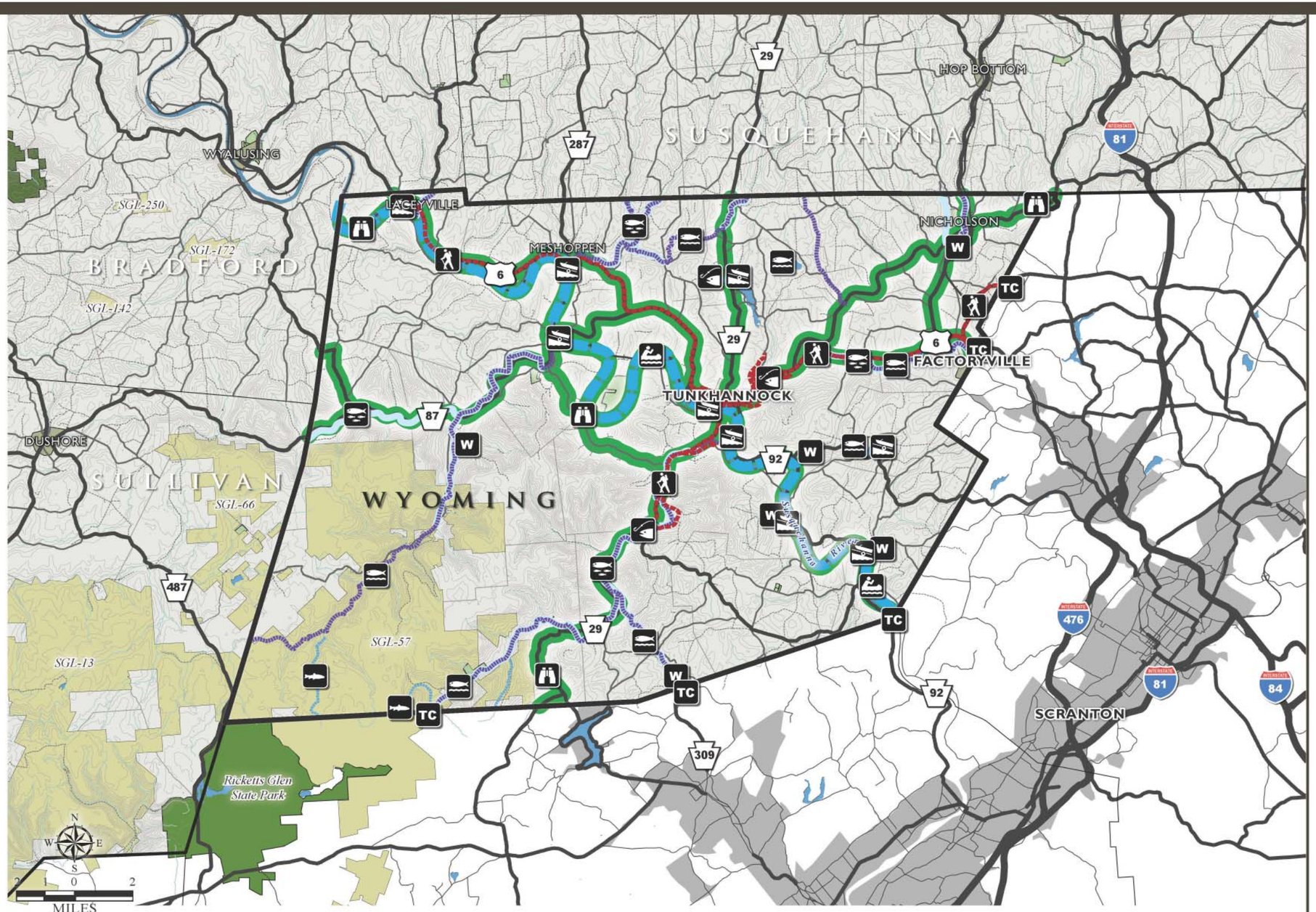
D

Map E

Wyoming County contains State Game Land 57, which comprises 15% of the county. Wyoming County is traversed by the Susquehanna River, a water trail (a.k.a. blueway). Other resources include scenic routes, bike routes, trout waters, waterfalls, lakes and private conservancy lands.

WYOMING COUNTY RECREATION FACILITIES

COUNTY INVENTORY MAP



RECREATION FACILITIES & AMENITIES

- Federal Lands
- State Parks
- Wilderness/Natural Areas
- State Forest
- Waterfalls
- Boat Launch
- Trail
- Snowmobile Trail
- Rail Trail
- Scenic Corridors
- State Game Lands
- County/Local Parks
- Private Conservancy Lands
- Regional Trail Connection
- Fishing Hot Spot
- Water Trail
- Approved Trout Waterbodies
- Stocked Trout Streams
- Wilderness Trout Streams

PREPARED BY:

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER:

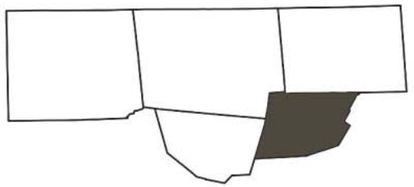
Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

PRIMARY MAP DESCRIPTION

This map illustrates the cumulative Level of Service (LOS) provided to the different geographic areas of the Northern Tier Study Area, based on the overall conditional assessment of recreation facilities and the overlay of these facilities' service areas. Areas with higher LOS (green) have a greater quantity and quality of parks and recreational facilities. Areas with lower LOS (red) have less access to adequate parks and recreational facilities, based on their geographic location.

COUNTY KEY



NORTHERN TIER
PENNSYLVANIA
Open Space, Greenway and Outdoor Recreation Plan
Sullivan, Susquehanna, Tioga and Wyoming Counties
March 2010

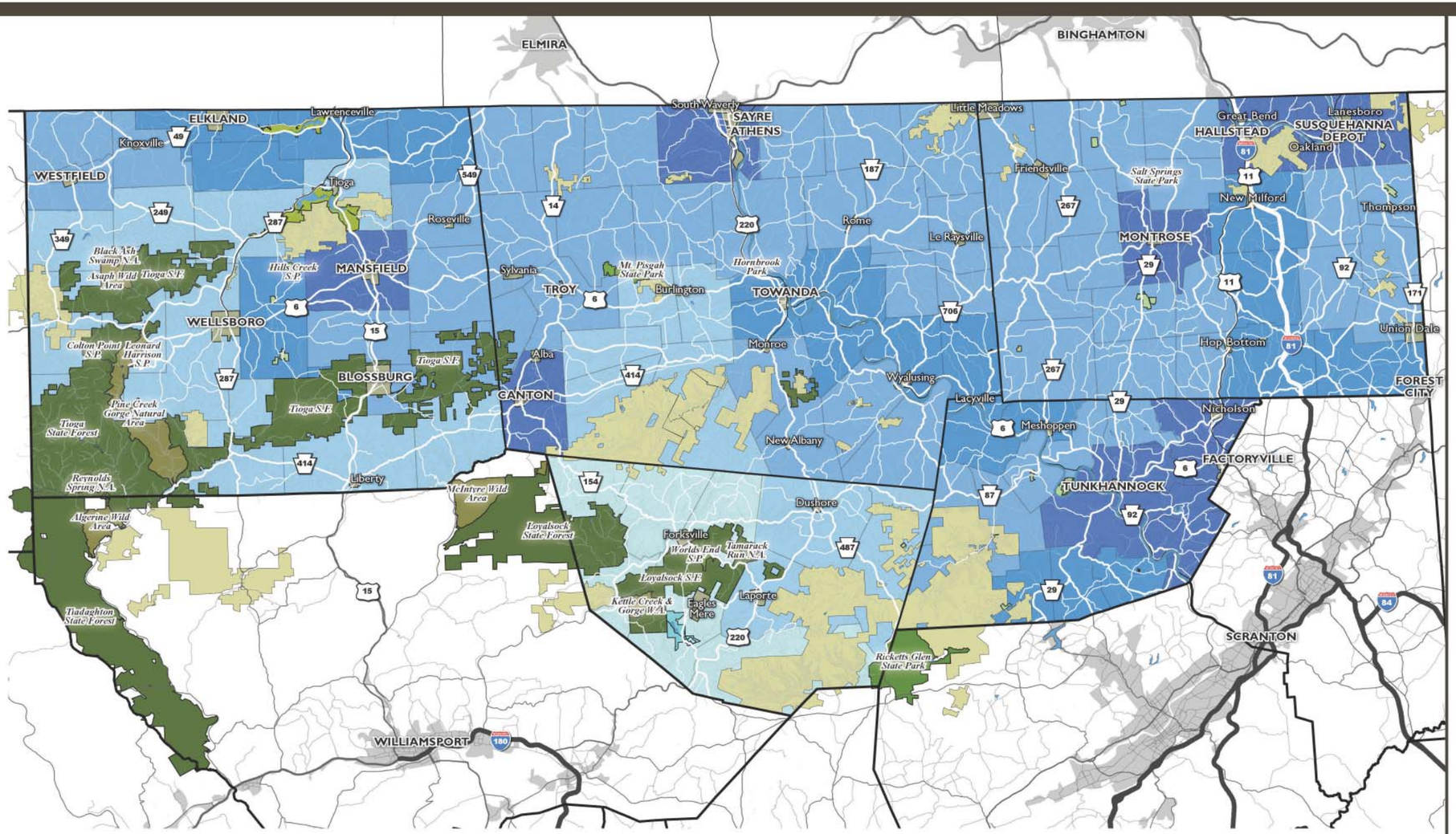
Map F – Population Density

This map illustrates the distribution of the population in the Northern Tier region by Census tract and based on data from 2007 estimates. It is important to note that census tracts are not necessarily restricted to straight or clear physical barriers, but may be more arbitrary in nature and therefore some areas reflect a higher or lower level of density than anticipated as a result of the overall tract.

Overall, the Northern Tier is a rural region with no one Census tract having a density above 3,000 people per square mile. Population density increases in eastern Wyoming County, near Scranton. Density also tends to be higher along the Susquehanna River and major transportation corridors. One can also see the density-lowering effect large tracts of state-owned land have, particularly in western Sullivan and Tioga Counties

REGIONAL POPULATION MAP

POPULATION DENSITY PER SQUARE MILE AND HOUSEHOLDS SERVED



RECREATION FACILITIES & AMENITIES

- Federal Lands
- State Parks
- Wilderness/Natural Areas
- State Forest
- State Game Lands
- County/Local Parks
- Private Conservancy Lands
- PA Fish & Boat Commission

POPULATION DENSITY

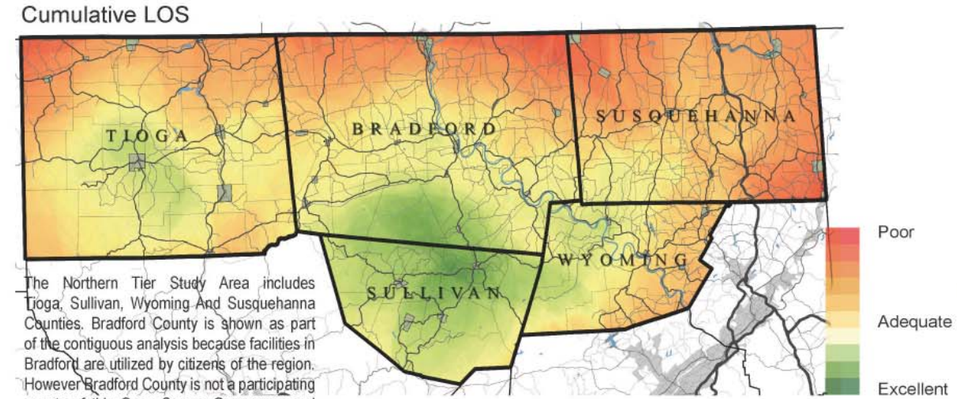
0
12.5
25
50
75
150
750
2,805 per square mile

PRIMARY MAP DESCRIPTION

This map illustrates the distribution of the Region's population to various geographic areas and census tracts, based on Census data from 2007 estimates. It is important to note that census tracts are not necessarily restricted to straight or clear physical barriers, but may be more arbitrary in nature and therefore some areas reflect a higher or lower level of density than anticipated as a result of the overall tract.

CONDITIONAL ASSESSMENT - INSET MAP

Cumulative LOS



The Northern Tier Study Area includes Tioga, Sullivan, Wyoming And Susquehanna Counties. Bradford County is shown as part of the contiguous analysis because facilities in Bradford are utilized by citizens of the region. However Bradford County is not a participating county of this Open Space, Greenways and Outdoor Recreation Plan.

N W E S

6 3 0 6

MILES

PREPARED BY

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER

Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

NORTHERN TIER PENNSYLVANIA

Open Space, Greenway and Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

March 2010

Maps G-K – Access to all Recreation Resources

Map G

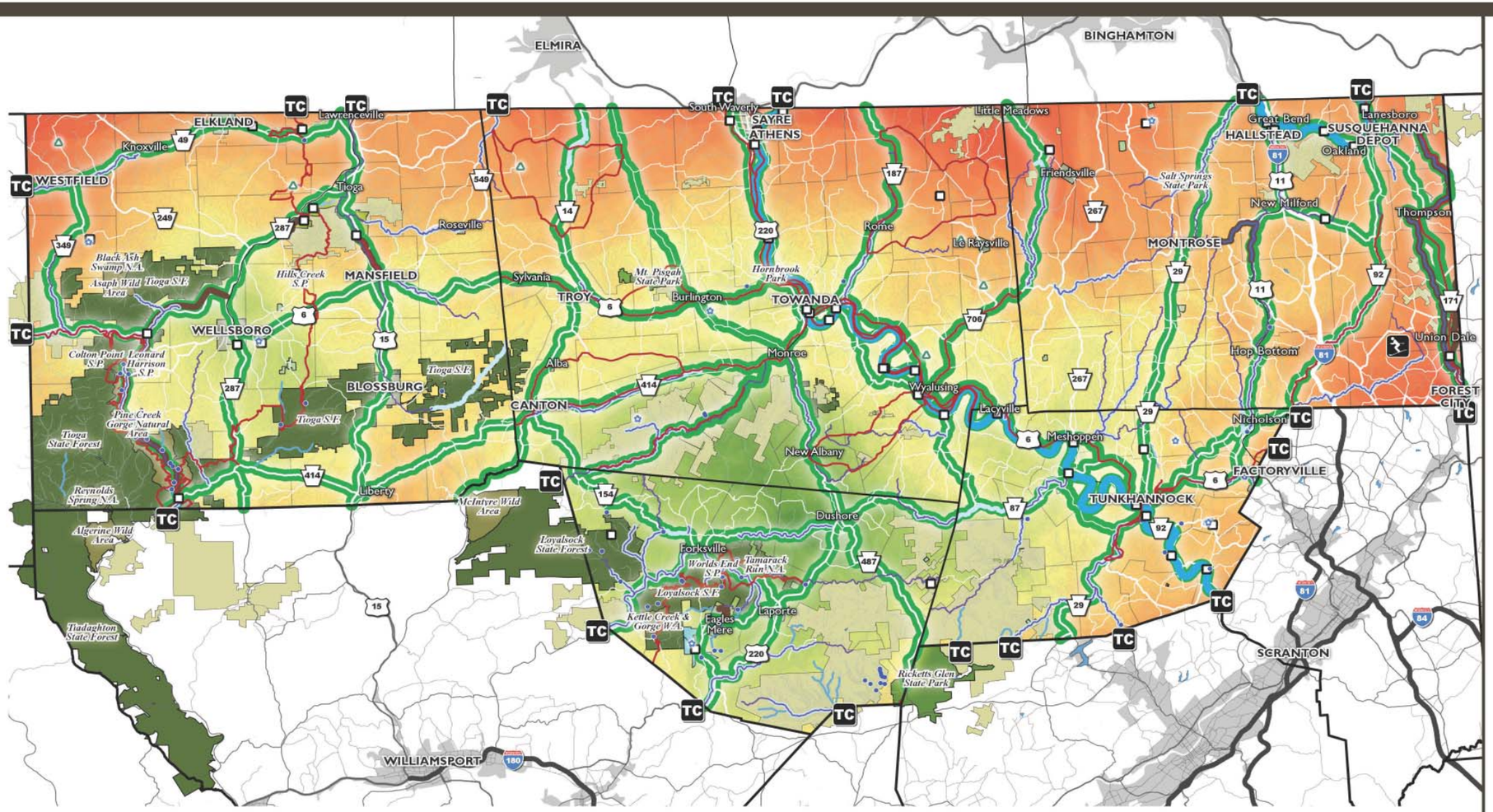
Map G provides a cumulative Level of Service (LOS) analysis of the entire Northern Tier open space, greenway and outdoor recreation system. The highest LOS is located in the central portion of the study area, in Sullivan County, due to the high concentration of public lands, high quality streams and waters. Another area with high LOS is located in Tioga County, as a result of the high concentration of facilities in that county.

The map also provides a clear indication of those areas within the study area where facilities are limited, which are generally areas with little or no public lands. The most significant lack of services is apparent in Susquehanna County, which has no state forest land and smaller state park and game lands than the other counties in the study area. Eastern Wyoming County is also low in services, as the majority of land is privately-owned and not open to public recreation. Northern Tioga County, particularly the northeast and northwest corners, also lacks some service.

Map G – Inset: This map illustrates that the average Level of Service for all recreation resources across the study area. The entire study area is being served by some kind of recreation with an average score above 60.0% (the threshold for an adequate LOS). Seventy percent (70%) of the study area has an overall LOS between 60 and 70%. Sullivan and Tioga Counties have areas with an LOS of 70-75%. Tioga County has a small area with an LOS of 75-80%. While the current LOS as a whole is adequate, the region should consider increasing opportunities in areas with a lower LOS to increase the overall service provided.

NORTHERN TIER RECREATION FACILITIES

CUMULATIVE LEVEL OF SERVICE MAP



RECREATION FACILITIES & AMENITIES

- Federal Lands
- State Parks
- Wilderness/Natural Areas
- State Forest
- Regional Trail Connection
- Waterfalls
- Boat Launch
- Fishing Hot Spots
- Approved Trout Waterbodies
- Trail
- Snowmobile Trail
- Rail Trail
- State Game Lands
- County/Local Parks
- Private Conservancy Lands
- PA Fish & Boat Commission
- Elk Mountain Ski Resort
- Approved Trout Waterbodies
- Stocked Trout Streams
- Wilderness Trout Streams
- Water Trail
- Scenic Corridors

CONDITIONAL ASSESSMENT - PRIMARY MAP

Cumulative LOS

Poor

Adequate

Excellent

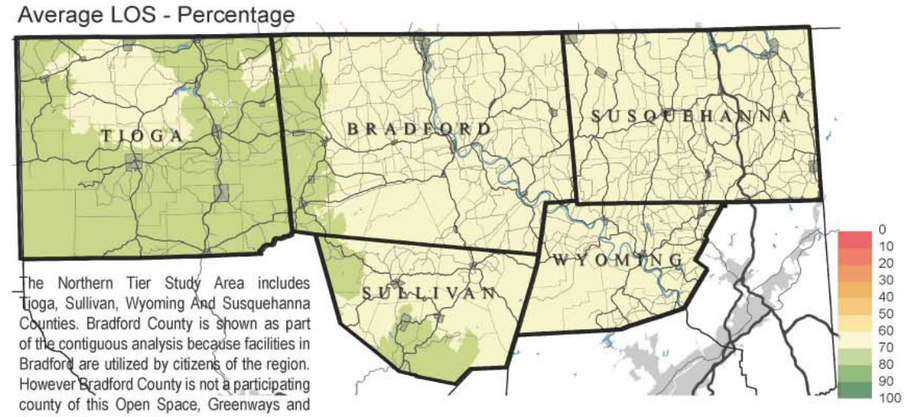
Recreation Facilities and Amenities included in this analysis are: Federal Lands, Private Conservancy Lands, County/Local Parks, Wilderness/Natural Areas, State Parks, State Game Lands, State Forest, PA Fish & Boat Commission Property, Scenic Corridors, Trails, Snowmobile Trails, Rail Trails, Water Trails, Stocked Trout Streams, Approved Trout Waterbodies, Wilderness Trout Streams , Waterfalls, Boat Launches and Fishing Hot Spots.

PRIMARY MAP DESCRIPTION

This map illustrates the cumulative Level of Service (LOS) provided to the different geographic areas of the Northern Tier Study Area, based on the overall conditional assessment of recreation facilities and the overlay of these facilities' service areas. Areas with higher LOS (green) have a greater quantity and quality of parks and recreational facilities. Areas with lower LOS (red) have less access to adequate parks and recreational facilities, based on their geographic location.

CONDITIONAL ASSESSMENT - INSET MAP

Average LOS - Percentage



The Northern Tier Study Area includes Tioga, Sullivan, Wyoming And Susquehanna Counties. Bradford County is shown as part of the contiguous analysis because facilities in Bradford are utilized by citizens of the region. However Bradford County is not a participating county of this Open Space, Greenways and Outdoor Recreation Plan.

N W E S

6 3 0 6

MILES

PREPARED BY

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER

Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

NORTHERN TIER PENNSYLVANIA

Open Space, Greenway and Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

March 2010

Map H

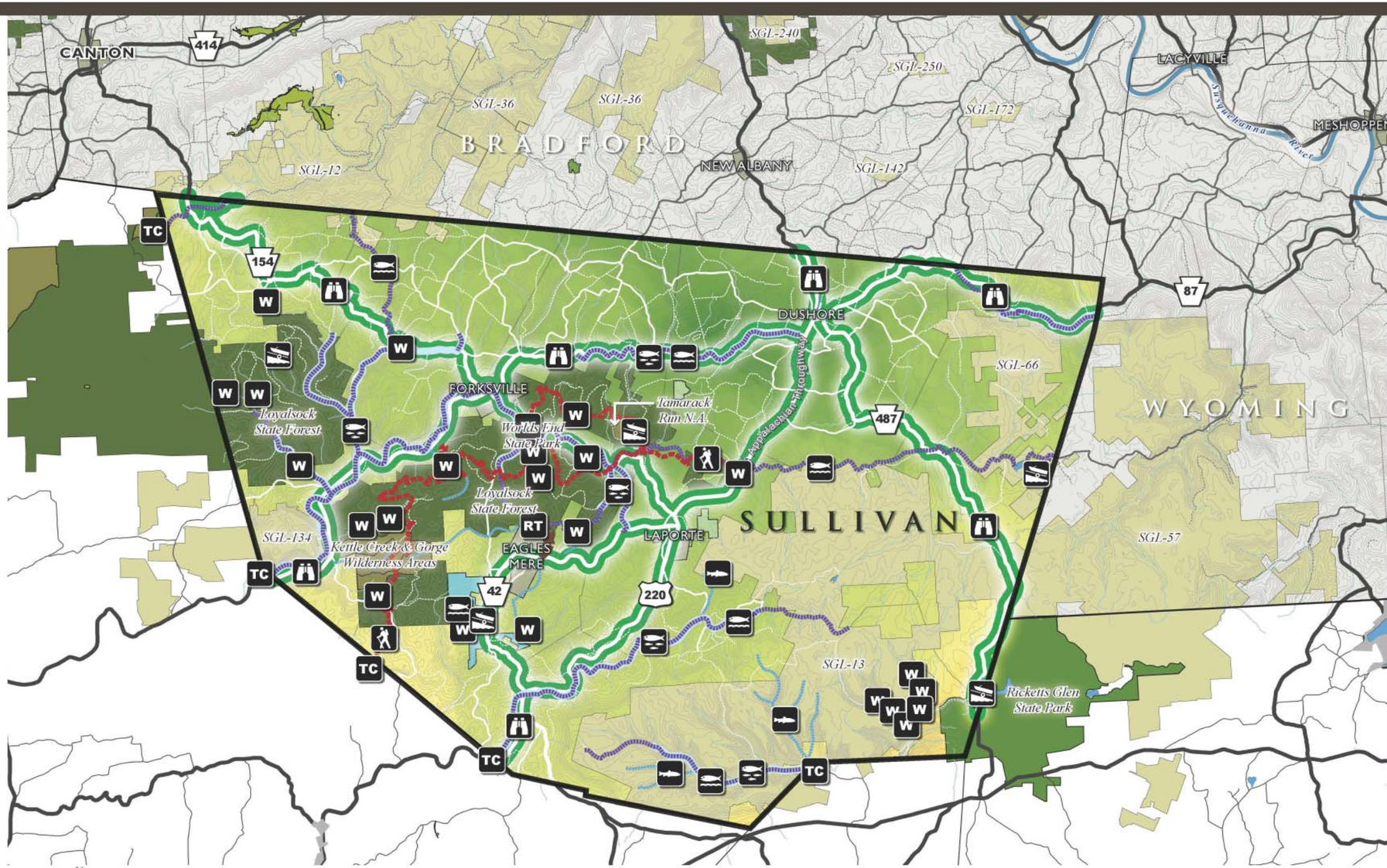
Map H provides an analysis of Sullivan County's cumulative LOS. The highest concentration is in the northern and central portions of the county. This high LOS is a reflection of the high quality of the state park and natural area, in addition to the quantity of resources available.

The map also provides an indication of those areas within Sullivan County where facilities are limited. State game lands have no facilities or amenities, leading to a lower conditional assessment and a lower LOS in the southeast portion of the County. The southwestern portion of the county also has a lower concentration of resources, due to the fact that it has fewer trout waters than the rest of the county.

Map H – Inset: Sullivan County's overall average LOS is between 65 and 75%, giving it the second highest overall LOS in the study area. To further increase the LOS, the county should consider developing additional resources in areas of the county that have a lower LOS. Addition of amenities or improvements to existing facilities should also be considered to increase the overall LOS.

SULLIVAN COUNTY RECREATION FACILITIES

CUMULATIVE LEVEL OF SERVICE MAP



RECREATION FACILITIES & AMENITIES

- Federal Lands
- State Parks
- Wilderness/Natural Areas
- State Forest
- Waterfalls
- Boat Launch
- Trail
- Snowmobile Trail
- Rail Trail
- Scenic Corridors
- State Game Lands
- County/Local Parks
- Private Conservancy Lands
- PA Fish & Boat Commission
- Regional Trail Connection
- Fishing Hot Spot
- Water Trail
- Approved Trout Waterbodies
- Stocked Trout Streams
- Wilderness Trout Streams

CONDITIONAL ASSESSMENT - PRIMARY MAP

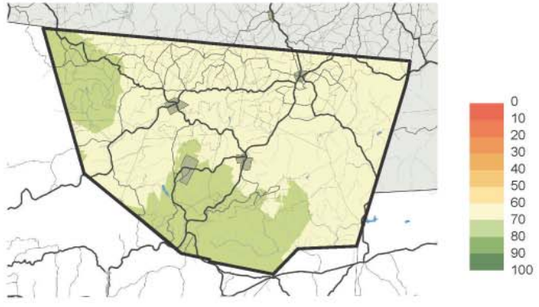
Cumulative LOS

- Poor
- Adequate
- Excellent

Recreation Facilities and Amenities included in this analysis are: Federal Lands, Private Conservancy Lands, County/Local Parks, Wilderness/Natural Areas, State Parks, State Game Lands, State Forest, Scenic Corridors, Trails, Snowmobile Trails, Rail Trails, Water Trails, Stocked Trout Streams, Approved Trout Waterbodies, Wilderness Trout Streams , Waterfalls, Boat Launches and Fishing Hot Spots.

CONDITIONAL ASSESSMENT - INSET MAP

Average LOS - Percentage



N W E S

2 1 0 2

MILES

PREPARED BY:

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER:

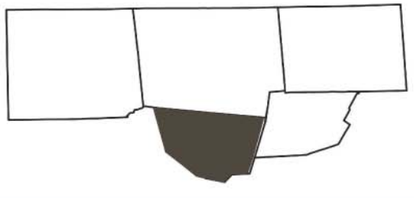
Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

PRIMARY MAP DESCRIPTION

This map illustrates the cumulative Level of Service (LOS) provided to the different geographic areas of the Northern Tier Study Area, based on the overall conditional assessment of recreation facilities and the overlay of these facilities' service areas. Areas with higher LOS (green) have a greater quantity and quality of parks and recreational facilities. Areas with lower LOS (red) have less access to adequate parks and recreational facilities, based on their geographic location.

COUNTY KEY



NORTHERN TIER PENNSYLVANIA

Open Space, Greenway and Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

March 2010

H

Map I

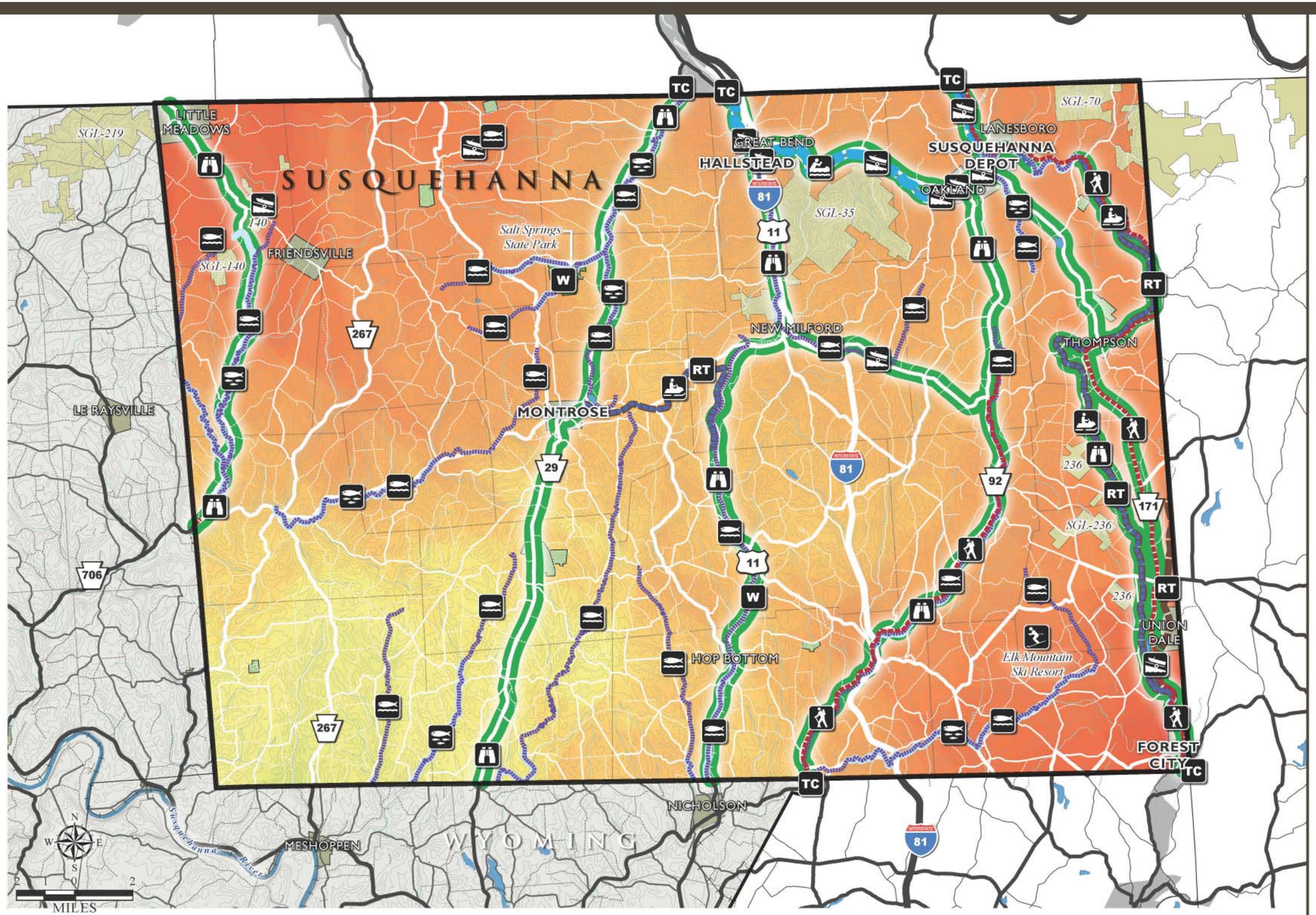
Map I provides an analysis of Susquehanna County's LOS. The highest LOS is located in the southwest and south-central area of the county. The service areas of the Susquehanna River, trout waters and scenic routes overlay one another to increase the LOS. The state lands also contribute to the higher LOS in the northern portion of the county.

The map also illustrates that the northwest and southeast corners of the county are lacking in service. The northwest corner has a small game land, a scenic route and trout water, but the concentration is lower compared to the rest of the region. While the southeast corner includes the D&H Rail Trail, it is the highest scored amenity in the area. The bike route and state game land's lower assessment do not contribute as much to the overall LOS score.

Map I – Inset: Susquehanna County currently has the lowest overall average LOS in the study area. The entire county has an LOS between 60 and 65%. While this does lie within the adequate range, if the county would like to increase its LOS, so as to compare with the rest of the Northern Tier region, additional recreation resources should be added throughout the county. The LOS would also benefit from improvements to existing facilities, such as Salt Springs State Park.

SUSQUEHANNA COUNTY RECREATION FACILITIES

CUMULATIVE LEVEL OF SERVICE MAP



RECREATION FACILITIES & AMENITIES

- Federal Lands
- State Parks
- Wilderness/Natural Areas
- State Forest
- Waterfalls
- Boat Launch
- Trail
- Snowmobile Trail
- Rail Trail
- Scenic Corridors
- Regional Trail Connection
- State Game Lands
- County/Local Parks
- Private Conservancy Lands
- Regional Trail Connection
- Elk Mountain Ski Resort
- Fishing Hot Spot
- Water Trail
- Approved Trout Waterbodies
- Stocked Trout Streams
- Wilderness Trout Streams

CONDITIONAL ASSESSMENT - PRIMARY MAP

Cumulative LOS

Poor

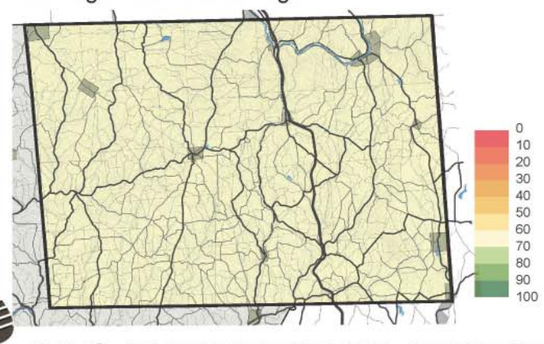
Adequate

Excellent

Recreation Facilities and Amenities included in this analysis are: Federal Lands, Private Conservancy Lands, County/Local Parks, Wilderness/Natural Areas, State Parks, State Game Lands, State Forest, Scenic Corridors, Trails, Snowmobile Trails, Rail Trails, Water Trails, Stocked Trout Streams, Approved Trout Waterbodies, Wilderness Trout Streams , Waterfalls, Boat Launches and Fishing Hot Spots.

CONDITIONAL ASSESSMENT - INSET MAP

Average LOS - Percentage



PREPARED BY

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER

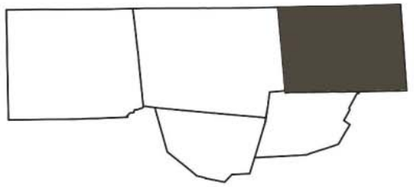
Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

PRIMARY MAP DESCRIPTION

This map illustrates the cumulative Level of Service (LOS) provided to the different geographic areas of the Northern Tier Study Area, based on the overall conditional assessment of recreation facilities and the overlay of these facilities' service areas. Areas with higher LOS (green) have a greater quantity and quality of parks and recreational facilities. Areas with lower LOS (red) have less access to adequate parks and recreational facilities, based on their geographic location.

COUNTY KEY



NORTHERN TIER PENNSYLVANIA

Open Space, Greenway and Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

March 2010

Map J

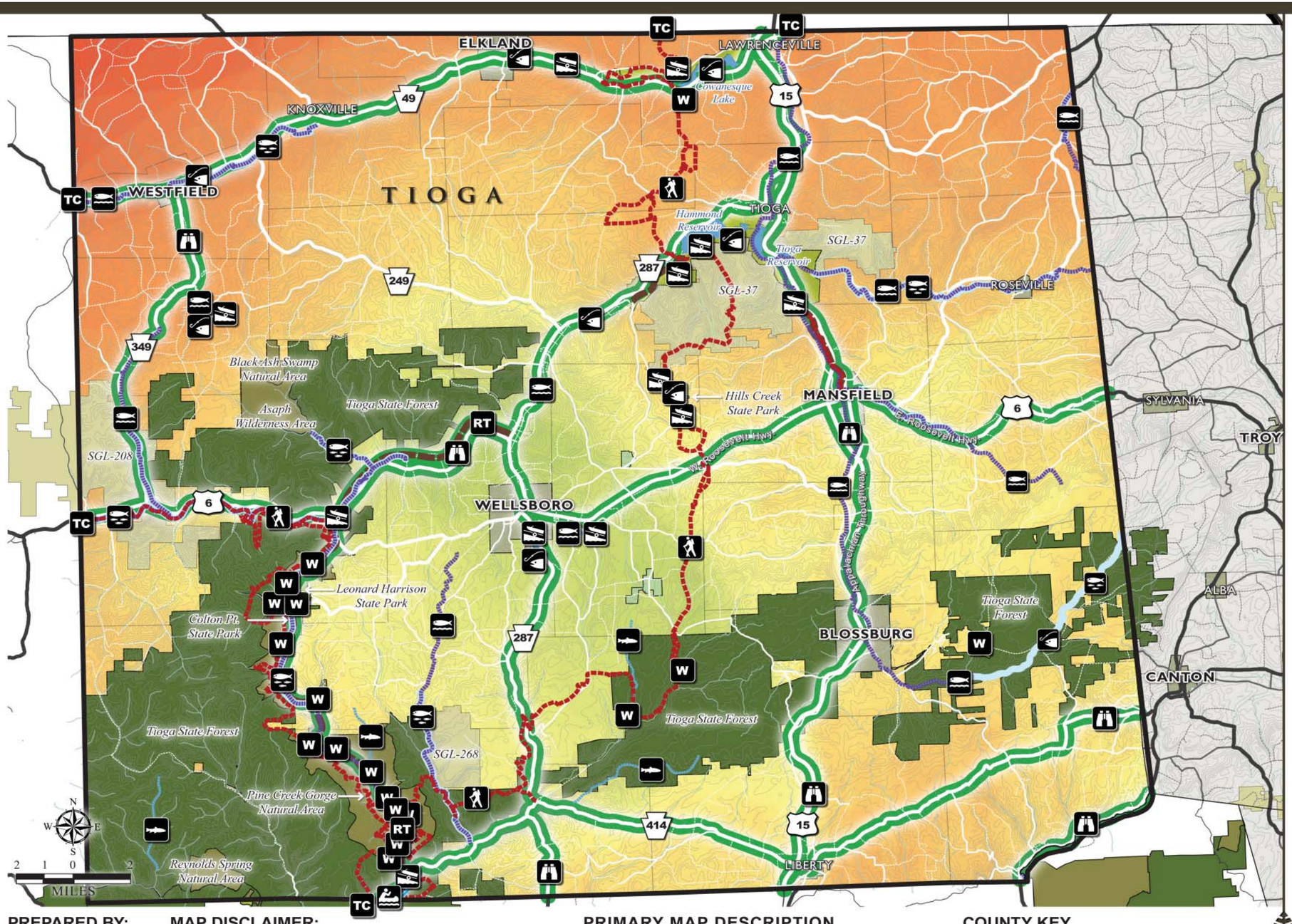
Map J examines Tioga County's recreation resources and LOS. The highest area of concentration is around Wellsboro, which is nearly surrounded by state lands. Scenic routes, trails and trout waters also contribute to the areas with a higher cumulative score.

The northern part of the county has the lowest LOS. Cowanesque Lake is the sole destination resource north of the Tioga Dam. There are also some scenic routes and trout waters, but their quantities are limited compared to the rest of the region.

Map J – Inset: With an average LOS mostly between 65 and 75%, as well as an additional area between 75 and 80%, Tioga County has the highest average LOS in the study area. The County should consider adding facilities in areas with a lower average LOS to increase their overall score. Improving existing facilities will also increase the average LOS within the county.

TIOGA COUNTY RECREATION FACILITIES

CUMULATIVE LEVEL OF SERVICE MAP



RECREATION FACILITIES & AMENITIES

- Federal Lands
- State Parks
- Wilderness/Natural Areas
- State Forest
- Waterfalls
- Boat Launch
- Trail
- Snowmobile Trail
- Rail Trail
- Scenic Corridors
- State Game Lands
- County/Local Parks
- Private Conservancy Lands
- Regional Trail Connection
- Fishing Hot Spot
- Water Trail
- Approved Trout Waterbodies
- Stocked Trout Streams
- Wilderness Trout Streams

CONDITIONAL ASSESSMENT - PRIMARY MAP

Cumulative LOS

Poor

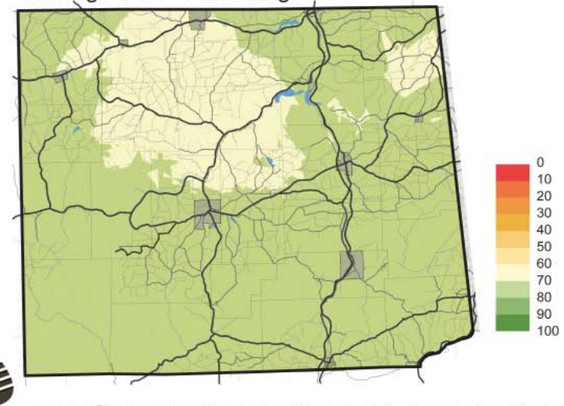
Adequate

Excellent

Recreation Facilities and Amenities included in this analysis are: Federal Lands, Private Conservancy Lands, County/Local Parks, Wilderness/Natural Areas, State Parks, State Game Lands, State Forest, Scenic Corridors, Trails, Snowmobile Trails, Rail Trails, Water Trails, Stocked Trout Streams, Approved Trout Waterbodies, Wilderness Trout Streams , Waterfalls, Boat Launches and Fishing Hot Spots.

CONDITIONAL ASSESSMENT - INSET MAP

Average LOS - Percentage



PREPARED BY:

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER:

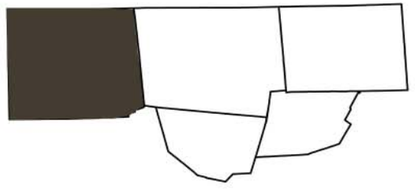
Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

PRIMARY MAP DESCRIPTION

This map illustrates the cumulative Level of Service (LOS) provided to the different geographic areas of the Northern Tier Study Area, based on the overall conditional assessment of recreation facilities and the overlay of these facilities' service areas. Areas with higher LOS (green) have a greater quantity and quality of parks and recreational facilities. Areas with lower LOS (red) have less access to adequate parks and recreational facilities, based on their geographic location.

COUNTY KEY



NORTHERN TIER PENNSYLVANIA

Open Space, Greenway and Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

March 2010

Map K

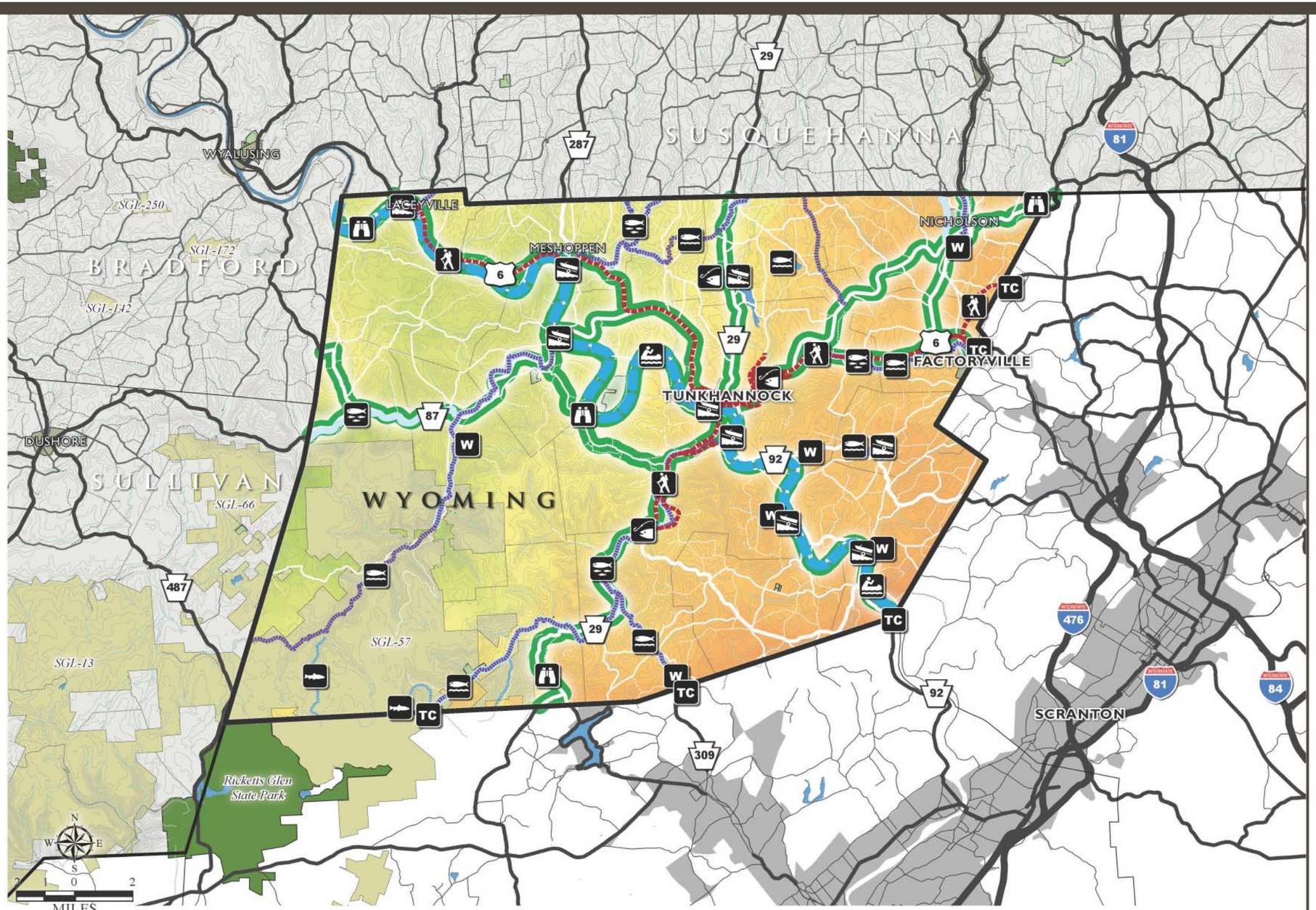
Map K illustrates that Wyoming County has a concentration of resources in the western portion of the county. The concentration is greatest where US 6 follows the Susquehanna River. The river is a water trail (a.k.a. blueway) and US 6 is a designated bike route, as well as scenic route. Additional scenic routes and trout waters contribute to the cumulative score.

Eastern Wyoming County does not benefit from any state lands. There are also fewer trout waters in this portion of the county, resulting in the portion of the county having a lower LOS.

Map K – Inset: Wyoming County's average LOS lies within the 60-70% range, with the majority between 60 and 65%. This is considered adequate; however, if the county would like to increase its average LOS it should consider adding additional recreation resources. Improvements to existing facilities would also increase this score.

WYOMING COUNTY RECREATION FACILITIES

CUMULATIVE LEVEL OF SERVICE MAP



RECREATION FACILITIES & AMENITIES

- Federal Lands
- State Parks
- Wilderness/Natural Areas
- State Forest
- Waterfalls
- Boat Launch
- Trail
- Snowmobile Trail
- Rail Trail
- Scenic Corridors
- State Game Lands
- County/Local Parks
- Private Conservancy Lands
- Regional Trail Connection
- Fishing Hot Spot
- Water Trail
- Approved Trout Waterbodies
- Stocked Trout Streams
- Wilderness Trout Streams

CONDITIONAL ASSESSMENT - PRIMARY MAP

Cumulative LOS

Poor

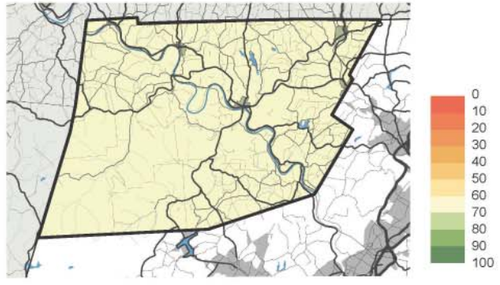
Adequate

Excellent

Recreation Facilities and Amenities included in this analysis are: Federal Lands, Private Conservancy Lands, County/Local Parks, Wilderness/Natural Areas, State Parks, State Game Lands, State Forest, Scenic Corridors, Trails, Snowmobile Trails, Rail Trails, Water Trails, Stocked Trout Streams, Approved Trout Waterbodies, Wilderness Trout Streams , Waterfalls, Boat Launches and Fishing Hot Spots.

CONDITIONAL ASSESSMENT - INSET MAP

Average LOS - Percentage



PREPARED BY:

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER:

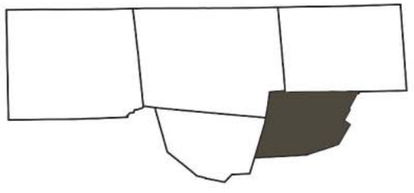
Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

PRIMARY MAP DESCRIPTION

This map illustrates the cumulative Level of Service (LOS) provided to the different geographic areas of the Northern Tier Study Area, based on the overall conditional assessment of recreation facilities and the overlay of these facilities' service areas. Areas with higher LOS (green) have a greater quantity and quality of parks and recreational facilities. Areas with lower LOS (red) have less access to adequate parks and recreational facilities, based on their geographic location.

COUNTY KEY



NORTHERN TIER PENNSYLVANIA

Open Space, Greenway and Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

March 2010

K

Map L – Access to Land-Based Recreation:
This map illustrates the cumulative Level of Service (LOS) provided to the entire region by land-based recreation, which includes federal, state and private tracts of land. The only county-owned land provided in the region occurs in Bradford County. Map L depicts the high concentration of public lands in the western portion of the study area, decreasing moving east. The only federal lands occur in Tioga County. There are also large tracts of state forest lands, as well as state parks in Tioga and Sullivan Counties that contribute to the higher LOS.

The easternmost portion of the study area has the lowest LOS due to the reduced amount of public lands provided there. A few state game lands exist; however, as a result of the low level of development of these lands their lower conditional assessment score does not contribute as much to the LOS being provided. Nearly all of Susquehanna County and the eastern third of Wyoming County have a low LOS for land-based recreation.

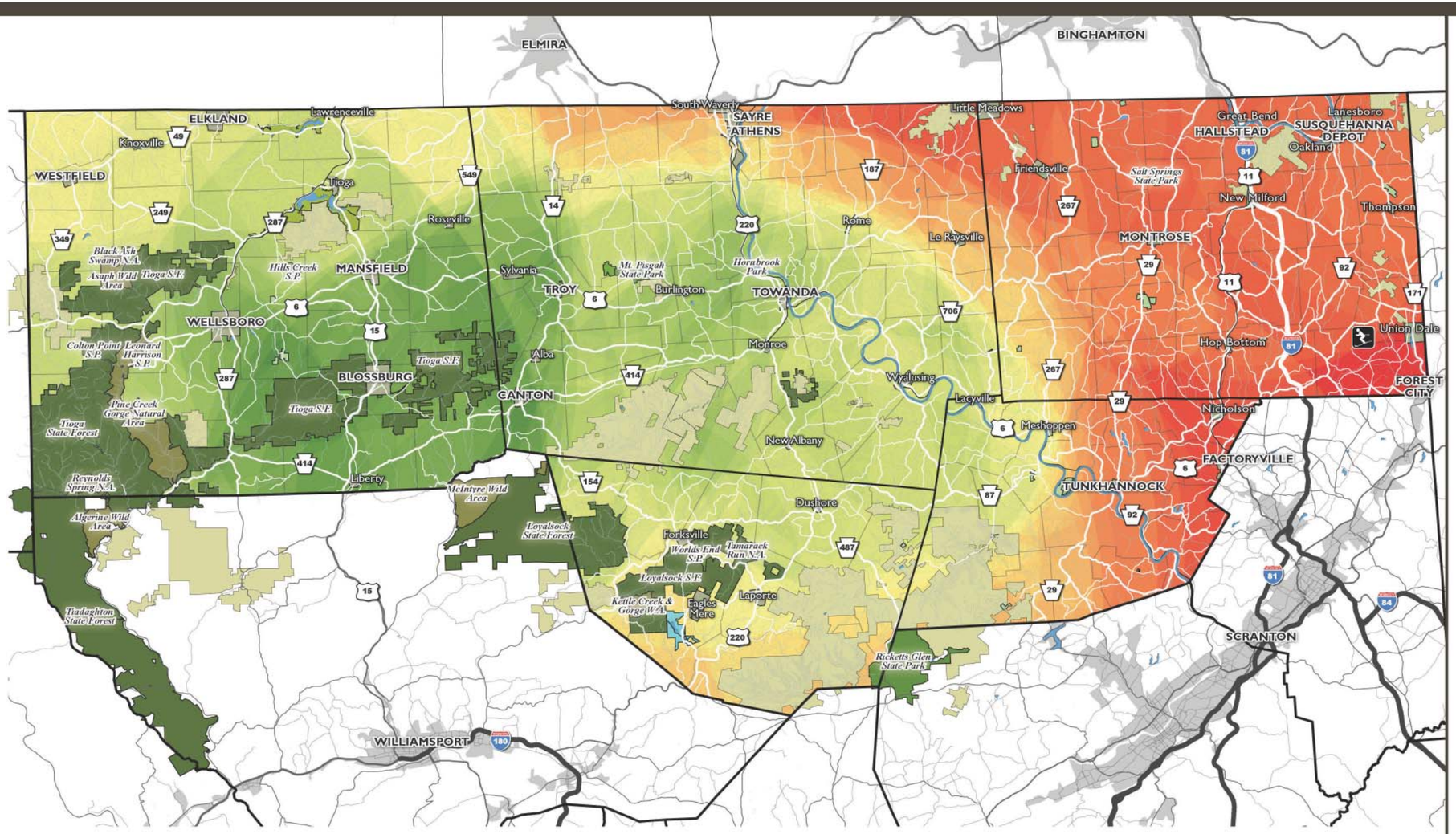
Map L – Inset: The average LOS of land-based recreation is adequate, with the entire study area obtaining a score above 60%. Tioga County's average LOS is 75-80%; additional land-based resources should not be considered a priority for the county. Sullivan County is also well served with 71% of the county obtaining an average LOS between 75 and 80%. Sullivan County should consider adding land-based recreation resources a low priority. Wyoming County's average LOS is 70-80%, with 51% of the county having an average LOS of 70-75%. Additional land-based resources should not be considered a high priority for the county. Contrastingly, Susquehanna County's average LOS is 60-65% for 59% of the county. The addition of land-based recreation resources should be considered a higher priority for Susquehanna County.

NORTHERN TIER LAND BASED RECREATION FACILITIES

CUMULATIVE LEVEL OF SERVICE MAP

RECREATION FACILITIES & AMENITIES

- Federal Lands
- State Parks
- Wilderness/Natural Areas
- State Forest
- Regional Trail Connection
- State Game Lands
- County/Local Parks
- Private Conservancy Lands
- PA Fish & Boat Commission
- Elk Mountain Ski Resort



CONDITIONAL ASSESSMENT - PRIMARY MAP

Cumulative LOS

Poor

Adequate

Excellent

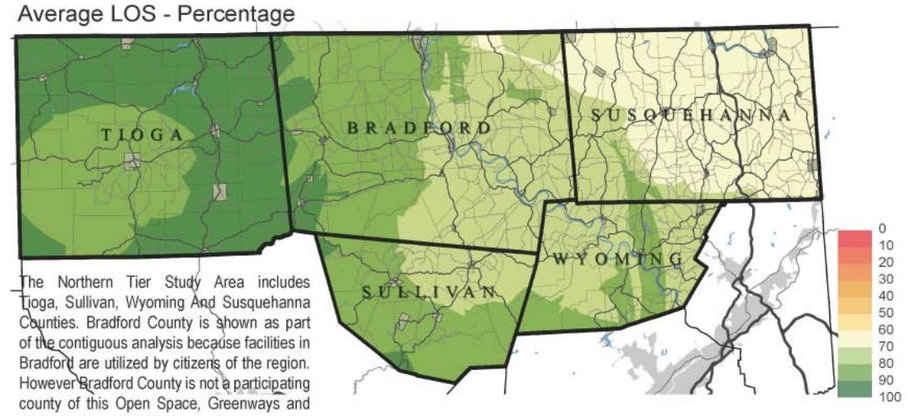
Recreation Facilities and Amenities included in this analysis are: Federal Lands, Private Conservancy Lands, County/Local Parks, Wilderness/Natural Areas, State Parks, State Game Lands, State Forests and PA Fish & Boat Commission Property.

PRIMARY MAP DESCRIPTION

This map illustrates the cumulative Level of Service (LOS) provided to the different geographic areas of the Northern Tier Study Area, based on the overall conditional assessment of recreation facilities and the overlay of these facilities' service areas. Areas with higher LOS (green) have a greater quantity and quality of parks and recreational facilities. Areas with lower LOS (red) have less access to adequate parks and recreational facilities, based on their geographic location.

CONDITIONAL ASSESSMENT - INSET MAP

Average LOS - Percentage



The Northern Tier Study Area includes Tioga, Sullivan, Wyoming And Susquehanna Counties. Bradford County is shown as part of the contiguous analysis because facilities in Bradford are utilized by citizens of the region. However Bradford County is not a participating county of this Open Space, Greenways and Outdoor Recreation Plan.

N W E S

6 3 0 6

MILES

PREPARED BY

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER

Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

NORTHERN TIER PENNSYLVANIA

Open Space, Greenway and Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

March 2010

Map M – Access to Scenic Corridors and Trail-Based Recreation:

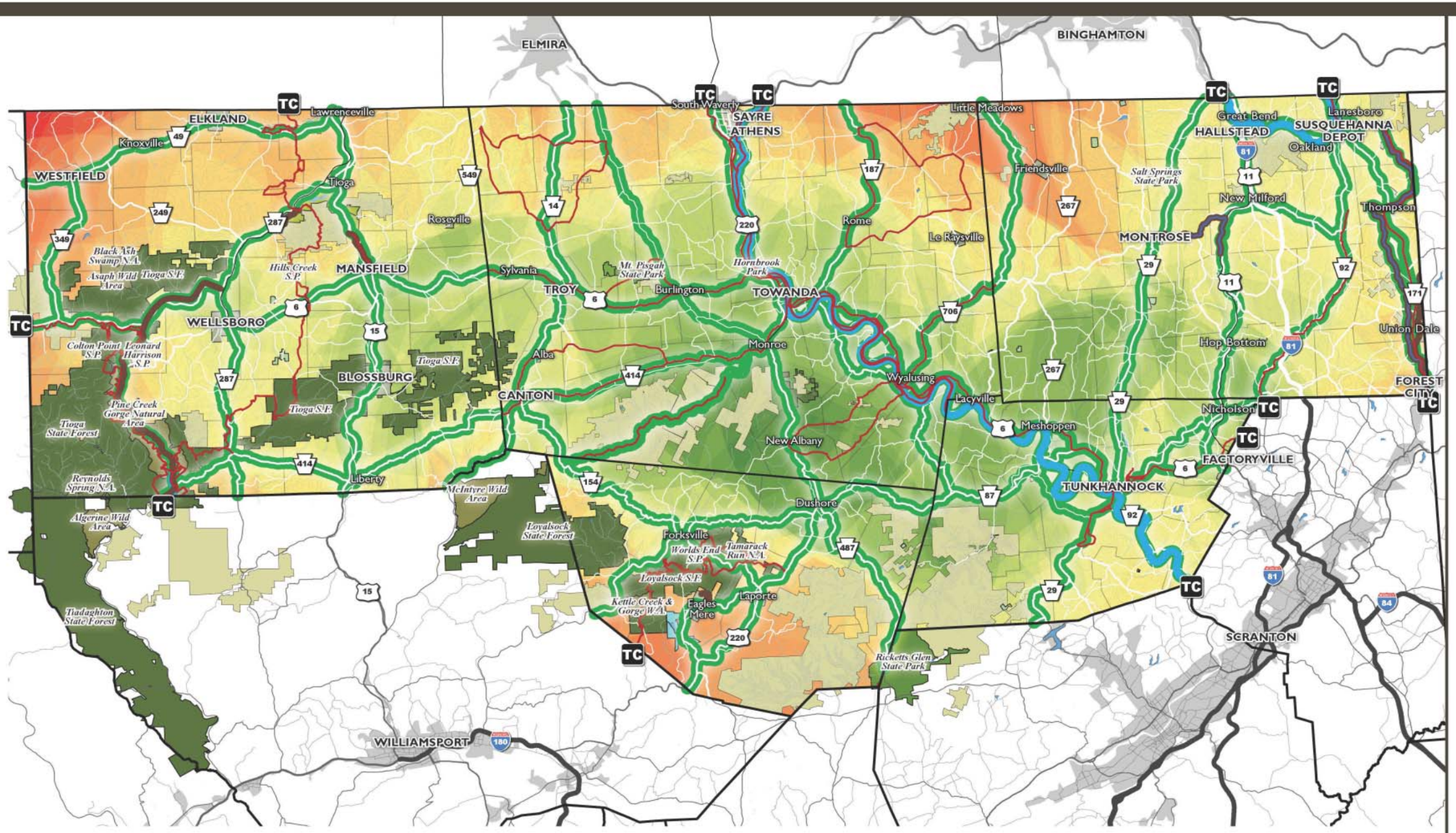
This map illustrates the resources available to the study area that include trails, rail trails, snowmobile trails, water trails (a.k.a. blueways), scenic corridors and bike routes. The study area as a whole has an adequate or above adequate LOS. The highest concentration of resources occurs near the Susquehanna River and eastern Tioga County. There is a high concentration of scenic routes near the Susquehanna River contributing to the score. Bike routes typically follow the scenic routes adding to the LOS. The Susquehanna River is also a water trail, contributing to the score.

The northwest corner of Tioga County, southernmost Sullivan County and northwest Susquehanna County currently have the lowest LOS in regard to trail and corridor-based recreation resources. These areas have fewer roads, trails and corridors at present time.

Map M – Inset: The average LOS for scenic corridors and trail-based recreation is 60-65% for 85% of the study area. Despite an adequate LOS, this category of recreation resources should be considered a priority for all four counties, as each has some portion of the county with less than 60% average LOS. Tioga (1%) and Wyoming (4%) Counties have the least amount of area with less than an adequate average LOS. Sullivan and Susquehanna Counties each have 11% of the county with less than an adequate LOS. Creation of new trails, continuation and connection of existing trails will increase the average LOS. Due to the condition of the bike routes in the region, their current contribution to the average LOS is small. Improvement of existing bike routes will also increase the average LOS.

NORTHERN TIER SCENIC CORRIDORS AND TRAIL RECREATION

CUMULATIVE LEVEL OF SERVICE MAP



RECREATION FACILITIES & AMENITIES

- Federal Lands
- State Parks
- Wilderness/Natural Areas
- State Forest
- Regional Trail Connection
- Trail
- Snowmobile Trail
- State Game Lands
- County/Local Parks
- Private Conservancy Lands
- PA Fish & Boat Commission
- Rail Trail
- Water Trail
- Scenic Corridors

CONDITIONAL ASSESSMENT - PRIMARY MAP

Cumulative LOS

Poor

Adequate

Excellent

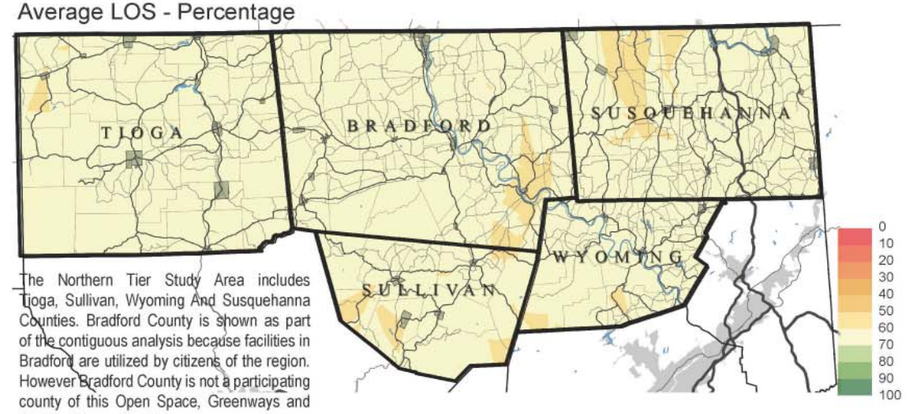
Recreation Facilities and Amenities included in this analysis are: Scenic Corridors, Trails, Snowmobile Trails, Rail Trails and Water Trails.

PRIMARY MAP DESCRIPTION

This map illustrates the cumulative Level of Service (LOS) provided to the different geographic areas of the Northern Tier Study Area, based on the overall conditional assessment of recreation facilities and the overlay of these facilities' service areas. Areas with higher LOS (green) have a greater quantity and quality of parks and recreational facilities. Areas with lower LOS (red) have less access to adequate parks and recreational facilities, based on their geographic location.

CONDITIONAL ASSESSMENT - INSET MAP

Average LOS - Percentage



The Northern Tier Study Area includes Tioga, Sullivan, Wyoming And Susquehanna Counties. Bradford County is shown as part of the contiguous analysis because facilities in Bradford are utilized by citizens of the region. However Bradford County is not a participating county of this Open Space, Greenways and Outdoor Recreation Plan.

N W E S

6 3 0 6

MILES

Recreation Facilities and Amenities included in this analysis are: Scenic Corridors, Trails, Snowmobile Trails, Rail Trails and Water Trails.

PREPARED BY

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER

Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

NORTHERN TIER PENNSYLVANIA

Open Space, Greenway and Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

March 2010

M

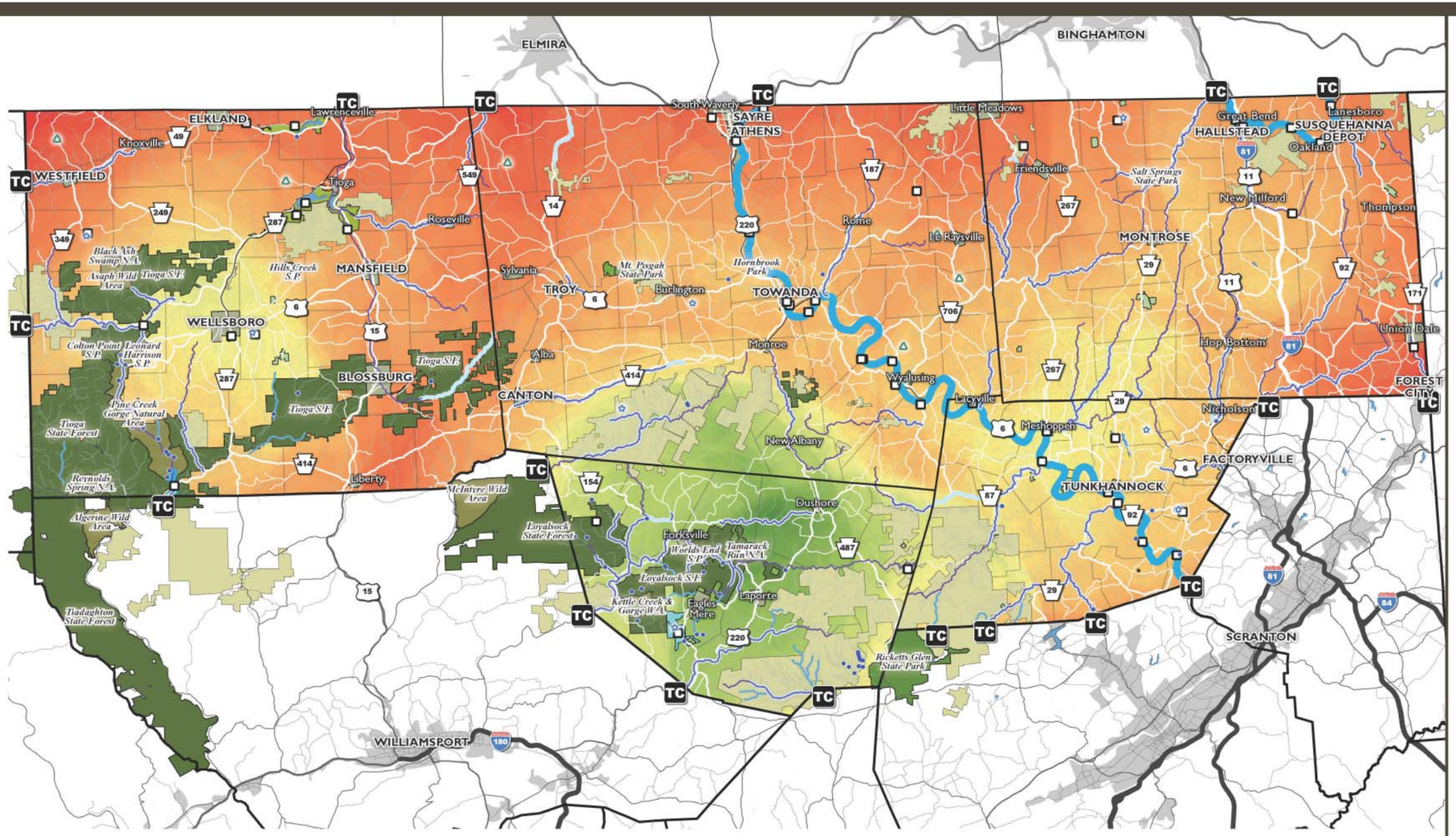
Map N – Access to Water-Based Recreation:
Map N illustrates water-based resources in the study area, including trout streams, water trails, waterfalls, fishing hot spots and boat launches. The highest concentration of these resources occurs in Sullivan County. Central Tioga County and Wyoming County also have an adequate LOS. Since the Susquehanna River is a water trail with multiple boat launches, it contributes much to the LOS in this area. Fishing spots in Tioga and Wyoming Counties play a role in their higher LOS. Furthermore, the concentration of waterfalls and trout waters in Sullivan County contributes to their LOS.

Trout waters and boat launches on the Susquehanna River factor in to the higher scoring portion of Susquehanna County. The reduced number of public facilities in the balance of the county is a contributing factor in the lower LOS. The same can be said of Tioga County. The Pine Creek gorge and Army Corps of Engineering waters contribute to Tioga County's area of higher LOS.

Map N– Inset: The entire study area has an adequate average LOS, with 71% of the area averaging 60-65% and 28% averaging 65-70%. Sullivan County has an average LOS of 65-70% for 95% of the county. Tioga County has an average LOS of 65-70% for 40% of the county. Improvement to existing water-based recreation resources should be considered a priority over addition of resources to increase the average LOS in these two counties. Wyoming County has an average LOS of 60-65% for 82% of the county. Additional resources, as well as improvements to existing resources should be considered in Wyoming County. Susquehanna County has an average LOS of 60-65% for the entire county. Therefore, the County should consider additional resources such as boat launches and public fishing access to increase the average LOS.

NORTHERN TIER WATER BASED RECREATION FACILITIES

CUMULATIVE LEVEL OF SERVICE MAP



RECREATION FACILITIES & AMENITIES

- Federal Lands
- State Parks
- Wilderness/Natural Areas
- State Forest
- Regional Trail Connection
- Waterfalls
- Boat Launch
- Fishing Hot Spots
- Approved Trout Waterbodies
- State Game Lands
- County/Local Parks
- Private Conservancy Lands
- PA Fish & Boat Commission
- Approved Trout Waterbodies
- Stocked Trout Streams
- Wilderness Trout Streams
- Water Trail

CONDITIONAL ASSESSMENT - PRIMARY MAP

Cumulative LOS

Poor

Adequate

Excellent

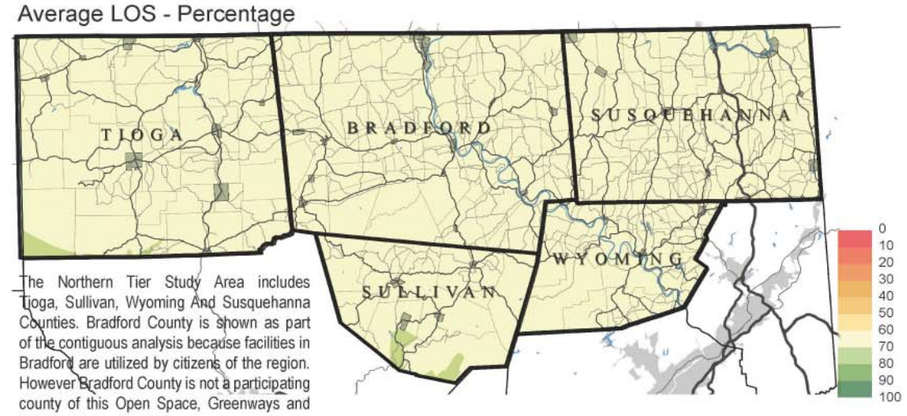
Recreation Facilities and Amenities included in this analysis are: Water Trails, Stocked Trout Streams, Approved Trout Waterbodies, Wilderness Trout Streams, Waterfalls, Boat Launches and Fishing Hot Spots.

PRIMARY MAP DESCRIPTION

This map illustrates the cumulative Level of Service (LOS) provided to the different geographic areas of the Northern Tier Study Area, based on the overall conditional assessment of recreation facilities and the overlay of these facilities' service areas. Areas with higher LOS (green) have a greater quantity and quality of parks and recreational facilities. Areas with lower LOS (red) have less access to adequate parks and recreational facilities, based on their geographic location.

CONDITIONAL ASSESSMENT - INSET MAP

Average LOS - Percentage



The Northern Tier Study Area includes Tioga, Sullivan, Wyoming And Susquehanna Counties. Bradford County is shown as part of the contiguous analysis because facilities in Bradford are utilized by citizens of the region. However Bradford County is not a participating county of this Open Space, Greenways and Outdoor Recreation Plan.

N W E S

6 3 0 6

MILES

PREPARED BY

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER

Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

NORTHERN TIER PENNSYLVANIA

Open Space, Greenway and Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

March 2010

9

OPPORTUNITIES & CONSTRAINTS ANALYSIS

OPPORTUNITIES & CONSTRAINTS ANALYSIS

Natural Areas and Open Space Preservation

The Northern Tier region has an abundance of natural areas and open space. Fortunately, the state preserves large areas already through parks, forests and game lands, particularly in Sullivan and Tioga Counties. However, for these lands to remain preserved, strong management strategies are needed that maintain a balance between preservation and exploitation. Lands can often be "loved to death" without careful management.

Existing preserved lands should also remain protected from natural resource extraction so that they do not lose their value as a visual and recreational resource. Extraction development often requires additional roads and clearing of trees and shrubs. Clearing not only reduces the amount of habitat available, it also breaks up large blocks of habitat, which some species require. Noise created by equipment also detracts from the recreational enjoyment of the resource.

Creation of buffers from development and protection of lands that house species of significance in the region could be a means of selecting lands for future acquisition. Each county within the region has a completed Natural Areas Inventory (now PNDI) that identifies areas of significance to be considered for preservation. Scenic views and drives comprise a significant portion of the region's existing recreation resources. Lands that are part of these view sheds should also be considered for preservation. Future lands should also be used to create connections, or spokes, between hubs of preserved land. Spokes to lands within the region as well as outside the region should be considered.

Bradford, Lycoming, Columbia, Luzerne and Lackawanna Counties have completed open space, greenway and outdoor recreation plans. These plans should be taken into consideration in the Recommendations phase of the project, when considering lands for preservation in the Northern Tier counties. Bradford County identified Towanda, Wappasening and Wyalusing Creeks, as well as Barclay Mountain as priority greenways. Lycoming County identi-

fied Loyalsock, Lycoming, Muncy and Pine Creek as high priority greenways, with other greenways along tributaries of these creeks. Lastly, Lackawanna and Luzerne Counties identified Tunkhannock Creek and the Susquehanna River as priority greenways.

Based on the consultant team's Inventory, GIS Mapping and LOS Analysis, Susquehanna and Wyoming Counties are in the most need of additional public lands. They both contain State Game Lands; however, their limited amenities and size do not provide a level of service that is comparable to the rest of the region. Sullivan and Tioga counties are well served by public lands. Additional public lands, as well as stream corridor preservation, or greenways, should be used to enhance existing lands and create connections between them.

Environment and Natural Resources

There is a strong desire to preserve the pristine, rural character of the Northern Tier. The quandary is that the region is rich in natural resources that are desirable for extraction. Recovery from previous extraction of timber and coal is an ongoing effort. Forest management has allowed for forest re-growth, while continuing harvest of select trees. Additionally, both public and private groups have made efforts to clean up tailings piles left from coal mining. They have also implemented measures to clean up streams impaired by acid mine drainage, which has mostly occurred in Tioga County. Damaged areas can become sites utilized for recreation and environmental education during and post clean up.

More recently, advances in technology have made the extraction of Marcellus shale natural gas an economically viable venture in the region. Drilling requires the clearing of a multi-acre pad site at the well location. Pipelines to transport the gas connect the pad site to collector lines and on to storage. Each pipeline requires the surface above it to be clear for a minimum width, creating a visual corridor through the forest. On the one hand, these clearings provide a constraint by disrupting the landscape both physically and visually, changing the composition of the landscape. On the other hand, through agreements with the natural gas companies and landowners, these clearings can also be seen as an opportunity to create corridors to be used for recreation such as hiking and biking.

Agriculture, while declining, is still an important industry to the Northern Tier. Many agricultural lands within the region are currently protected through the various programs offered through the state. Expanding the number of agricultural lands already protected can assist in creating the critical mass often needed for agricultural viability. It also is a means of maintaining the cultural heritage of the region.

Water quality is also a concern in the region. Water quality in streams and rivers can be enhanced through the use of riparian buffers. Riparian buffers provide an area of vegetation along banks that filter run-off, in addition to holding the soil in place. These buffers can also provide recreation opportunities for trail and nature-based activities. A single stream can often flow through several protected lands; continual riparian buffers are an opportunity to connect these lands. Additionally, several streams in the region are classified high quality or exceptional value; these should be taken into consideration when prioritizing areas for protection.

Wildlife corridors vary in size and composition and can be used to offset habitat fragmentation caused by development. Wildlife habitat quality is decreased at the edges, but tends to increase the further the distance from development. Species that are more sensitive to development need wider corridors than those who are less sensitive. Greenways that double as wildlife corridors can also be used for wildlife viewing. However, recreational uses may need to be restricted during certain seasons.

Barriers and Accessibility

The rural character and rolling topography that provide the Northern Tier region with many of its recreation opportunities can also affect accessibility. Routes and resulting travel times between destinations are often long and winding. Visitors not familiar with the region and those who are more used to a grid system of roads may find travel in the region difficult or confusing. Wayfinding is not only important to attracting and keeping visitors in the region, it is important to local residents exploring the places they live. Consistent signage aids travelers in finding their destination and can also make the experience of traveling to that destination more enjoyable.

Where public lands are scarce residents may be recreating on private lands. Agreements for recreation on private lands may occur between individuals, excluding the larger population. Landowners may be allowing others to recreate on their property with only a few individuals being aware of the opportunity. Additionally, private groups may own recreational lands and allow public access, but due to limited marketing and promotion may only be attracting a small group of individuals that may be aware of the opportunity. Formalized agreements for public recreation on private lands should be highly promoted in order to maximize the use of lands and facilities and to avoid exclusion.

While shared use of facilities is often encouraged, multiple uses should be carefully considered and managed for compatibility. For example, state parks currently allow hunting in designated areas. However, some areas designated as hunting also have hiking trails through them. State forests also allow hunting where there are trails. Hunting seasons in Pennsylvania occur throughout the majority of the year. Controlled management of various uses, as well as increased awareness, especially between hikers and hunters, is necessary to ensure recreation participant's safety.

Existing transportation corridors often provide opportunities for recreation. Shoulder improvements on key state and county roads create safer cycling routes. Appropriate signage also alerts drivers to the possibility of encountering other modes of transportation. During the stakeholder input process, township roads were also identified as potential recreational corridors. Shoulder and general road maintenance, in addition to signage can enhance safety and the experience of using these roads for recreation. Designated routes should connect recreation destinations to encourage alternative forms of transportation and increase accessibility.

Railroad corridors also provide a means for a wide variety of recreation activities. Abandoned railroad corridors occur throughout the region. Corridors selected for trail improvements should occur near existing or future recreation destinations to increase their accessibility. Where possible, rail with trail agreements may also be considered.

Several trails are noted in adjacent counties' plans as being significant at either the regional or the county level. These trails include:

- Countryside Conservancy Trolley Trail
- Black Mountain Trail
- Pine Creek Trail
- Mid-State Trail
- Loyalsock Trail
- Susquehanna River Trail

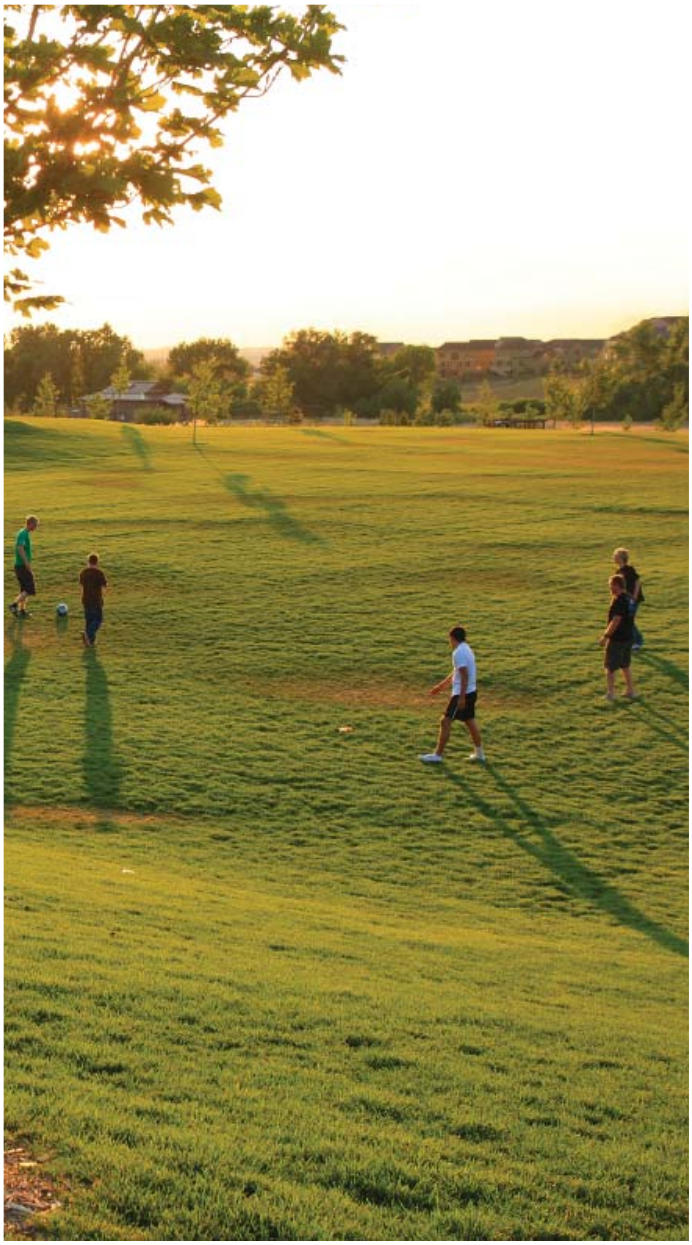
The Susquehanna River is currently designated as a water trail or blueway. Numerous streams connect to the Susquehanna River, creating an opportunity for a system of water trails, including local and regional trails (similar to hiking and biking trail networks). Making access points available for public use is a necessity for creating additional water trails and connections.

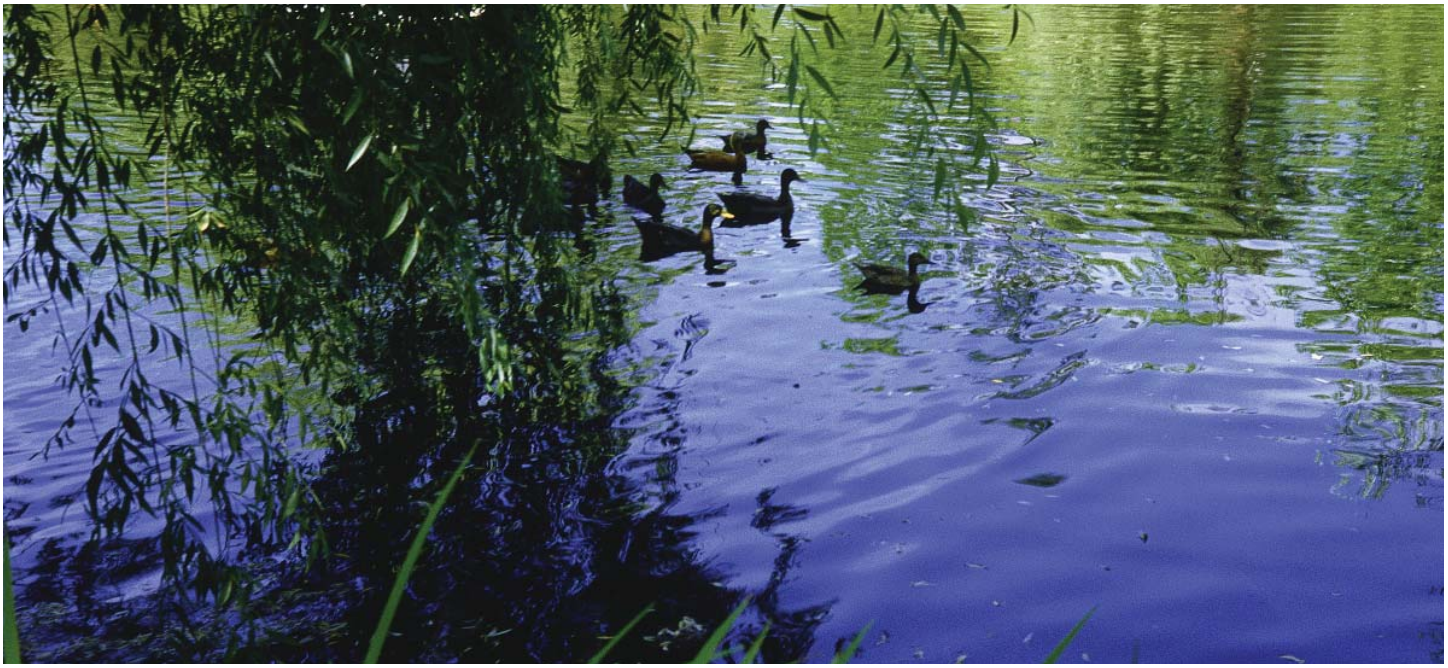
Facility Improvements

Improving existing recreation facilities and public lands will increase their value to the region. For example, Salt Springs State Park is unique in that it is managed and maintained by a private organization. However, it lacks the amenities and level of maintenance that other state parks in the region receive. Improving maintenance and upgrading current facilities, such as the restrooms, would greatly increase this park's level of service.

In addition, there are many state game lands throughout the region that currently have no amenities or facilities. The addition of minimal parking, signage, trails or port-a-lets would increase the variety of recreational opportunities able to be supported on these existing lands. However, in conjunction with the promotion of multiple uses, all users need to be aware of shared uses through education and signage.

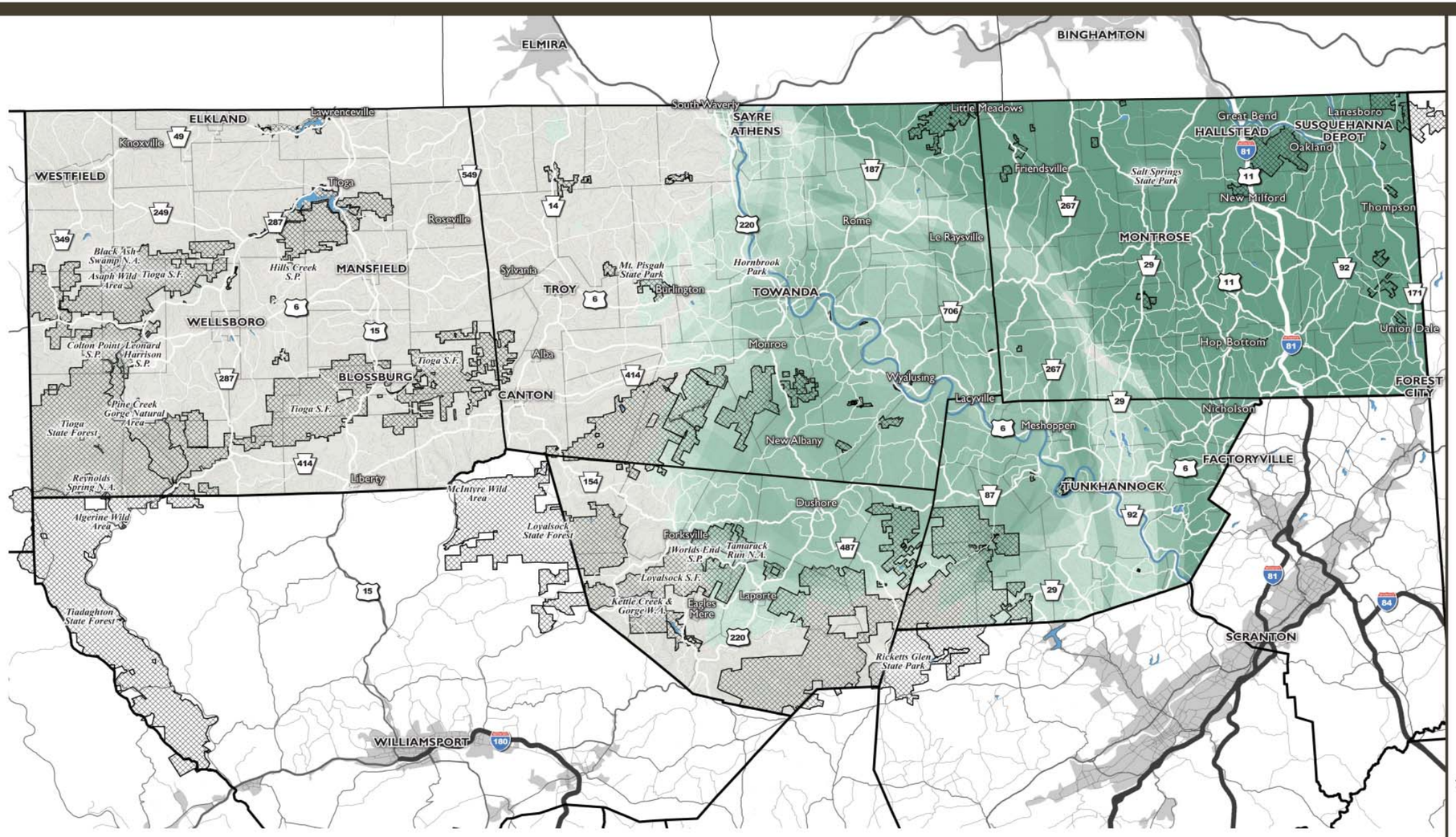
Existing facilities can also be enhanced through additional programming. Programs that celebrate and explain the region's history, culture and environment enhance a user's experience. Programs can be provided through collaborative efforts between state, county, local and community groups and may be either personnel-led or self-led through interpretive signs.





NORTHERN TIER LAND BASED RECREATION FACILITIES

RECOMMENDATIONS ANALYSIS MAP



NORTHERN TIER REGION

Study Area

The Northern Tier Study Area includes Tioga, Sullivan, Wyoming And Susquehanna Counties. Bradford County is shown as part of the contiguous analysis because facilities in Bradford are utilized by citizens of the region. However Bradford County is not a participating county of this Open Space, Greenways and Outdoor Recreation Plan.

Recreation and Conservation Lands (Public and Private)

LAND BASED RECREATION

LOS scores below overall average (82.56)

Greater Need

Less Need

PRIMARY MAP DESCRIPTION

This map illustrates gaps within the Level of Service (LOS) for recreation provided by public and private conservation lands. The green shading gradient represents the locations that are currently served at levels below the overall LOS average of 82.56. The areas show a need for an increased LOS from land-based recreation resources.

NORTHERN TIER REGION

Regional Location Map

N W E S

6 3 0 6

MILES

PREPARED BY

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER

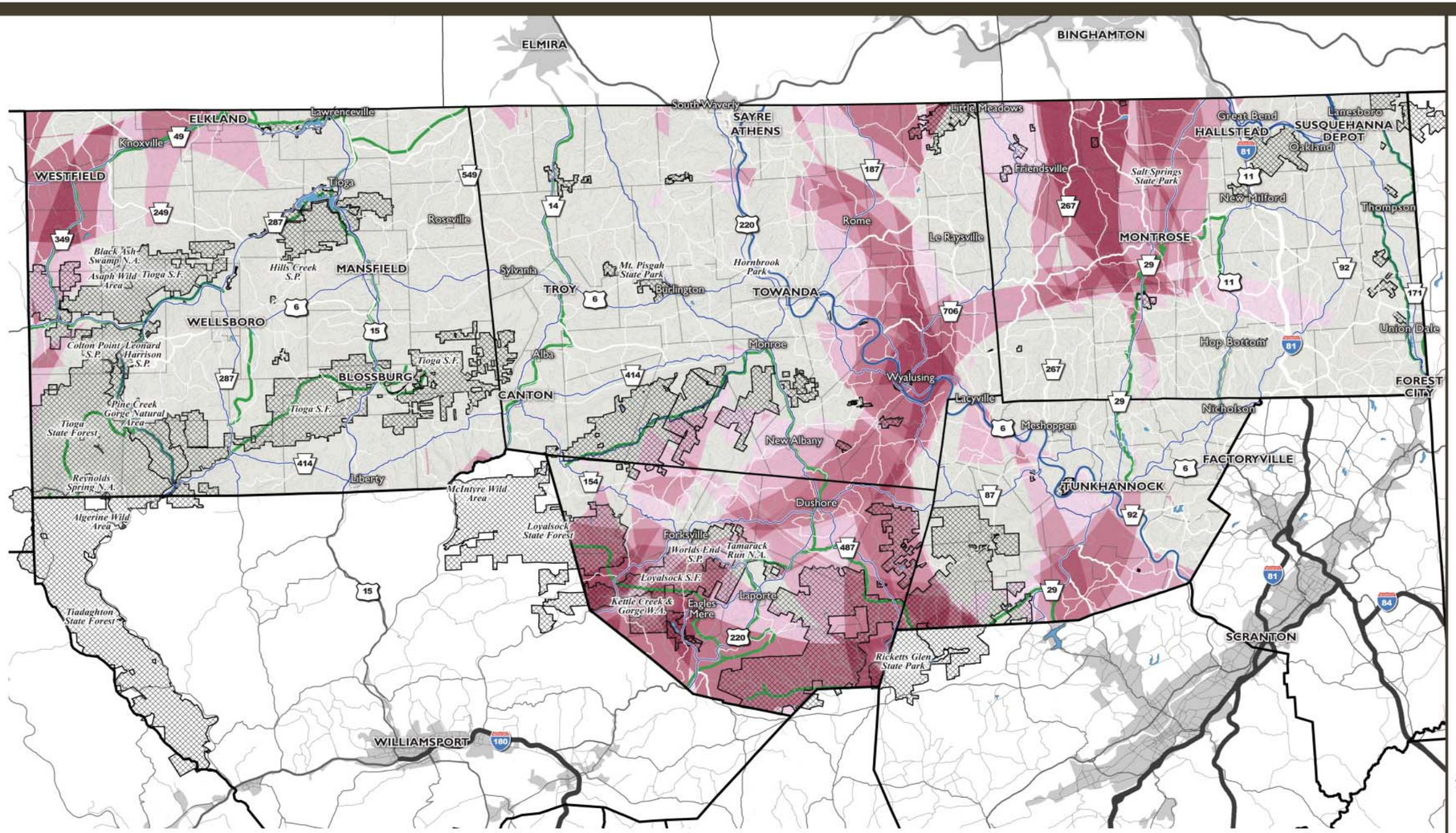
Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

NORTHERN TIER
PENNSYLVANIA
Open Space, Greenway and Outdoor Recreation Plan
Sullivan, Susquehanna, Tioga and Wyoming Counties

NORTHERN TIER SCENIC CORRIDORS & TRAIL RECREATION

RECOMMENDATIONS ANALYSIS MAP



SCENIC CORRIDOR & TRAIL RECREATION

LOS scores below overall average (61.65)

Greater Need

Less Need

Recreation and Conservation Lands (Public and Private)

Inactive Railroad Corridor

Scenic Corridor / Trail

PRIMARY MAP DESCRIPTION

This map illustrates gaps within the Level of Service (LOS) for recreation provided by scenic corridors and trails. The red shading gradient represents the locations that are currently served at levels below the overall LOS average of 61.65. The areas show a need for an increased LOS from corridor and trail recreation resources.

NORTHERN TIER REGION

Regional Location Map

NORTHERN TIER REGION

Study Area

The Northern Tier Study Area includes Tioga, Sullivan, Wyoming And Susquehanna Counties. Bradford County is shown as part of the contiguous analysis because facilities in Bradford are utilized by citizens of the region. However Bradford County is not a participating county of this Open Space, Greenways and Outdoor Recreation Plan.

N W E S

6 3 0 6

MILES

PREPARED BY

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER

Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

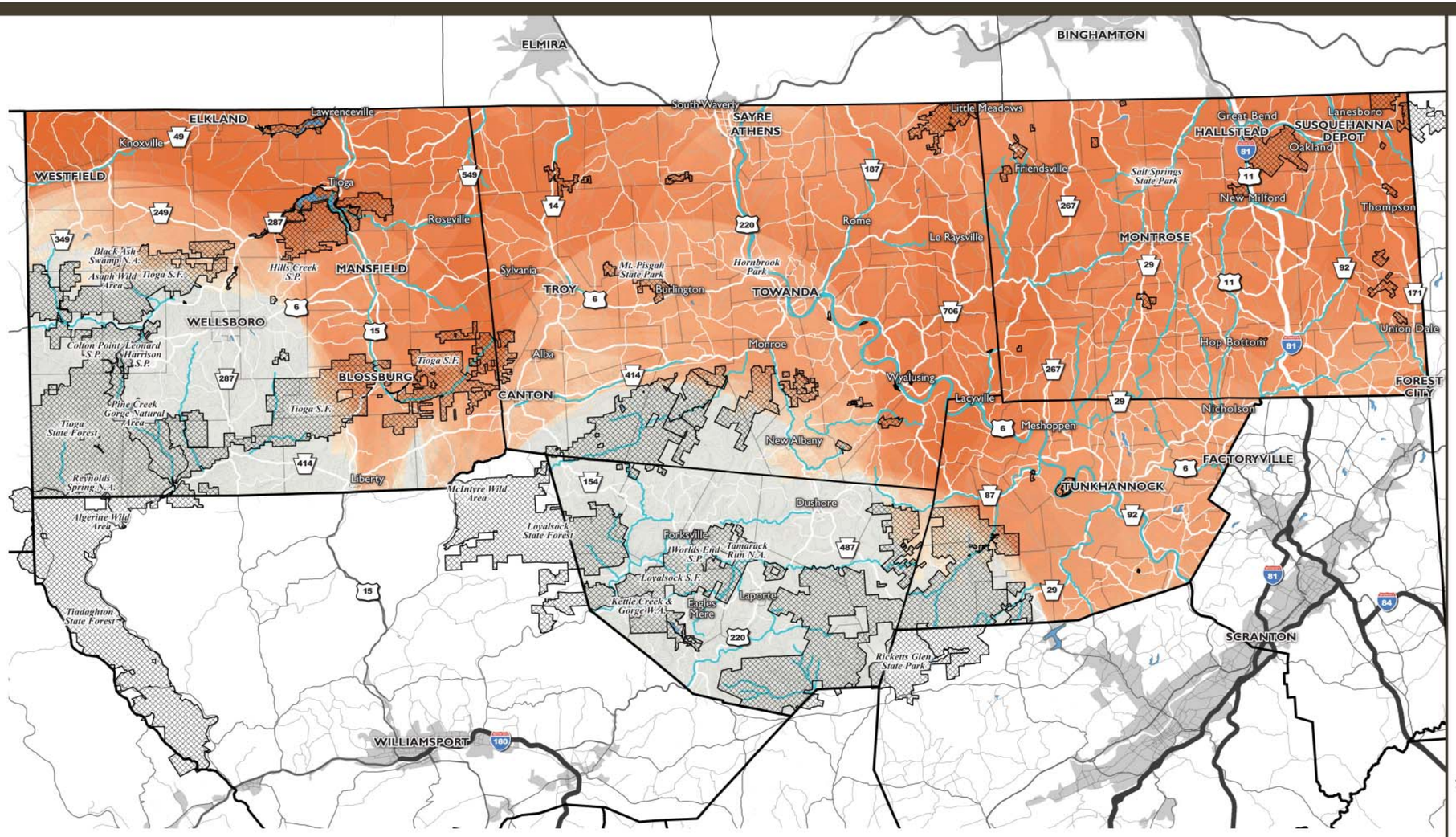
NORTHERN TIER PENNSYLVANIA

Open Space, Greenway and Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

NORTHERN TIER WATER BASED RECREATION

RECOMMENDATIONS ANALYSIS MAP



Recreation and Conservation Lands (Public and Private)

Trout Streams / Water Trails

WATER BASED RECREATION

LOS scores below overall average (65.92)

Greater Need

Less Need

PRIMARY MAP DESCRIPTION

This map illustrates gaps within the Level of Service (LOS) for recreation provided by lakes and streams. The orange shading gradient represents the locations that are currently served at levels below the overall LOS average of 65.92. The areas show a need for an increased LOS from water-based recreation resources.

NORTHERN TIER REGION

Regional Location Map

NORTHERN TIER REGION

Study Area

The Northern Tier Study Area includes Tioga, Sullivan, Wyoming And Susquehanna Counties. Bradford County is shown as part of the contiguous analysis because facilities in Bradford are utilized by citizens of the region. However Bradford County is not a participating county of this Open Space, Greenways and Outdoor Recreation Plan.

N W E S

6 3 0 6

MILES

PREPARED BY

NORRIS DESIGN

Planning | Landscape Architecture

1101 Bannock Street

Denver, Colorado 80204

P 303.892.1166

F 303.892.1186

www.norris-design.com

MAP DISCLAIMER

Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

NORTHERN TIER

PENNSYLVANIA

Open Space, Greenway and Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

NORTHERN TIER VIEWSHED & SCENIC OVERLOOKS

ANALYSIS MAP

Recreation and Conservation Lands (Public and Private)

Scenic Overlook Location

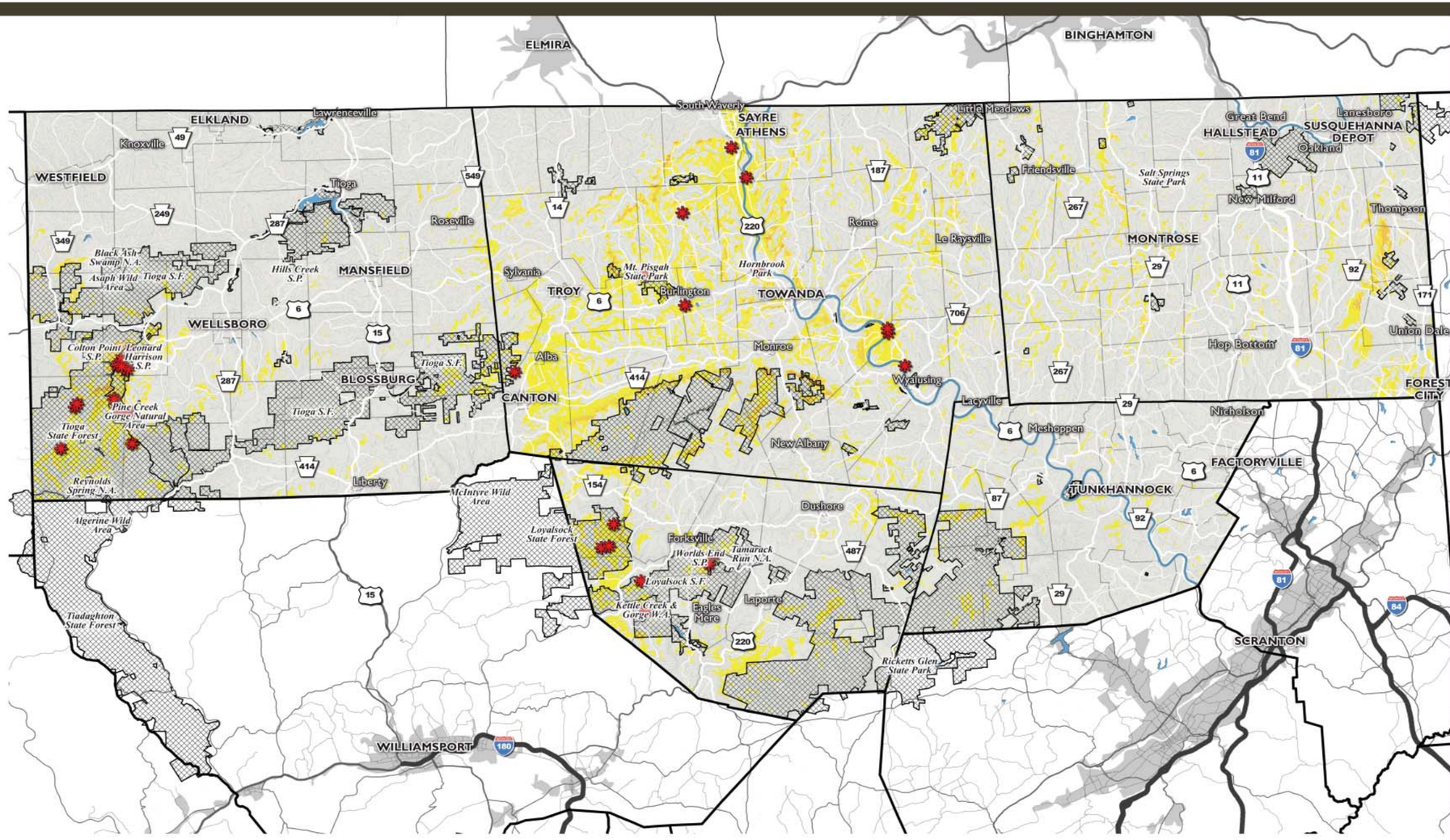
VIEWSHED ANALYSIS

Visible From One Location

Visible From Multiple Locations

PRIMARY MAP DESCRIPTION

This map illustrates viewsheds as determined from scenic overlooks throughout the Northern Tier region. Some locations are visible from as many as 9 overlooks.



NORTHERN TIER REGION

Regional Location Map

NORTHERN TIER REGION

Study Area

The Northern Tier Study Area includes Tioga, Sullivan, Wyoming And Susquehanna Counties. Bradford County is shown as part of the contiguous analysis because facilities in Bradford are utilized by citizens of the region. However Bradford County is not a participating county of this Open Space, Greenways and Outdoor Recreation Plan.

N W E S

6 3 0 6

MILES

PREPARED BY

NORRIS DESIGN

Planning | Landscape Architecture

1101 Bannock Street

Denver, Colorado 80204

P 303.892.1166

F 303.892.1186

www.norris-design.com

MAP DISCLAIMER

Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

NORTHERN TIER

PENNSYLVANIA

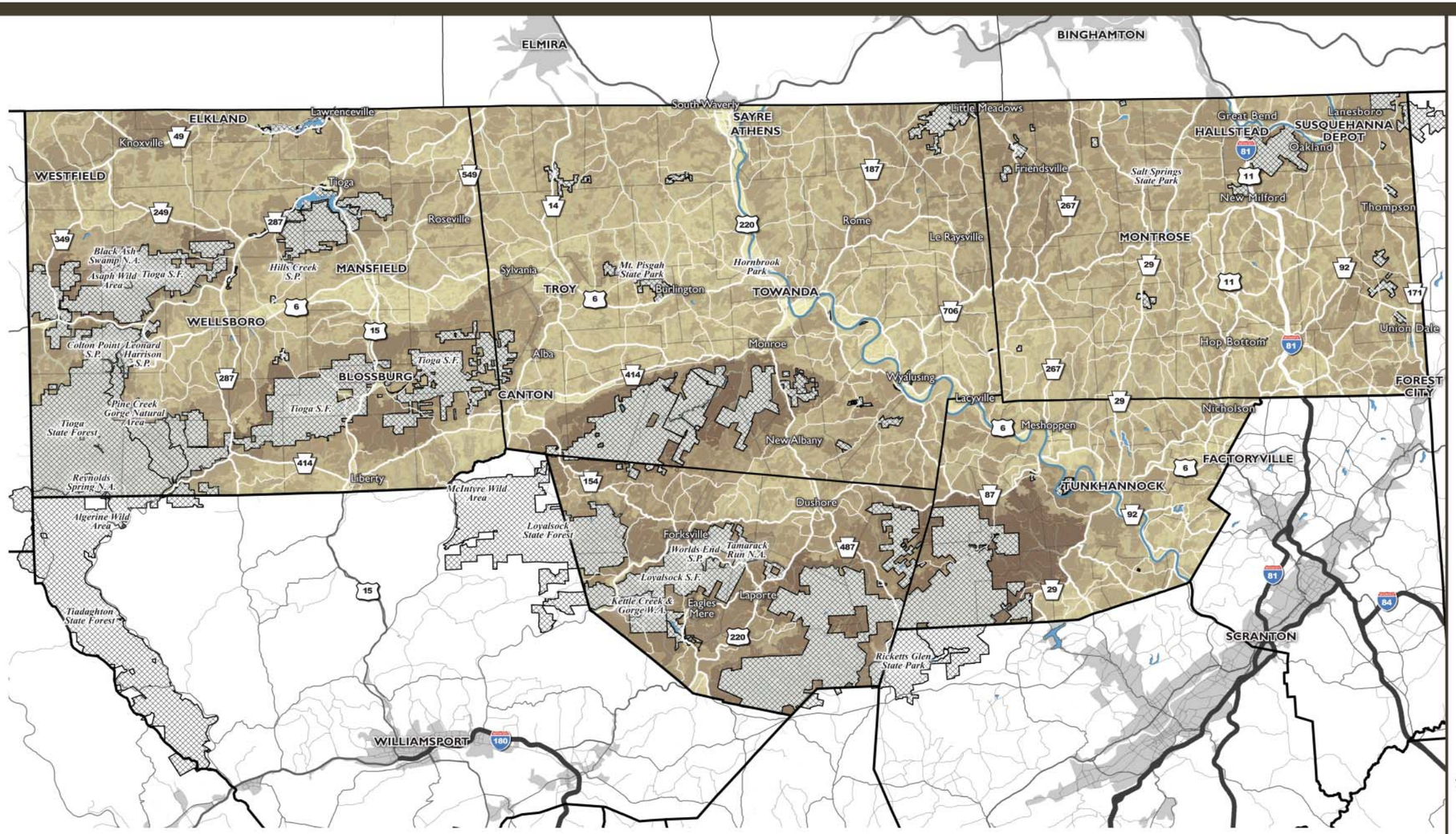
Open Space, Greenway and Outdoor Recreation Plan

Sullivan, Susquehanna, Tioga and Wyoming Counties

R

NORTHERN TIER LARGE LANDBLOCK & FOREST AREA

ANALYSIS MAP



Recreation and Conservation Lands (Public and Private)

LANDBLOCK & FORESTED AREA

Lower Priority

Higher Priority

PRIMARY MAP DESCRIPTION

This map illustrates areas that contain large, unbroken forested areas and contiguous areas of land. These landblocks are undivided by physical barriers such as roadways, waterways, etc. Darker areas within the gradient indicate areas where the two attributes are coincident.

NORTHERN TIER REGION

Regional Location Map

NORTHERN TIER REGION

Study Area

The Northern Tier Study Area includes Tioga, Sullivan, Wyoming And Susquehanna Counties. Bradford County is shown as part of the contiguous analysis because facilities in Bradford are utilized by citizens of the region. However Bradford County is not a participating county of this Open Space, Greenways and Outdoor Recreation Plan.

N W E S

6 3 0 6

MILES

PREPARED BY

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER

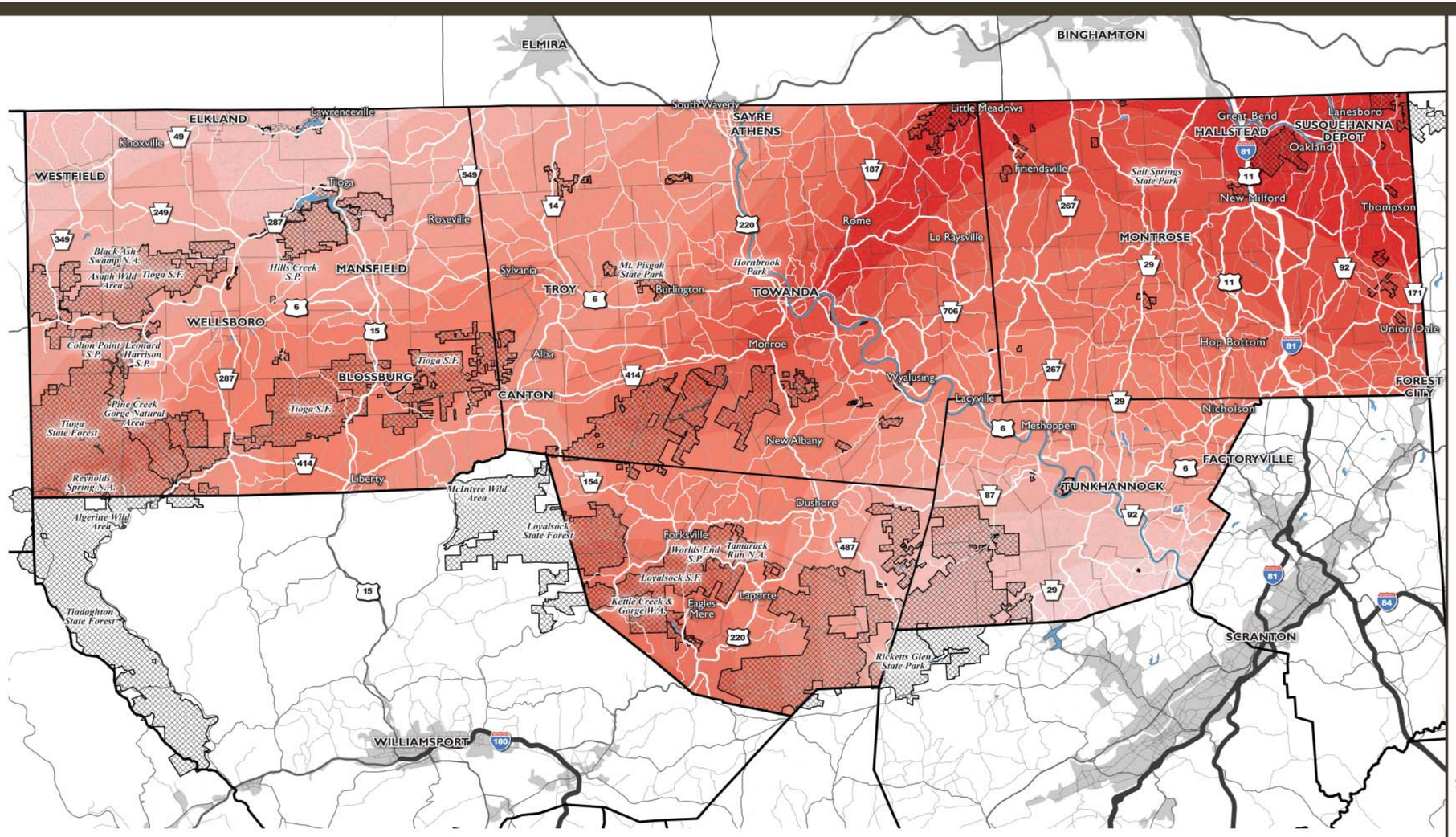
Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

NORTHERN TIER
PENNSYLVANIA
Open Space, Greenway and Outdoor Recreation Plan
Sullivan, Susquehanna, Tioga and Wyoming Counties

NORTHERN TIER MARCELLUS SHALE FORMATION THICKNESS

ANALYSIS MAP



Recreation and Conservation Lands (Public and Private)

MARCELLUS SHALE ISOPLETH

FORMATION THICKNESS

- Less than 50'
- 50'
- 75'
- 100'
- 125'
- 150'
- 175'
- 200'
- 225'
- 250'
- Greater than 250'

PRIMARY MAP DESCRIPTION

This map illustrates thickness in feet for the Marcellus Shale formation. Darker red areas indicate the greatest formation thickness for this region.

NORTHERN TIER REGION

Regional Location Map

NORTHERN TIER REGION

Study Area

The Northern Tier Study Area includes Tioga, Sullivan, Wyoming And Susquehanna Counties. Bradford County is shown as part of the contiguous analysis because facilities in Bradford are utilized by citizens of the region. However Bradford County is not a participating county of this Open Space, Greenways and Outdoor Recreation Plan.

N W E S

6 3 0 6

MILES

PREPARED BY

NORRIS DESIGN
Planning | Landscape Architecture
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1186
www.norris-design.com

MAP DISCLAIMER

Map produced for Northern Tier Regional Planning and Development Commision (NTRPDC) - By Norris Design. This map is intended for planning and discussion purposes only. Legend elements may vary in size, color and transparency from those shown on the map.

Copyright© 2009 - NTRPDC - All Rights Reserved. No part of this GIS data may be copied, reproduced, or transmitted in any form or by any means whatsoever, whether graphic, electronic or mechanical, including photocopying, posting on the Internet, recording, or through the use of an information storage and retrieval system, without prior written permission of the NTRPDC.

NORTHERN TIER
PENNSYLVANIA
Open Space, Greenway and Outdoor Recreation Plan
Sullivan, Susquehanna, Tioga and Wyoming Counties

T

10

AREAS OF FOCUS

AREAS OF FOCUS

Connections

Connections not only create a sense of continuity, they can also aid in providing that "critical mass" often needed to truly make preservation and conservation effective. Connectivity of a region also promotes the use of alternative modes of transportation. Major greenways, blueways, trails and scenic corridors should be identified throughout the Northern Tier that create those connections and provide continuity throughout the region. Once regional connections are identified, more local spokes and connections should be designated as priorities, in order to create an integrated network. At the local level, alternative connections such as township roads and use of private lands should be considered.

Recreation Facility Improvement and Development

While most state parks in the region are well maintained and developed, other state lands are not. At present, the majority of recreation facilities in the region are provided by the state. Additional facilities provided at the local level would be beneficial to fill in gaps in the existing level of service (LOS). Once gaps in service are filled in, improvements to existing facilities will further raise the LOS provided within the region. Trail maintenance and addition of support amenities, such as parking, restrooms, benches and picnic tables in existing facilities, are ways of increasing the LOS provided by a particular facility.

Preservation and Conservation

Areas of preservation and conservation should be identified at both the regional and local level. Establishing a system for prioritizing lands will provide guidance to agencies and organizations in regard to which lands to protect first. Protection of lands that include both environmental and recre-

ation resources should be considered. Priority should also be given to lands that achieve other goals such as creating connections. Collaborative efforts and the identification of and various funding sources will play key roles in protecting and conserving the land within the Northern Tier.

Marketing and Tourism Promotion

Currently, the Northern Tier Region is known by a variety of names. In order to become more recognizable, a consistent brand and identity should be established for the region, so as to promote sales tax and revenue generation to support park and recreation facility maintenance, improvements and development. Incorporating this brand into consistent signage and wayfinding for the region will further reinforce the identity as well as ease navigation to and within the region. Additionally, this brand should be applied to streamlined marketing strategies and implemented through specific communication mediums in order to increase the Northern Tier's visibility as a premier recreation destination among both local residents and visitors. This may include a web-based 'one-stop-shop' for information regarding the events, amenities and recreation available in the region. Lastly, heritage and agritourism should also be promoted throughout the region.

Funding and Resources

In the past, state lands have been well funded. However, with the status of the current economy that funding may not continue into the future. Alternative, in addition to traditional, means of funding and resources need to be identified to ensure the continuation of the current level of service in the region through long-term maintenance and operations. Funding and resources for capital improvements and programs beyond what currently exist are also important to the region to increase the level of service. This is true not just at the state level, but all levels.

Regional Partnerships and Collaboration

Currently, there is a heavy reliance on state departments throughout the region. County and community organizations need to become more involved in facility and program development and improvements to further supplement the region's recreation opportunities. These groups should also be involved in regional marketing efforts. Participation at the local level also helps to create a sense of ownership and pride in the region that as a whole may currently be lacking. Encouraging collaboration among groups will maximize the use of resources, allow for leverage of funding, ease the burden of any one group, and may increase the likelihood of local participation.

11

RECOMMENDATIONS

RECOMMENDATIONS

INTRODUCTION:

The DRAFT recommendations of the Northern Tier Open Space, Greenway & Outdoor Recreation Plan are the result of the consultant team's site visits, inventory and analysis, community and stakeholder input, and the opportunities and constraints identified in the Needs Assessment phase of the project. The following recommendations and action plan were formulated based on the key findings of the planning process and will be finalized based on staff and advisory committee input. It is the goal of this Plan to provide the Commission with a realistic and action-oriented strategies that best meet the needs of the Northern Tier region, as well as funding and phasing recommendations that promote sustainable development, improvement, operations and management of the region's outdoor recreation resources.

A. PLANNING INTEGRATION:

GOAL 1: Recognize the planning efforts of the past and present to avoid duplication of effort and reinforce the objectives of those planning efforts.

Objective 1.1: Utilize the Northern Tier Greenways planning process as means to integrating the findings of previous planning efforts.

Strategies:

1.1.1 Review and utilize the relevant analysis and recommendations of the following planning efforts into the Northern Tier Greenways Action Plan:

- Bradford County Open Space, Greenways and Outdoor Recreation Plan
- Lackawanna & Luzerne Counties OS, Greenways & Outdoor Recreation Master Plan 2004
- Columbia County Comprehensive Recreation, Parks, Greenways & Open Space Plan 2007
- Lycoming County Comprehensive Recreation, Parks & Open Space/Greenway Plan 2008
- River Conservation Plans

- Watershed Plans
- Recreation Plan for State Parks and State Forests in the Pennsylvania Wilds
- Endless Mountains Heritage Region Management Action Plan
- Pennsylvania Outdoors: The Keystone for Healthy Living 2009-2013 SCORP
- Susquehanna Greenway Partnership planning efforts
- Municipality and community parks and recreation planning
- 2008 State Parks Visitor Survey: A Summary of Key Findings
- 2008 Pennsylvania Resident Survey: A Summary of Key Findings
- Lumber Heritage Region Management Action Plan
- Pennsylvania Route 6 Heritage Corridor Management Action Plan
- Elmira-Chemung Transportation Council Long Range Plan
- Tioga County Strategic Plan (New York)
- Binghamton Metropolitan Transportation Study Pedestrian and Bicycle Plan
- Endless Mountains Visitors Bureau Marketing Plan

B. CONNECTIONS:

GOAL 2: Identify and create connections extending across political boundaries to further link the region visually and physically. Recognize the potential connections to Bradford County, the Susquehanna Greenway and New York to enhance the region as a whole.

Objective 2.1: Work with PennDOT to make improvements to the existing roadway system for the benefit and safety of motorists and bicyclists.

Strategies:

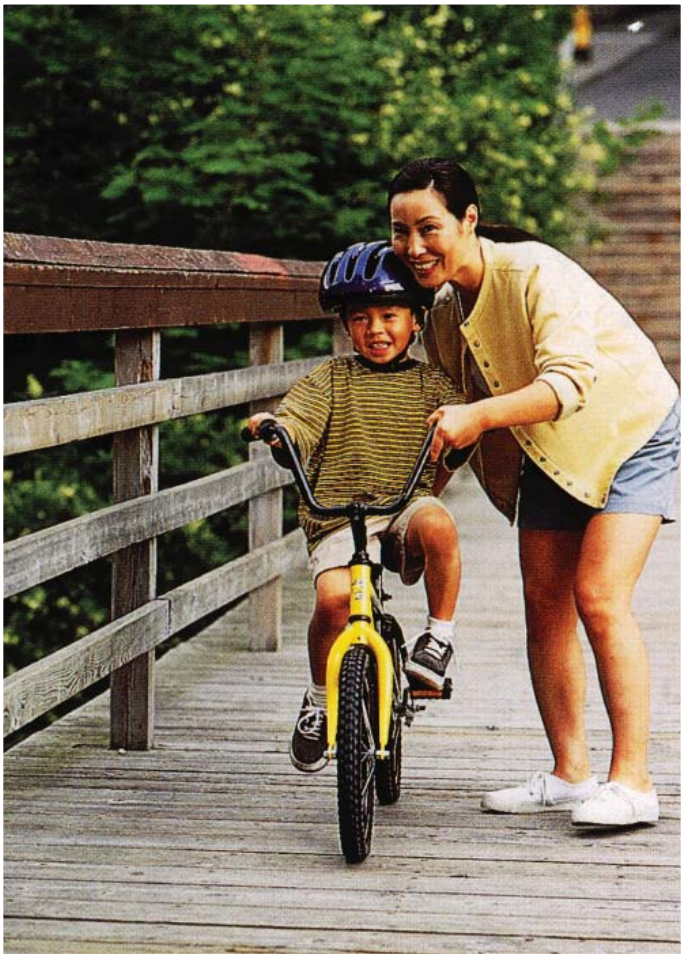
2.1.1. Upcoming Transportation Improvement Plans and "corridor safety analyses" studies by the NTRPDC should target Northern Tier scenic corridors to determine and budget for low-cost improvements that should be made to these roadways. Following is a list of the most effective low-cost safety measures (reduced crash rates by 35-50%, based on research by PennDOT):

- Centerline rumble strips
- Improved curve delineation
- Utility pole relocation
- Advanced curve warning markings

Other measures installed by PennDOT were shown to decrease the crash rate by 20-30%, and should be considered:

- Paving to improve skid resistance
- Close object delineation
- Shoulder rumble strips
- Tree removal
- Correcting shoulder drop-offs

Also refer to PennDOT Districts 3-0 and 4-0 Transportation Safety Plans.



2.1.2. Increase the promotion of bicycling in the Northern Tier region when appropriate and safe. The recent influx of gas industry activities to the region has increased traffic volumes and inherent risk and quality of many scenic, rural roadways. When appropriate, encourage the use of these roads not only for recreational bicycling, but also for traveling between recreational facilities in close proximity.

2.1.2.a. Some strategies and mediums to promote bicycling may include, but are not limited to:

- Designation of additional routes
- Wayfinding and signage
- Distribution of bike maps at local businesses and retail locations
- Coordination of marketing campaigns and materials with the following groups – PennDOT BikeSafe Program, DCNR Greenways & Trails Program, Private and Nonprofit User Groups (i.e. bicycle clubs, touring groups/companies, etc.), Bicycle Access Council, Bike Pittsburgh, Bike Adirondacks, Suburban Cyclists Unlimited, Bike PA, Pedal PA, Walk and Bike Berks County

2.1.3. Improve roadway safety and safety for bicyclists and pedestrians through the provision of new or improved existing shoulders appropriate to the posted speed and volume of the roadway.

2.1.3.a. A minimum 4-foot shoulder is recommended for the safety and comfort of a bicyclist, with widths increasing to 6-feet for road ways with daily traffic volumes above 2,000 and for higher traffic speeds (40-55mph). A width of 8-feet may also be considered for those roadways posted at higher speeds, even if below the level of principal arterial, for segments identified as particularly important to bicycle routes.

2.1.3.b. Evaluation the current Transportation Improvement Plans for the Northern Tier to ensure that all planned highway and bridge improvement projects are designed with the proper bike facilities and incorporate these safety and design requirements.

2.1.4. Safety improvements should be considered along Bike Routes Y - US 6, G, J and A, such as wider shoulders, bike lanes, larger/additional signage and striping, to increase awareness, as drivers may not expect to encounter cyclists on this road.

2.1.5. Cross-marketing, programming and promotion of existing transit services, such as the Endless Mountains Transportation Authority (EMTA), which provides fixed-route and demand-response public transit services in Bradford, Sullivan and Tioga Counties should continue to be strongly encouraged.

2.1.6. Tioga County should be a priority for funding overall transportation infrastructure needs, such as re-investing in safe, new bike lanes and routes along roads and highways.

Objective 2.2: Improve and add to the existing land-based trail system for the benefit of pedestrians and multi-modal transportation.

Strategies:

2.2.1. Major greenways, trails and scenic corridors should be identified throughout the Northern Tier in order to enhance connections and provide continuity and help support the development of new and/or improved recreation facilities that will further support the region's growth as a recreation destination. Once regional connections are identified, more local spokes and connections (i.e. township roads and private lands) should be designated as priorities, in order to create an integrated network.

- Geographic Priority – Providing connections between existing trails
- Social or Experiential Priorities – Access to natural scenery and trails that accommodate more than one user group.
- Organizational Priority – Securing trail rights-of-way that would otherwise be lost to development.

2.2.2. Creating a statewide trail network, providing access for disabled users, and rehabilitating/improving existing trails, including addressing gaps and voids in the existing system, are crucial in implementing recreation access and opportunities, connecting to Susquehanna Greenway to the south thru Pine Creek Trail and to the west with Rochester/Genessee Wilds trail.

- Close gaps identified in the 2009 State Trail Gap Study (refer to individual counties for specific strategies).

2.2.3. Sullivan County

2.2.3.a. Close the gap between the Loyalsock forestry trails in the Cabbage Hollow area and the State Game Lands 12 trails in the Sunfish Pond area with a spur to Shunk for gas (snowmobile).

2.2.3.b. Close the gaps among State Game Lands 13 trails, Ricketts Glen State Park trails, and State Game Lands 57 trails (snowmobile).

2.2.3.c. Close the trail gap west of Lake Jean along SR487 (cross country skiing).

2.2.3.d. Extend the Loyalsock Trail to connect Worlds End State Park with Ricketts Glen State Park.

2.2.4. Susquehanna County

Endless Mountain Rail-Trail:

2.2.4.a. Provide a more suitable surface along the mown sections of the trail for multi-modal use (i.e. crusher fines or a paved surface).

2.2.4.b. Additional signage and wayfinding should be provided for visitors using the trail.

2.2.4.c. Promote use of the trail by the adjacent elementary school through programming that encourages walking and biking to school (i.e. Safe Routes to School).

2.2.4.d. Maintain public control of the trail corridor, so as not to incur any additional ownership and management conflicts with private landowners.

2.2.4.e. Create connections to the D & H Rail-Trail (70-mile greenway) and the larger regional trail system.

2.2.5. Tioga County

2.2.5.a. Improve access sites for trails through increased signage and promotion, as they are often very difficult to find for visitors and new residents.

2.2.5.b. Pursue efforts to connect communities with greenways, including developing more trail connections using links such as Rail-Trail beds and existing corridors.

2.2.5.c. Close the Charleston Township gap in the Mid State Trail.

2.2.5.d. Close the trail gap from the Ansonia area east to Armenia Mountain near Troy.

2.2.5.e. Work to construct the planned Pine Creek Trail extension from the Marsh Creek Access Area to Wellsboro Junction in order to connect to other regional trails and amenities.

2.2.5.f. Connect the Pine Creek Trail to proposed trails in Galeton (Potter County).

2.2.5.g. Continue the Ulysses Trail via PA 49 from Potter County to the Mid State Trail at Cowanesque Lake.

2.2.5.h. Improve aesthetics, signage and access to the Lamb's Creek Recreation Area in Mansfield.

2.2.6. Wyoming County

2.2.6.a. Connect to the Back Mountain Trail in Luzerne County.

2.2.6.b. Connect Eatonville to Evans Falls by redeveloping the Eatonville Bridge for pedestrian traffic as part of the Seneca Trail.

2.2.6.c. Ensure completion of the Countryside Conservancy Trolley Trail from Factoryville to Lake Winola.

2.2.6.d. Ensure completion of the Iroquois Trail in the Tunkhannock area.

Objective 2.3: Improve and add to the existing water trail system for the benefit of recreation users and multi-modal transportation.

Strategies:

2.3.1. Develop trail connections, wayfinding and access points, as well as promote canoeing, kayaking and rafting. Balance between recreational use and environmental preservation will be a key factor in recreation development, to prevent overburdening the watersheds. (Refer to individual Watershed Plans for specific locations and strategies.) (Refer to Map R for spatial analysis)

2.3.2. Sullivan County

2.3.2.a. Develop water trails on the Loyalsock Creek.

2.3.3. Susquehanna County

2.3.3.a. Additional access points to the Susquehanna River.

2.3.3.b. Provide directional signage to and informational signage at boat launch 348.

2.3.3.c. Allow human-powered small crafts on the Susquehanna River and remove launch permit requirement.

2.3.3.d. Promote increased use of the Susquehanna River by kayaks and canoes.

2.3.3.e. Develop the Wyalusing Creek Water Trail to connect to Bradford County.

2.3.3.f. Inventory other streams that could be used for kayaking and canoeing.

2.3.4. Tioga County

2.3.4.a. Develop access points to the upper portion of Pine Creek.

2.3.4.b. Develop trail access on the Tioga River to New York.

2.3.5. Wyoming County

2.3.5.a. Develop additional access points to the Susquehanna River between Ulster and Tunkhannock.

2.3.5.b. Develop additional access points to the Susquehanna River in the Bowman's Creek area.

2.3.5.c. Develop a water trail with signage on Bowman's Creek.

2.3.5.d. Further develop the Tunkhannock Creek water trail.

GOAL 3: Use the development of natural resource extraction infrastructure (i.e. oil/natural gas, coal, etc.) to enhance the access and use of public lands.

Objective 3.1: Work with the energy companies to create roadways and access to extraction sites that can serve for recreation access when abandoned.

Strategies:

3.1.1. Utilize areas damaged by coal mining for recreation and environmental education during and post clean up.

3.1.2. Collaborate with oil and gas companies to provide a dual use of pipeline corridors for trail development and greenway connectivity (Please refer to Objective 5.4 for specific strategies).

C. PRESERVATION AND CONSERVATION

GOAL 4: Build upon and develop a system for prioritizing lands to be preserved, utilizing data from existing studies to prioritize and preserve lands and resources.

Objective 4.1: Coordinate with other agencies to develop conservation guidelines for natural areas throughout the Northern Tier.

Strategies:

4.1.1. Preserve lands that include environmental, ecological and recreation resources (i.e. dark skies, wildlife species, land adjacent to other preserved land, viewsheds, and lands that complete connections).

4.1.2. Preserve natural resources (forests, streams, etc.) prior to development.

4.1.2.a. Designate greenways and open spaces to preserve resources, as well as provide outdoor recreation for the region. These greenways and open spaces should also be used to create connections between existing destinations and recreation amenities.

4.1.2.b. The following parks were listed 10 or more times in the Northern Tier survey responses, suggesting that additional preservation efforts in these areas will be well received by the public:

- Hills Creek State Park
- Salt Spring State Park
- Ives Run Recreation Area/Hammond Lake
- Colton Point State Park
- Leonard Harrison State Park
- Grand Canyon of PA
- Ricketts Glen State Park

4.1.2.c. Work to preserve areas with significant ecological and historical considerations including acid mine drainage, stream water quality, wildlife habitat and native plant species, such as:

- Muncy Creek
- Loyalsock Creek
- Meshoppen Creek
- Wyalusing Creek
- Babb Creek
- Marsh Creek
- Tioga River

Watershed-related Strategies:

4.1.3. Rivers Conservation Plans should be used to inform priorities at the local level for action regarding open space, greenways and recreation opportunities.

4.1.4. Utilize Map R to identify priority areas for conservation and enhancement, as specific opportunities and funding sources are identified.

4.1.5. Preserve streams, particularly those designated by the state as high quality or exceptional value, through riparian buffers.

4.1.5.a. Utilize existing programs and guidelines for riparian buffers such as:

- Stream ReLeaf
- Riparian Forest Buffer Protection Agreement
- DEP Riparian Forest Buffer Guidance
- Growing Greener
- Watershed Grants
- Conservation Reserve Enhancement Program (CREP)
- NRCS Watershed Program

4.1.5.b. Complete stream assessments in order to identify additional conservation and enhancement opportunities.

4.1.6. Work to implement the management goals (reduction of nutrients to meet Total Maximum Daily Loads (TMDLs)) for the Chesapeake Bay Program for the Susquehanna River:

- Creation of watershed plans for watersheds that do not currently have plans.
- Conserve forests along all streams and shorelines through riparian buffers.
- Permanently preserve from development 20% of the land area in the watershed by 2010.

4.1.7. Work with private and nonprofit conservancies in the Northern Tier region in order to preserve environmental and recreation resources. (See Strategy 12.1.4 for specific groups.)

Plant and Wildlife-related Strategies:

4.1.8. Large blocks of uninterrupted forest should be preserved as opportunities and resources are identified (see Map T).

4.1.9. Utilize existing programs and guidelines for habitat conservation

- Wildlife Habitat Incentive Program (WHIP)

GOAL 5: Develop guidelines to appropriately balance the conservation of lands with the oil and gas interests in the region.

Objective 5.1: Develop a mapping system that will illustrate oil and gas influenced areas, so as to identify those areas that should be a focus for conservation efforts as well as partnerships for dual use of the land.

Strategies:

5.1.1. Utilize Map U to determine the viability and priorities for conservation of lands in regard to oil and gas drilling operations.

Objective 5.2: Work at the state level to develop appropriate guidelines and compensation for local interests in relation to the oil and gas activities of the region.

Strategies:

5.2.1. Work to establish a regional grass-roots lobbying effort through the collaborative effort of recreation and conservation stakeholders to educate elected officials on the impacts of natural resource extraction on the area.

5.2.2. Lobbying efforts should emphasize the need to keep a percentage of royalties to enhancing the quality of life through recreation and conservation opportunities.

Objective 5.3: Develop guidelines or standards for oil and gas activities that benefit the quality of life for the residents, both in the short and long-term.

Strategies:

5.3.1. Existing preserved lands should remain preserved, as much as is appropriate, from natural resource extraction so that its value as a visual and recreational resource is maintained.

5.3.2. Public-private partnerships and collaborative efforts should be established to minimize the impacts of the following:

- Development of new roads and improvements to existing roads.
- Noise created by equipment.
- Well sites that house highly visible equipment, impact dark skies, and restrict activities near them.
- The effects of extraction process on water quality (this is a new process and currently there is not sufficient data to make conclusions on the impacts).

5.3.3. Work to change land use regulations regarding oil and gas extraction to result in more recreation opportunities and the preservation of open space.

Objective 5.4: Work to develop agreements with the natural gas companies and landowners to maximize the use and benefit of these lands for the good of the public. (Refer to Map U)

Strategies:

5.4.1. Create dual use of pipeline corridors and reclassify for conservation purposes, not only to transport gas from the pad site to collector lines, but also for recreation activities such as hiking and biking.

5.4.2. Incorporate interpretive signage and/or programming into existing recreation facilities regarding the Marcellus Shale and historic mining activities.

5.4.3. Work with oil and gas companies to develop facilities and programs that educate and inform recreation users and visitors to the area about the drilling of the Marcellus Shale.

5.4.4. Facilitate access agreements between natural gas companies, land owners and easement holders that address the parties' concerns regarding public access.

D. RECREATION FACILITY AND PROGRAMMING IMPROVEMENT AND DEVELOPMENT

GOAL 6: Maintain the Level of Service (LOS) throughout the Northern Tier.

Objective 6.1: Maintain existing facilities.

Strategies:

6.1.1. Lobby for continued and additional funding.

6.1.2. Work with private groups to provide maintenance.

6.1.3. Replace existing facilities as they age.

GOAL 7: Increase the Level of Service (LOS) throughout the Northern Tier.

Objective 7.1: Meet the needs of the region through the provision of land-based recreation through the acquisition of land or providing additional access to existing lands. See Map O.

Strategies:

7.1.1. Sullivan County

7.1.1.a. Provide additional signage and wayfinding throughout the county.

7.1.1.b. Provide additional public access to land in the Dushore area through:

- Purchase of additional public land.
- Access easements.
- Public access to private lands such as those owned by conservancies.

7.1.1.c. Improve trails and add facilities such as parking, seating, restrooms in State Game Lands to increase their contribution to the LOS.

7.1.2. Susquehanna County

7.1.2.a. Provide additional public access to land throughout the county through:

7.1.2.a.1. Purchase of additional public land.

7.1.2.a.2. Access easements.

7.1.2.a.3. Public access to private lands such as those owned by conservancies.

7.1.2.b. Improve trails and add facilities such as parking, seating, restrooms in State Game Lands to increase their contribution to the LOS.

7.1.2.c. Develop programming of existing public lands to increase their contribution to the LOS.

7.1.2.d. Consider joint use agreement for public access of Camp Choconut.

7.1.3. Tioga County

7.1.3.a. Provide additional public access to land in the northwest and northeast portions of the county through:

- Purchase of additional public land.
- Access easements.
- Public access to private lands such as those owned by conservancies.

7.1.3.b. Pursue plans to enhance the Mill Cove area.

7.1.3.c. Upgrade facilities in existing state lands to increase their contribution to the LOS (see facility specific recommendations).

7.1.4. Wyoming County

7.1.4.a. Provide additional public access to land, particularly in the eastern portion of the county, through:

- Purchase of additional public land.
- Access easements.
- Public access to private lands, such as those owned by conservancies.

7.1.4.b. Improve trails and add facilities such as parking, seating, restrooms in State Game Lands to increase their contribution to the LOS.

Objective 7.2: Meet the needs of the region through the provision of scenic corridors and trail-based recreation with creation of new trails, continuation and connection of existing trails. See Map P. (Also see Section B Connections)

Strategies:

7.2.1. Utilize Map S to identify areas to preserve as scenic viewsheds.

7.2.2. Sullivan County

7.2.2.a. Improve existing bike routes (see Table 5.1).

7.2.2.b. Add additional bike routes along County and State roads.

7.2.2.c. Improve and promote usage of existing trails within State Game Lands.

7.2.2.d. Maintain existing trails.

7.2.2.e. Add additional trails.

- Connect Loyalsock State Forest across PA 87.
- Create a trail connection from Eagles Mere to the Loyalsock Trail.
- Create trail connections from Dushore and Laporte to the Loyalsock Trail.
- Create a trail connection from Dushore to Bradford County trails.
- Consider trail connections from Loyalsock State Forest to SGL 134.
- Consider trail connections between SGL 13, 57 and 66.

7.2.3. Susquehanna County

7.2.3.a. Improve existing bike routes (see Table 5.1).

- Shoulder improvements on PA 29 & 92.

7.2.3.b. Improve and promote usage of existing trails within State Game Lands.

7.2.3.c. Add additional trails.

7.2.3.c.1. Consider a trail connection from Friendsville to Bradford County trails.

7.2.3.c.2. Consider a trail connection from Montrose to Salt Springs State Park, incorporating the Rail-Trail.

7.2.3.c.3. Consider a trail connection from Montrose to New Milford.

7.2.3.c.4. Consider a trail connection from Montrose to Tunkhannock.

7.2.4. Tioga County

7.2.4.a. Improve existing bike routes (see Table 5.1).

7.2.4.b. Improve and promote usage of existing trails within State Game Lands.

7.2.4.c. Maintain trails within Tioga State Forest.

7.2.4.d. Add additional trails.

7.2.4.d.1. Consider a trail connection along SR 349.

7.2.4.d.2. Connect Blossburg to the Mid State Trail.

7.2.4.d.3. Consider a trail connection from Bradford County to the Mid State Trail.

7.2.4.d.4. Create a trail connection from Tioga State Forest to Loyalsock State Forest.

7.2.5. Wyoming County

7.2.5.a. Improve existing bike routes (see Table 5.1).

- Provide shoulder improvements on PA 29 & 92.

7.2.5.b. Improve and promote usage of existing trails within State Game Lands.

7.2.5.c. Add additional trails.

7.2.5.c.1. Consider trail connections from Ricketts Glen State Park to the Susquehanna River.

7.2.5.c.2. Consider a trail connection between Nicholson and Factoryville.

7.2.5.c.3. Investigate right-of-way ownership of the Northern Electric Railway to be developed as the "Trolley Trail" from Clarks Summit to Lake Winola.

Objective 7.3: Meet the needs of the region through the provision of water-based recreation resources. See Map Q.

Strategies:

7.3.1. Sullivan County

7.3.1.a. Add additional water trails along the following:

- Loyalsock Creek

7.3.1.b. Improve fishing access to water bodies (additional access points, ADA access, signage) along the following:

- Loyalsock Creek

7.3.2. Susquehanna County

7.3.2.a. Add additional water trails along the following to connect with the Susquehanna River:

7.3.2.a.1. Meshoppen Creek (section within Lemon Township - for expert level kayaking)

7.3.2.a.2. Wyalusing Creek (also a connection to Bradford County).

7.3.2.b. Improve fishing access to water bodies (additional access points, ADA access, signage) along the Susquehanna River, Wyalusing Creek and Meshoppen Creek.

7.3.2.c. Add programming throughout the county focused on the Bluestone quarries.

7.3.3. Tioga County

7.3.3.a. Consider boating access to Mill Creek.

7.3.3.b. Investigate creating a water trail on the Tioga River, a potential connection to New York water trails and the Susquehanna River.

7.3.3.c. Consider creating a water trail on Marsh Creek.

7.3.3.d. Work with the Army Corps of Engineers to improve amenities at Cowanesque Lake.

7.3.3.e. Improve fishing access to water bodies (additional access points, ADA access, signage).

7.3.3.f. Create programming for the Reynolds Spring Bog and Algerine Swamp Bog in the Tioga State Forest.

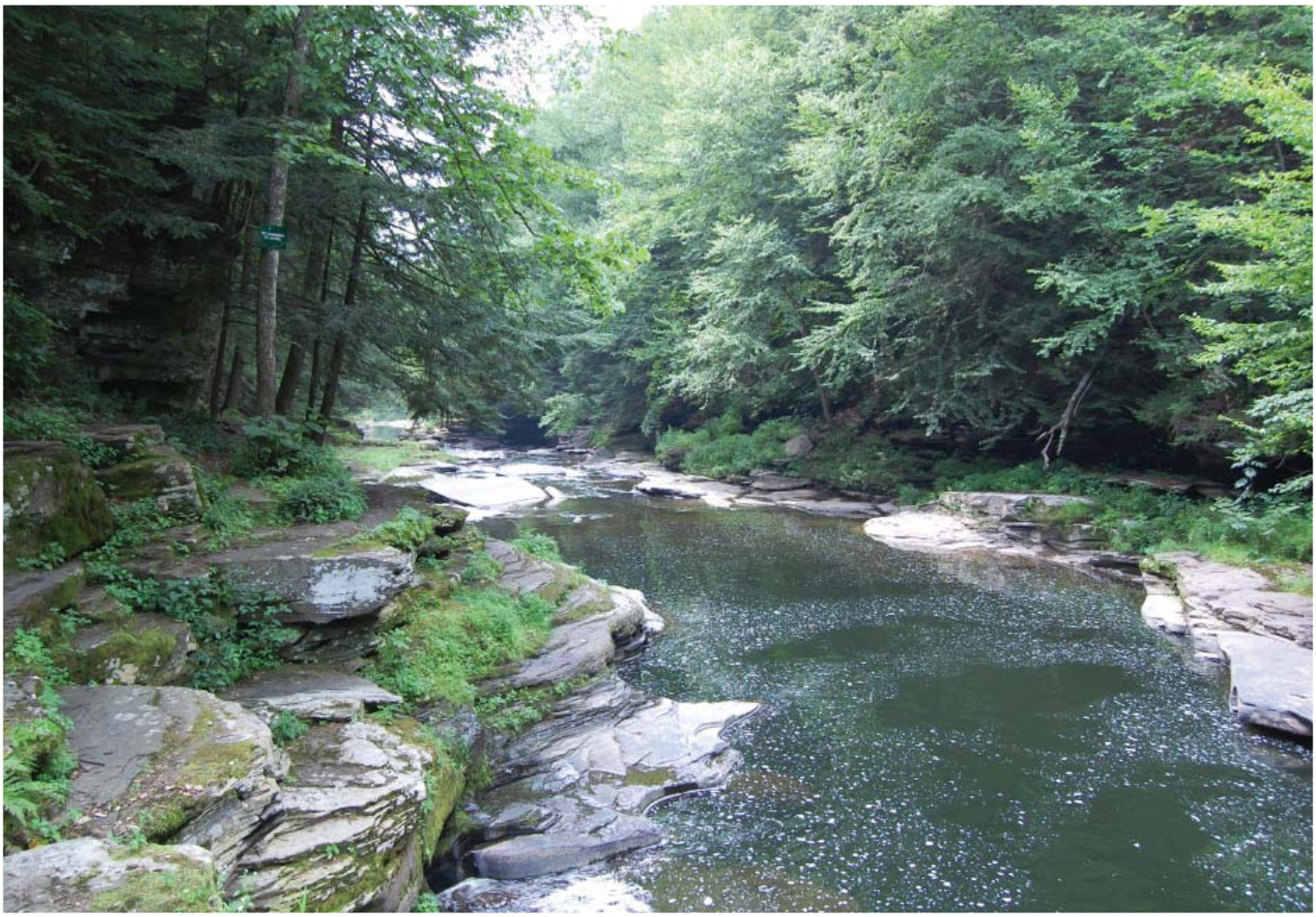
7.3.4. Wyoming County

7.3.4.a. Add additional water trails along the following:

- Bowman's Creek
- Mehoopany Creek

7.3.4.b. Further develop and promote the Tunkhannock Creek water trail.

7.3.4.c. Add public amenities such as picnic tables, trash receptacles, etc. to river access points.



Facilities:

GOAL 8: Meet the Northern Tier's need for facility improvements and development.

Objective 8.1: Meet the growing recreation needs of the region through the improvement to existing facilities.

Strategies:

8.1.1. Northern Tier Region-wide Strategies

8.1.1.a. Survey responses indicate that restrooms, trails and water access points were specified as most needed and therefore should be a priority in future planning.

8.1.1.b. Improve informational and directional signs for Hills Creek and Salt Springs State Parks (listed most frequently in the survey).

8.1.1.c. Provide additional restrooms, trails, camping areas, ADA accessible facilities and water access points in recreation areas as support facilities.

8.1.1.d. Consider expanding primary facilities, including dedicated ATV and bike facilities, based on survey responses.

8.1.1.e. Improvements/modifications to State lands and facilities should include restroom facilities and trails, providing accessibility for disabled users, bringing older facilities up to current standards, improving overnight accommodations and making general infrastructure improvements.

8.1.2. Sullivan County

8.1.2.a. Ricketts Glen State Park

- Add signage for trailhead parking.
- Work with DCNR and PennDOT to add road signs directing visitors from US 220 to the park, as well as at the Hayfields trailhead.

8.1.2.b. Worlds End State Park/Loyalsock State Forest

- Improve signage and wayfinding to direct visitors as they drive through the park to reach as their primary destination.
- Delineation between the state park and Loyalsock State Forest could also be improved.

8.1.2.c. Hunters Lake

- Improve signage and wayfinding to the lake.
- Smooth the driveway transition from Brunnerdale Road to the parking at the fishing pier.

8.1.3. Susquehanna County

8.1.3.a. Salt Springs State Park

- Update aging restroom facilities.
- Improve parking area.
- Improve trail maintenance.
- Improve signage and wayfinding to and within the park.
- Preserve and remodel barn to allow use for public events.

8.1.4. Tioga County

8.1.4.a. Leonard Harrison State Park/Colton Point State Park/Tioga State Forest

- Add signage and wayfinding to promote key trails and destinations throughout the area.
- Further develop natural scenery viewing/photography opportunities.

- Further develop interpretive centers.
- Expand the Leonard Harrison State Park visitor center.

8.1.4.b. Hills Creek State Park

- Further develop camping, wildlife viewing/ photography, swimming and warm-water fishing.
- Replace restrooms and aging infrastructure.

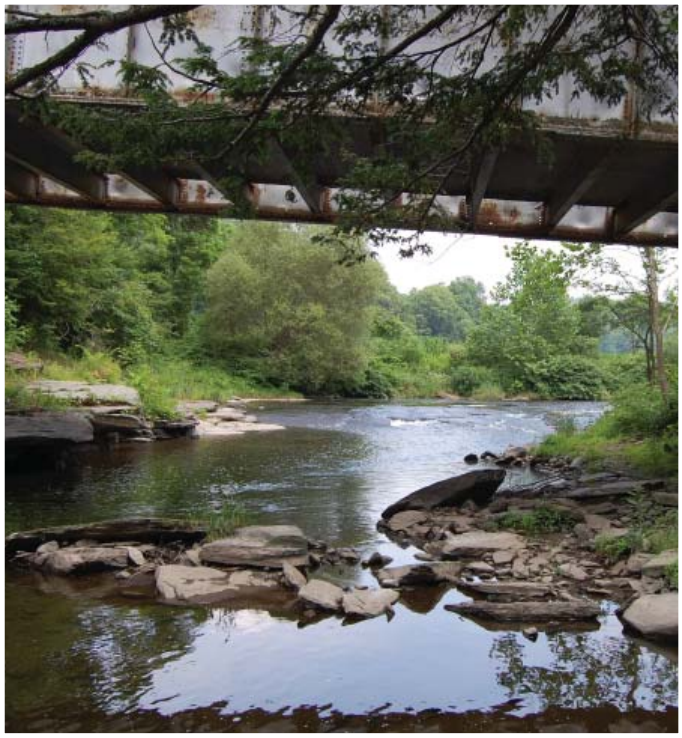
8.1.5. Wyoming County

8.1.5.a. Little Rocky Glen

- Add signage to provide better way finding to the preserve as well as warn motorists driving on the road of potential cars and pedestrians.

8.1.5.b. Endless Mountains Nature Center (EMNC)

- Add signage and wayfinding to the EMNC from the highway and to deli eate the EMNC versus Camp Lackawanna.
- Clarify which facilities are for public versus private use.



Objective 8.2: Provide for long-term sustainability of facilities.

Strategies:

8.2.1. Ensure proper funding for operations and management (see Funding Strategies in Section F).

8.2.2. Restore, maintain, and improve state parks and existing recreation facilities to improve users' experiences and attract more visitors which will, in turn, generate revenue for the state.

8.2.3. Work with private land owners to establish agreements and negate personal liability to allow recreation on their property, including - walking/hiking, hunting, fishing and ATV/snowmobiling were the favored activities, respectively.

8.2.3.a. Utilize conservation easements to increase access and reduce liability for private landowners.

8.2.4. Expand recreation areas in order to attract more tourism and revenue generation to the region.

Objective 8.3: Meet the needs of the community and residents through the support of local municipalities' park and recreation improvements and development.

Strategies:

8.3.1. Community planning and conservation efforts at the local level (i.e. through townships and boroughs) should be utilized to identify key areas and implement proper land management techniques in order to create open space areas, provide greater access to recreation facilities and opportunities for residents.

8.3.2. County and community organizations should be engaged in facility and program development and improvements to further supplement the region's recreation opportunities and marketing efforts in order to create a sense of ownership and pride in the region that as a whole may currently be lacking.

Programming:

GOAL 9: Provide programs and activities to serve the diverse needs of the Northern Tier communities and visitors.

Objective 9.1: Increase the program offerings to include a diverse and comprehensive selection of options for all ages and interests.

Strategies:

9.1.1. Diversify recreation offerings through the development of recreation programs and opportunities that target a wide variety of demographic groups and that meet current and future recreation needs and trends, such as environmental/ stewardship education programs for all ages, adventure activities for youth, and trails, which can accommodate multiple users.

9.1.2. Increase programs that celebrate and explain the region's history, culture and environment enhance a user's experience.

9.1.2.a. Programs can be provided through collaborative efforts between state, county, local and community groups and may be either personnel-led or self-led through interpretive signs.

9.1.3. Promote outdoor recreation activities as an alternative to traditional forms of exercise. Both parents and children should be targeted in an informational campaign explaining the current state of affairs of health and how outdoor activities can help remedy and provide a fun, enjoyable way for youth to stay fit and healthy. Schools and the internet should be the primary avenues for distributing information.

9.1.4. If expansion into state forest lands is pursued, it is recommended that the recreation opportunities must offer diversity of uses such as horseback riding, water sports, swimming, kayaking, bicycling, camping, birdwatching, and viewing/ photographing wildlife or scenery rather than just traditional recreational uses such as hunting and fishing.

9.1.4.a. Collaborate with the DCNR and Audubon Pennsylvania to promote the north branch of the Susquehanna River within the Northern Tier region as a birdwatching and wildlife viewing "hot spots" to increase draw to the rapidly growing number of participants in these activities. (Wildlife viewing and birdwatching are the state's 3rd most popular outdoor activity, following walking/jogging and hunting - *PA Wildlife Action Plan*)

9.1.5. Consider any special needs or desires of the various races/ethnicities or other special groups within the area. However, given the homogenous character of the region, increased marketing to minorities may be a more effective use of resources instead of developing specific programs geared towards minority groups.

9.1.6. Consider recreation trends (i.e. - rising participation in individual and unstructured activities such as hiking, wildlife viewing, fishing, camping, etc.) that will accommodate those over 55 and to reach out to the residents of the area in order to educate them about the benefits of recreation, and to make recreation opportunities easily accessible to all.

9.1.6.a. Older adults are a group with physical fitness levels that vary greatly between individuals. When pro moting physical activity and outdoor recreation for this population, a range of activities beneficial to all abilities should be included.

9.1.6.b. Activities that can help promote specific health benefits should be incorporated (i.e. - walking, hiking, bicycling, snowshoeing, etc.).

9.1.7. Look for opportunities to add art and cultural programs through public-private partnerships and collaboration with local townships, boroughs and municipalities to aid in financing these programs.

9.1.8. Provide programming to attract youth and young adults to the area as visitors as well as to encourage permanent residency in the region. These activities could include mountain biking, BMX, ATVing, rock climbing, kayaking, etc.

9.1.9. According to the NTRPDC Survey, from the 93 activities that people listed as their form of recreation in local parks, the following ten were most popular responses:

- Hiking/Walking
- Fishing
- Hunting
- Camping
- Biking
- Boating
- Picnicking/Cook-outs
- Swimming
- ATV riding
- Skiing

Therefore, the counties and local organizations should look to provide additional programming and special events that focus on these activities.

9.1.10. Develop additional nature tourism opportunities is another way to grow and diversify recreation offerings. If this opportunity is pursued, it will be necessary to provide training in hospitality and backcountry safety and to concentrate marketing efforts towards a predominantly urban user base.

Objective 9.2: Coordinate with alternative providers and partners to minimize overlap in programming.

Strategies:

9.2.1. The NTRPDC and all five counties should work with the community and nonprofit groups to promote existing recreation programs throughout the region and to potential visitors. (See Strategy12.1.3 for specific organizations)

Objective 9.3: Maximize the use of facilities while also working to minimize conflicts between multiple users of the same facilities.

Strategies:

9.3.1. Multiple uses should be carefully considered and managed for compatibility. Controlled management of various uses through dedicated times for set activities (i.e. hikers, hunters and mountain bikers), as well as increased awareness through signage and education, should be utilized to ensure recreation participant's safety.

9.3.1.a. Use educational programs to inform users about potential conflicts with other users such as hunter safety courses, hiking and biking programs.

9.3.1.b. Clearly mark and sign hunting boundaries in state parks and forests.

9.3.1.c. Clearly post seasons at SGL trailheads.

E. MARKETING AND TOURISM PROMOTION

GOAL 10: Continue to create a unified marketing and tourism identity for the Endless Mountains region including Bradford, Sullivan, Susquehanna, and Wyoming Counties and for the Tioga County region. Implement these identities through various marketing collateral and outlets.

Marketing Overview:

The counties that are located within the Endless Mountains region and Tioga County are associated with two different State of Pennsylvania Tourism Office mandated "Marketing Regions":

- Bradford, Sullivan, Susquehanna, and Wyoming Counties are a part of an eleven county region formerly known as the Northeast Pennsylvania Mountains Region and currently known as Upstate PA (www.upstatepa.org).
- Tioga County is a part of a twelve county region known as PA Wilds (www.pawilds.com) which includes the north central counties of Pennsylvania.

Recently, funding to these regions has been dramatically reduced and therefore, the Marketing Regions are not as beneficial in supporting new project as in the past.

Objective 10.1: Currently, the marketing regions are known by a variety of names. In order to become more recognizable, a consistent marketing identity should be maintained and promoted.

Strategies:

10.1.1. In order to become more recognizable, Bradford, Sullivan, Susquehanna, and Wyoming Counties should continue to promote themselves as a part of the Endless Mountains region and Tioga County, as the #1 destination along Rt 6. These identities should continue to be applied to streamlined marketing strategies and implemented through specific communication mediums in order to increase the region's visibility as a premier recreation destination among both local residents and visitors.

- Provide information to visitors with a unified and comprehensive set of materials marketing the region.
- Endless Mountains should continue to market collaboratively with Lackawanna County.
- Endless Mountains should continue to market collaboratively with Tioga County all significant destinations along Route 6.
- Tioga County should continue to capitalize on Leonard Harrison and Colton Point State Parks (the PA Grand Canyon) and the main travel Routes including 15, 414, 287 and 6.
- Tioga County should continue to market collaboratively with Lycoming, Clinton and Potter Counties.
- Tioga County should adopt a county-wide approach to promote those towns and amenities located along the major transportation routes.
- Tioga County should continue to create a presence to promote the County at the State Welcome Center along Interstate 15.

10.1.2. Continue to inform residents about local recreation opportunities through effective marketing mediums including radio and TV (Endless Mountains), Web sites, guidebooks and printed media.

10.1.3. Utilize new technology including social media to complement and enhance the current marketing activities and drive greater results.

10.1.4. Continue to inform and educate the public about new recreation programs, opportunities, schedules and events through a central clearinghouse for dispersing park and recreation information.
10.1.5. Continue to improve public outreach and available information to give residents and visitors better knowledge regarding access to recreation facilities including trails and other local community resources.
10.1.6. Continue to provide a consistent health and outdoor recreation message/campaign to be marketed to a mostly urban customer base.

Objective 10.2: Continue to coordinate with other providers and groups across the State to effectively distribute information to all members, parks and centers, etc., the recreation opportunities in the region.

Strategies:
10.2.1. Begin conversations with new interest groups including the gas companies and provide information for their employees living and working in the region.
10.2.2. Begin a Trade Marketing strategy targeted to entities such as group tour companies, as well as attending trade shows and consumer shows such as AAA.
10.2.2.a. Offer a guided tour service as a potential option for income.
10.2.3. Continue to target-market and promote activities aimed at low-impact outdoor recreation activities for engaging older adults and aging populations.

Tourism Overview:

- Bradford, Sullivan, Susquehanna, and Wyoming Counties are represented by the Endless Mountains Visitors Bureau for tourism efforts:

Endless Mountains Visitors Bureau
4 Werks Plaza Route 6
Tunkhannock, PA 18657
(800) 769-8999 or (570) 836-5431
www.endlessmountains.org

- Tioga County is represented by the Tioga County Visitors Bureau for tourism efforts:

Tioga County Visitors Bureau
2053 Route 660
Wellsboro, PA 16901-7231
(888) 846-4228 or (570) 724-0635
www.visittiogapa.com

Objective 10.3: Establish a clearinghouse and/or a conservation landscape initiative for the Endless Mountains and for Tioga County.

Strategies:

10.3.1. The Endless Mountains and Tioga County Visitors Bureaus should work together to develop a map for promoting shared bike routes that exist within the region.

10.3.2. Promote the benefits of nature-based tourism programs and products which will create new retail business development opportunities for outfitters and others.

Objective 10.4: The Endless Mountains and Tioga County region's should continue to monitor the process and policy changes that are or will be proposed by PennDOT for signage and wayfinding and remain an active player in those processes and policy development.

Strategies:

10.4.1. All signage and wayfinding plans should begin at interstate highways or arterials.

Objective 10.5: Further investigate the viability of different types of tourism interests and market appropriately.

Strategies:

10.5.1. Continue to work within the mandated marketing regions including Upstate PA and PA Wilds including the Route 6 corridor to develop a region-wide comprehensive Marketing Plan in order to promote tourism for current market trends, streamline communication and reduce the overall costs.

10.5.2. The Endless Mountains and Tioga County Visitors Bureaus should continue to identify the levels of attendance, both of residents and visitors, as well as the economic impact of existing events and festivals and utilize this data to champion additional community and regional events.

10.5.3. Historical sites and festivals provide great opportunities for residents and tourists to better connect to the community and community events. The Endless Mountains and Tioga Visitors Bureaus should continue to support the efforts of local Chambers and special interest groups for historical tourism in order to increase the length of visitor stays, as well as taxes and revenue gained.

10.5.4. The Endless Mountains and Tioga County Visitors Bureaus should continue to support, when and where appropriate, the Endless Mountains Heritage Region, PA Route 6 Corporation, Lumber Heritage Corporation, and Agricultural Heritage Corporation to increase the agri-tourism and heritage tourism-based programs already in existence. The following communication mediums should be considered for this promotion:

- Experience PA Web site
- Farmstop.com
- Pennsylvania Department of Agriculture's Consumer's Guide to Pennsylvania Farm Markets
- Pennsylvania Farm Vacation Association
- Pennsylvania Retail Farm Market Association, Inc.
- Pennsylvania State Association of County Fairs;
- Pennsylvania Tourism and Lodging Association;
- Pennsylvania Wine Association;
- Pennsylvania Visitors Network
- Buy Fresh Buy Local

10.5.5. Continue to promote tourism to a variety of households.

10.5.5.a. Target households that are located within a reasonable distance, as many vacationers are staying closer to home and looking for more affordable recreation opportunities.

10.5.5.b. Pursue more on-line advertising and marketing with www.Philly.com and www.WashingtonPost.com

10.5.5.c. Pursue smaller niche magazines to market overnight stays that are more geared toward B&B and long-term vacation rental packages, to provide lodging options due to high occupancy rates in motels resulting from gas companies.

10.5.5.d. For cost-efficiency purposes, participate regionally with Upstate PA, PA Wilds and Route 6 to pursue International tourist markets.

10.5.6. Continue to promote efforts to increase four-season amenities and activities and continue to implement the marketing plan to attract visitors and to promote activities and events within all of the counties.

10.5.6.a. Summer/Fall/Spring Activities (some activities are weather dependent) – Walking, Hiking, Biking (Road and Mountain Biking), Hunting (Quail, Turkey and Duck), Swimming, Canoeing, Kayaking, Special Events, ATVing, Fishing, Festivals, Fall Foliage Activities, Camping, Backpacking, and Agri-tourism

10.5.6.b. Winter Activities - Snowshoeing, Snowmobiling, Nordic Skiing, Downhill Skiing, Ice Fishing, Winter Hiking, and Winter Backpacking

Objective 10.6: Collaborate with county agencies, local Chambers of Commerce and local businesses to continue to provide new facilities, such as lodging, in order to support demand from both tourism and business travelers.

Strategies:

10.6.1. Continue to work cooperatively alongside local and county agencies including local Chambers of Commerce, as well as local businesses including the gas industry, to promote new lodging options for visitors resulting in a benefit to the local economy.

10.6.2. Continue efforts to collaborate with local and county agencies to bring support retail to the area for visitors such as grocery stores, bike shops, outdoor sporting goods and many others.

10.6.3. Encourage local Chambers of Commerce to make a paradigm shift from focusing on relocation of residents to economic development.

F. FUNDING AND REGULATORY RESOURCES

GOAL 11: Identify sustainable funding sources, both for the short-term and the long-term.

Objective 11.1: Investigate potential traditional funding sources.

Strategies:

11.1.1. Improving services for existing participants to increase the number of participants in the base or the amount of use by repeat customers (i.e. – revenue generation through user fees).

11.1.1.a. Improve communication with current and potential user groups (residents and visitors) to better inform the current and potential users about offerings.

11.1.1.b. Investigate the need to expand service hours or level of services provided.

11.1.2. The Commission should work with its member agencies to create a tiered fee system, which is structured by classification as residents, visitors, non-profit organizations and seniors. This approach reflects the philosophy that those who benefit from these amenities and resources should pay for their continued maintenance.

*11.1.2.a.*Other options may include charging outfitter fees and fees for boating access.

11.1.3. Consider implementing concessions and user fees for recreation facilities at state recreation sites, where revenue goes back into the facility rather than to the state's general fund.

1.1.3.a. Given the historical open access and current lack of fee policies, new fee and/or vendor station facilities would need to be developed and appropriate staff will be required to implement the required fees.

11.1.3.b. Consider dedicating a portion of these concession and user fees to supporting Visitors Centers and marketing outreach.

11.1.4. In the future, once there is a rebound in the economy, utilize a strong educational campaign to employ township or county bond referendums, to secure funds for the development and/or rehabilitation of local park and recreational facilities within the Northern Tier region.

11.1.5. Explore additional taxing opportunities to support recreation facility development and improvements, including:

11.1.5.a. Hotel Occupancy Tax – Proposing an increase to this tax that would be directly dedicated to the benefit of park and recreation facilities within the Northern Tier is a viable option due to the amount of tourists that visit the area and benefit from the region's park and recreation amenities.

11.1.5.b. Dedicated Sales or Property Tax – A dedicated sales or property tax would generate stable annual funding to support the ongoing capital needs of the communities within the area.

11.1.5.c. Natural Gas Severance Tax – Work with the state to pass a state severance tax that has limited exemptions a dedicated portion for local governments to use to mitigate environmental impacts (i.e. - surface water quality, treatment of hydraulic fracturing wastewater and soil compaction), as well as provide for public safety, road maintenance, population growth, housing and quality of life infrastructure (including parks and recreation facilities), schools and healthcare.

11.1.6. Explore other potential traditional funding methods including:

11.1.6.a. Gaming Revenue – Benefits include living wage job creation, revenues to lower property taxes for homeowners, and reinvigoration of the state's horse racing industry. Given the growing revenue being gained from this source, there is potential to lobby to have a portion of this dedicated to parks, trails and open space.

11.1.6.b. Benefit Assessment Districts – Separate units of government that manage specific resources within

defined boundaries. As self-financing legal entities, they have the ability to raise a predictable stream of money, such as taxes, user fees or bonds, directly from the people who benefit from the services and are often created specifically for parks and recreation.

11.1.6.c. Impact Fees – Review local township and county codes to update existing or develop future impact fees, which are charges assessed by local governments against new development projects that attempt to recover the cost incurred by government in providing the public facilities required to serve new development.

11.1.7. Sullivan, Susquehanna and Wyoming Counties should explore Regional funding opportunities, specifically including the Endless Mountains Visitors Bureau Room Tax Grant Program - The set-aside portion of the county hotel room tax specific to the support of tourism-related cultural, historical and recreational assets is to be used to help underwrite the expense of three types of projects: 1. Special Events, exhibits and publicity initiatives, and historical preservation projects that will increase tourism to an area/attraction; 2. Marketing and promotional projects; and 3. Wayfinding aides by the county or the county's cultural, historical, and recreational organizations for the purpose of increasing tourism and overnight stays.

Objective 11.2: Pursue alternative funding sources.

Strategies:

11.2.1. Sponsorship and/or naming rights for the development of new facilities and programs is one of the ways to support parks and recreation facilities in the area.

11.2.1.a. These sponsorship opportunities should be offered with a tiered level of benefits, should quantify marketing exposure for each level, bundle packages on a system-wide level, and bundle the assets of sponsors (i.e. - money, marketing and product supply).

11.2.2. The NTRDPC members and partners should play an active role in fundraising for regional parks and recreation amenities. Commission members could play a vital role in providing guidance, expertise, advocacy, political support, fund-raising efforts, and to represent various parks and recreation facilities within the region.

11.2.3. The Commission should look for the alignment between their funding requests and the funding objectives of various organizations. The Counties and local townships should explore potential grant funding opportunities, which may include:

- *Growing Greener Grants* – Provided by the Department of Conservation and Natural Resources through the Department of Environmental Protection.
- *Community Conservation Partnerships Program (C2P2) Grants* – C2P2 includes a wide variety of grant options funded by the state designed to meet local recreation and conservation needs which include Planning and Technical Assistance Grants, Technical Assistance Programs, Acquisition and Development Grants, and assistance with federally funded projects.
- *Boating Facility Grant Program* – This Program has been created by the Pennsylvania Fish and Boat Commission to provide grants for planning, acquisition, development, expansion and rehabilitation of public boating facilities throughout the state.
- *Local Municipal Resources and Development Program (LMRDP)* – This grant program is provided through the Department of Community and Economic Development to municipalities and non-profit entities to improve the quality of life within Pennsylvania communities.

- *Keystone Opportunity Zone (KOZ)* – This program provides an opportunity to develop land with reduced state and local taxes. Within the state of Pennsylvania, there is more than 46,000 acres of developable land that is available for purchase mainly in underdeveloped and underutilized areas. The Northern Tier KOZ is administered through the Northern Tier Regional Planning and Development Commission, which lists the each of the available properties within the regional KOZ.

11.2.4. Explore federal grant opportunities including:

- *Community Development Block Grants (CDBG)* - Although the program funds housing, public facilities, economic development and community projects, recreation could be a minor component of the project.
- *Land & Water Conservation Fund* - For many years since the mid 1960's, the Land and Water Conservation Fund (LWCF) program provided funds for outdoor recreation acquisition and development. The program is administered through the Pennsylvania Department of Conservation and Natural Resources.
- *National Recreational Trails Program* - The program was initiated through the TEA-21 legislation. Funds are awarded for the construction of trails and support facilities with an emphasis for the construction of multi-use trails such as biking, hiking, equestrian, motorized, etc. The program is administered through the Pennsylvania Department of Conservation and Natural Resources.
- *Rehabilitation Service Programs* - This program is available through the US Department of Education, Office of Special Education and Rehabilitative Services. The intent of the program is to provide individuals with disabilities with recreational activities and related experiences that can be expected to aid in their employment, mobility, socialization, independence, and community integration.
- *Transportation Enhancement Funds* - This program was created by the federal Transportation Equity Act for the 21st Century (TEA-21) and is related to transportation activities. The activities funded through the Transportation Enhancements program are property acquisition, development of trails including hiking and biking, landscaping including trees, signage, and restoration of historic structures, safety education activities for pedestrians and bicyclists, and projects to reduce vehicular collisions with wildlife.

11.2.5. Explore the possibility of creating a Regional Recreation Authority –The establishment of a Regional Recreation Authority is an additional funding option for the Northern Tier that would be supported by a dedicated tax or funding source. Similar to Benefit Assessment Districts, although on a larger scale, development of a Regional Recreation Authority would provide more local recreation programs and facilities that are operated by a regional recreational authority in order to reduce the dependence on state recreation facilities.

11.2.5.a. An option in establishing a Regional Recreation Authority may be to research KOZ properties within the region as a way of acquiring, developing and operating parks and recreation facilities locally rather than depending on the state.

11.2.5.b. Investigate applying to the Bureau of Conservation and Recreation's Circuit Rider program to fund the hiring of staff person(s) to manage and provide services through the Regional Recreation Authority.

Objective 11.3: Develop regulatory requirements which assist in a comprehensive land use planning approach and benefit open space and recreation facilities.

Strategies:

11.3.1. Many counties, townships and boroughs do not have comprehensive plans, zoning ordinances or subdivision / land development ordinances to guide future development. Without these plans in place, development can occur sporadically and without sufficient regulation. Also, the topography and large amount of state owned land in the Northern Tier pro-

hibit development over large parts of the region. However, also adopting planning ordinances will help to ensure that development occurs in areas where it is best suited.

11.3.1.a. Develop comprehensive plans to preserve land use characteristics and connections in order to serve as a guide for future development, as well as set aside land for future recreation and predict transportation corridors.

11.3.1.b. Develop detailed zoning subdivision / land development ordinances carry out the guiding principles of the comprehensive plan by establishing review criteria for future developments to ensure adequate LOS as the population increases.

- For example, requirements with timeframes and thresholds, including those specific to parks, trails and open space (i.e. - such as parkland dedication, cash-in-lieu, dedicated right-of-way and easements, etc.), can then be included as new development occurs.

11.3.2. Information regarding Marcellus Shale gas extraction is continually being made available and updated, jurisdictions within the Northern Tier should evaluate all new information associated with Marcellus shale and develop guidelines for mining activities to minimize their visual and non-visual impacts.

G. REGIONAL PARTNERSHIPS AND COLLABORATION

GOAL 12: Facilitate partnerships with the State, counties, agencies, private organizations and private land owners that provide recreation and open space opportunities and maximize the use of resources.

Objective 12.1: Investigate and implement partnership opportunities to reduce costs or share expenses for the development of new facilities or programs, or in order to sustain existing facilities and programs.

Strategies:

12.1.1. The most critical partner to aid in the implementation of the transportation recommendations of this plan will be PennDOT, given the importance of state roadways in traveling to recreational facilities and in bicycling and walking as recreational pursuits.

12.1.2. Assess relevant agencies, organizations and stakeholder groups' programs and services in order to identify opportunities for collaboration and/or consolidation of services.

12.1.3. Investigate the development of a Regional Recreation Authority (See 9.2.6 For specific strategies.)

12.1.4. The NTRPDC and all four counties should work with the community and nonprofit groups to promote existing recreation programs throughout the region and to potential visitors.

- Pennsylvania Department of Transportation (PennDOT)
- Pennsylvania Fish and Boat Commission (PFBC)
- Pennsylvania Game Commission (PGC)
- Pennsylvania Department of Environmental Protection (DEP)
- Pennsylvania Environmental Council (PEC)
- Pennsylvania Wilds (PA Wilds)
- Endless Mountains Visitors Bureau
- Tioga County Visitors Bureau
- Endless Mountains Heritage Region (EMHR)
- Northcentral Pennsylvania Conservancy
- Countryside Conservancy
- Endless Mountains Nature Center
- North Branch Land Trust
- Keystone Trails Association
- Watershed Associations
    - Bowman's Creek Watershed Association
    - Loyalsock Creek Watershed Association
    - Mehoopany Creek Watershed Association
    - Muncy Creek Watershed Association
    - Pine Creek Headwaters Protection Group
    - Lower Tunkhannock Creek Watershed Association
    - South Branch Tunkhannock Creek Watershed Association
    - Choconut Creek Watershed Association
    - Tobyhanna Creek/Tunkhannock Creek Watershed Association

12.1.5. Work with the following private conservancies to preserve existing and additional private lands to allow for public access:

- Pennsylvania Environmental Council
- Susquehanna Greenway Partnership
- Northcentral Pennsylvania Conservancy
- Countryside Conservancy
- North Branch Land Trust
- Woodbourne Forest and Wildlife Preserve
- Florence Shelly Preserve
- The Pennsylvania Chapter of The Nature Conservancy (TNC)

12.1.6. 2008 Pennsylvania Resident Survey: A Summary of Key Findings - Investigate opportunities to partner with local colleges to promote environmental education and stewardship programs.

12.1.7. 2008 Pennsylvania Resident Survey: A Summary of Key Findings – Work to integrate recreation and transportation planning between agencies, as trails were a primary need noted by respondents.

12.1.8. 2008 Pennsylvania Resident Survey: A Summary of Key Findings – Create partnerships between health, economic development, and outdoor recreation stakeholders and providing state-wide studies and resources for local jurisdictions to use will also help to improve agency alignment.

Objective 12.2: Increase local and community involvement in facility and program development as well as regional marketing efforts.

Strateies:

12.2.1. Indentify and recruit Champions for projects and partnerships between departments and organizations will be necessary to accomplish goals set forth in this study.

12.2.2. 2008 Pennsylvania Resident Survey: A Summary of Key Findings - Common throughout many of the reviewed planning documents is the need for additional local government cooperation. Working collaboratively can distribute the burden of costs, provide more facilities and services and ensure that future development occurs appropriately. This will help to make certain the rural charm and natural resources of the region are preserved and provide appropriate land for commercial and business uses.

> *12.2.2.a.* Engage representatives of the local townships, boroughs and municipalities in order to expand outdoor recreation opportunities.
>
> *12.2.2.b.* 2008 Pennsylvania Resident Survey: A Summary of Key Findings - Increase collaboration between the municipalities and other organizations in order to help increase the quality and quantity of recreation facilities avail able to all residents.

Region-wide Action Strategies and Recommendations

Short Term - 2011 to 2013						
Priority	**Strategy Number(s)**	**Category**	**Strategy Description**	**Champion**	**Strategy Team**	**Cost Estimate**
High	1.1.1	Planning Integration	Review and utilize the relevant analysis and recommendations of the various planning efforts into the Northern Tier Greenways Action Plan.	Region-wide, EMHR		Staff Time
High	2.1.1	Connections	Upcoming Transportation Improvement Plans and "corridor safety analyses" studies should target scenic corridors to determine and budget for low-cost improvements to these roadways.	NTRPDC		Staff Time
High	2.1.3a&b	Connections	Improve bicycle and pedestrian safety by improving existing shoulders (4-8 foot width) appropriate to posted speed limits and volumes of roadways, as well as evaluate TIPs for safety standards for future projects.	PennDOT, Region-wide		$110,000-145,000/mile shoulder addition, final cost TBD by project; Staff Time
High	2.1.4	Connections	Consider safety improvements along Bike Routes Y - US 6, G, J and A to increase awareness of cyclists on the roads.	PennDOT, Region-wide		Construction Cost; $50/SF, total will be based on type/size of sign fabricated
High	2.2.1	Connections, Marketing & Tourism	Identify major greenways, trails and scenic corridors throughout the Northern Tier to enhance connections, provide continuity and help support the development of new and/or improved recreation facilities to support the region's growth as a recreation destination. Designate local spokes and connections to develop an integrated network.	DCNR, PennDOT, EMHR, Region-wide		Staff Time
High	2.2.2	Connections	Create a statewide trail network, provide access for disabled users and rehabilitate / improve existing trails to implement recreation access and opportunities, connecting to Susquehanna Greenway to the south thru Pine Creek Trail and to the west with Rochester/Genesee Wilds Trail.	DCNR, PennDOT, EMHR, Region-wide		Staff Time; TBD by project
High	3.1.2	Connections, Regional Partnerships & Collaboration	Collaborate with oil and gas companies to provide a dual use of pipeline corridors for trail development and greenway connectivity (Please refer to Objective 5.4 for specific strategies).	NTRPDC, EMHR, Region-wide		Legal/Staff Time
High	4.1.4	Preservation and Conservation	Identify priority areas for conservation and enhancement, utilizing Map R.	Region-wide, North Branch Land Trust (NBLT)		Staff Time
High	4.1.8	Preservation and Conservation	Large blocks of uninterrupted forest should be preserved as opportunities and resources are identified. (See Map T)	Region-wide, NBLT		Staff Time
High	5.1.1	Preservation and Conservation	Utilize Map U to determine the viability and priorities for conservation of lands in regard to oil and gas drilling operations.	Region-wide, NBLT		Staff Time
High	5.2.1	Preservation and Conservation, Regional Partnerships & Collaboration	Work to establish a regional grass-roots lobbying effort through the collaborative effort of recreation and conservation stakeholders to educate elected officials on the impacts of natural resource extraction on the area.	Region-wide		Staff Time
High	5.2.2	Preservation and Conservation, Regional Partnerships & Collaboration	Emphasize the need to keep a percentage of royalties to enhancing the quality of life through recreation and conservation opportunities in lobbying efforts.	Region-wide		Staff Time
High	5.3.1	Preservation and Conservation	Preserve existing preserved lands from natural resource extraction so that its value as a visual and recreational resource is maintained.	Region-wide		Staff Time
High	5.3.3	Preservation and Conservation	Work to change land use regulations regarding oil and gas extraction to result in more recreation opportunities and the preservation of open space.	Region-wide		Staff Time
High	5.4.4	Preservation and Conservation	Facilitate access agreements between natural gas companies, land owners and easement holders that address the parties' concerns regarding public access.	Region-wide		Staff Time
High	6.1.1, 8.2.1	Recreation Facility and Programming Improvement and Development	Lobby for continued and additional funding for operations and management. (See Funding Strategies in Section F)	Region-wide		Staff Time
High	8.3.2	Recreation Facility and Programming Improvement and Development	Engage county and community organizations in facility and program development and improvements to further supplement the region's recreation opportunities and marketing efforts in order to create a sense of ownership and pride in the region.	Region-wide		Staff Time
High	9.1.3	Recreation Facility and Programming Improvement and Development	Promote outdoor recreation activities as an alternative to traditional forms of exercise targeting both parents and children.	Region-wide, EMVB, TCVB, EMHR		Staff Time
High	9.3.1.a, b, c	Recreation Facility and Programming Improvement and Development	Manage multiple uses of recreation facilities through educational programs to inform users about potential conflicts with other users such as hunter safety courses, hiking and biking programs. Clearly mark and sign hunting boundaries in state parks, forests and game lands.	PA Game Commission		Staff Time; $50/SF, total will be based on type/size of sign fabricated
High	12.1.2	Regional Partnerships and Collaborations	Assess relevant agencies, organizations and stakeholder groups' programs and services in order to identify opportunities for collaboration and/ or consolidation of services.	Region-wide		Staff Time
High	10.1.3	Marketing and Tourism	Utilize new technology including social media to complement and enhance the current marketing activities and drive greater results.	Region-wide, EMVB, TCVB		Staff Time; Marketing Campaign
High	10.1.4	Marketing and Tourism	Continue to inform and educate the public about new recreation programs, opportunities, schedules, and events through a central clearinghouse for dispersing park and recreation information.	Region-wide, EMVB, TCVB		Staff Time
High	10.1.5, 11.1.1a	Marketing and Tourism, Funding and Regulatory Resources	Continue to improve public outreach and available information to give residents and visitors better knowledge regarding access to recreation facilities including trails, local community resources and offerings.	Region-wide, EMVB, TCVB		Staff Time; Marketing Campaign
High	10.3.1	Marketing and Tourism	The Endless Mountains and Tioga County Visitors Bureaus should work together to develop a map for promoting shared bike routs that exist within the region.	Region-wide along with The Endless Mountains and Tioga County Visitors Bureaus		Staff Time
High	11.1.5.c	Funding and Regulatory Resources	Work with the state to pass a state severance tax that has limited exemptions and a dedicated portion for local governments.	Region-wide		Staff Time
High	11.2.2	Funding and Regulatory Resources	NTRPDC members and partners should play an active role in fundraising for regional parks and recreation amenities. Commission members could play a vital role assisting in this effort.	Region-wide		Staff Time

High	11.2.3	Funding and Regulatory Resources	The Commission members should look for the alignment between their funding requests and the funding objectives of various organizations. Counties and local townships should explore potential grant funding opportunities. (Refer to detailed recommendations)	Region-wide		Staff Time
High	11.3.2, 5.3.2	Preservation and Conservation, Funding and Regulatory Resources, Regional Partnerships and Collaboration	Evaluate new information associated with Marcellus shale and develop guidelines for mining activities to minimize their visual and non-visual impacts. Establish public-private partnerships and collaborative efforts to minimize the impacts of oil and gas.	Region-wide		Staff Time
High	12.1.1	Regional Partnerships and Collaborations	Partner with PennDOT to implement the transportation recommendations of this plan.	PennDOT, Region-wide		Staff Time
High	12.1.7	Regional Partnerships and Collaborations	Work to integrate recreation and transportation planning between agencies, as trails were a primary need noted by respondents.	PennDOT, Region-wide		Staff Time
High	12.2.1	Planning Integration, Regional Partnerships and Collaborations	Identify and recruit Champions for projects and partnerships between departments and organizations will be necessary to accomplish goals set forth in this study.	NTRPDC, Region-wide		Volunteer/Staff Time
High	12.2.2	Regional Partnerships and Collaborations	Work collaboratively with local governments to distribute the burden of costs, provide more facilities and services and ensure that future development occurs appropriately.	Region-wide		Staff Time
Medium	2.1.2	Connections	Promote bicycling in the Northern Tier region based on area's low traffic volumes and inherent scenic qualities of rural roadways. Encourage the use of these roads not only for recreational bicycling, but also for traveling between recreational facilities.	EMVB, TCVB, Region-wide		Staff Time; Marketing Campaign
Medium	2.1.2a	Connections/Partnerships/Marketing and Tourism	Promote bicycling through additional designated routes, wayfinding, bike maps, and coordination with partner groups (see recommendation for detailed strategies).	PennDOT, EMVB, TCVB, Region-wide		Staff Time; $50/SF, total will be based on type/size of sign fabricated
Medium	2.1.6	Connections	Prioritize funding for overall transportation infrastructure needs for Tioga County.	PennDOT, Tioga County		Staff Time
Medium	4.1.2b	Preservation and Conservation	Increase preservation efforts in specified parks. (See recommendation for specific strategies)	DCNR, Region-wide, EMHR, PHMC		Staff Time
Medium	4.1.5a	Preservation and Conservation	Preserve streams, particularly those designated by the state as high quality or exceptional value, through riparian buffers and programs such as Stream ReLeaf and Riparian Forest Buffer Protection Agreement.	DCNR, DEP, Watershed Associations		Staff Time; TBD by project
Medium	5.4.1	Preservation and Conservation	Create dual use of pipeline corridors not only to transport gas from the pad site to collector lines, but also for recreation activities such as hiking and biking.	DCNR, DEP, PEC, EMHR		Legal/Staff Time
Medium	7.2.1	Recreation Facility and Programming Improvement and Development	Utilize Map S to identify areas to preserve as scenic viewsheds.	Region-wide		Staff Time
Medium	7.2.3.b	Recreation Facility and Programming Improvement and Development	Improve and promote usage of existing trails within State Game Lands.	Susquehanna County		Staff Time & Materials
Medium	8.2.2, 11.1.1	Recreation Facility and Programming Improvement and Development, Funding and Regulatory Resources	Restore, maintain, and improve state parks and existing recreation facilities to improve users' experiences and attract more visitors and repeat customers which will, in turn, generate revenue for the state.	Region-wide		Volunteer/Staff Time & Materials
Medium	8.2.3	Recreation Facility and Programming Improvement and Development	Work with private land owners to establish agreements and negate personal liability to allow recreation on their property.	Region-wide		Staff Time
Medium	8.3.1	Recreation Facility and Programming Improvement and Development	Identify key areas and implement proper land management techniques through community planning and conservation efforts at the local level in order to create open space areas, provide greater access to recreation facilities and opportunities for residents.	Region-wide		Staff Time
Medium	9.1.6.b, 9.1.3	Recreation Facility and Programming Improvement and Development	Promote outdoor recreation activities as an alternative to traditional forms of exercise that provide health benefits, targeting both parents, children and older adults.	Region-wide		Staff Time
Medium	9.2.1	Recreation Facility and Programming Improvement and Development, Regional Partnerships and Collaboration	The NTRPDC and all five counties should work with the community and nonprofit groups to promote existing recreation programs throughout the region and to potential visitors. (See Strategy 12.1.3 for specific organizations)	Region-wide		Staff Time
Medium	10.1.1	Marketing and Tourism	Streamline marketing strategies and promote the region as a recreation destination for both local residents and visitors.	EMVB, TCVB, Region-wide		Staff Time
Medium	10.1.2	Marketing and Tourism	Continue to inform residents about local recreation opportunities through effective marketing mediums including radio and TV(Endless Mountains), Web sites, guidebooks and printed media.	EMVB, TCVB, Region-wide		Staff Time; Marketing Campaign
Medium	10.1.6	Marketing and Tourism	Continue to provide a consistent health and outdoor recreation message / campaign to be marketed to a mostly urban customer base.	EMVB, TCVB, Region-wide		Staff Time; Marketing Campaign
Medium	10.2.1	Marketing and Tourism	Begin conversations with new interest groups including the gas companies and provide information for their employees living and working in the region.	EMVB, TCVB, Region-wide		Staff Time
Medium	10.5.3	Marketing and Tourism, Funding and Regulatory Resources	Historical sites and festivals provide great opportunities for residents and tourists to better connect to the community and community events. The Endless Mountains and Tioga Visitors Bureaus should continue to support historical tourism in order to increase the length of visitor stays, as well as taxes and revenues gained.	EMVB, TCVB, Region-wide		Staff Time
Medium	10.5.5	Marketing and Tourism	Continue to promote tourism to a variety of households.	EMVB, TCVB, Region-wide		Staff Time; Marketing Campaign
Medium	10.5.5.a	Marketing and Tourism	Target households that are located within a reasonable distance, as many vacationers are staying closer to home and are looking for more affordable recreation opportunities.	EMVB, TCVB, Region-wide		Staff Time; Marketing Campaign
Medium	10.5.5.b	Marketing and Tourism	Pursue more on-line advertising and marketing with www.philly.comand www.WashingtonPost.com.	EMVB, TCVB, Region-wide		Staff Time; Marketing Campaign

Medium	10.6.1	Marketing and Tourism	Continue to work coooperatively alongside local and county agencies, including local Chamber of Commerce, as well as local businesses including the gas industry, to promote new lodging optinons for visitors resulting in a benefit to the local economy.	EMVB, TCVB, Region-wide		Staff Time
Medium	11.1.2.a	Funding and Regulatory Resources	Explore charging outfitter fees and fees for boating access.	PA Fish and Boat Commission		Staff Time
Medium	11.1.5.a	Funding and Regulatory Resources	Explore an increase to the Hotel Occupancy Tax that would be directly dedicated to the benefit of park and recreation facilities within the Northern Tier.	Region-wide		Staff Time
Medium	11.1.6.c	Funding and Regulatory Resources	Explore Impact Fees as a potential traditional funding method.	Region-wide		Staff Time
Medium	11.2.4	Funding and Regulatory Resources	Explore federal grant opportunities. (Refer to detailed recommendations for specific examples).	Region-wide		Staff Time
Medium	12.1.4	Regional Partnerships and Collaborations	NTRPDC and all four counties should work with the community and nonprofit groups to promote existing recreation programs throughout the region and to potential visitors. (see Recommendation for specific organizations).	Region-wide		Staff Time; Marketing Campaign
Low	2.1.5	Connections	Encourage cross-marketing, programming and promotion of existing transit services that provide fixed-route and demand-response public transit services in Bradford, Sullivan and Tioga Counties.	EMVB, TCVB, Region-wide		Staff Time
Low	4.1.9	Preservation and Conservation	Utilize existing programs and guidelines for habitat conservation (WHIP).	DCNR, Region-wide		Staff Time
Low	6.1.2	Recreation Facility and Programming Improvement and Development	Work with private groups to provide maintenance.	DCNR, Region-wide		Volunteer/Staff Time
Low	10.3.2	Marketing and Tourism	Promote the benefits of nature-based tourism programs and products which will create new retail business development opportunities for outfitters and others.	Region-wide along with The Endless Mountains and Tioga County Visitors Bureaus		Staff Time
Low	10.5.2	Marketing and Tourism	The Endless Mountains and Tioga County Visitors Bureaus should continue to identify the levels of attendance, both of residents and visitors, as well as the economic impact of existing events and festivals and utilize this data could be used to champion additonal community and special events.	Region-wide along with The Endless Mountains and Tioga County Visitors Bureaus and Heritage Areas		Staff Time
Low	10.5.4	Marketing and Tourism	The Endless Mountains and Tioga County Visitors Bureaus should continue to support the Endless Mountains Heritage Region, PA Route 6 Corporation, Lumber Heritage Corporation, and Agricultural Heritage Corporation to increase agri- and heritage-tourism through the appropriate mediums (listed in detailed recommendation.)	Region-wide along with The Endless Mountains and Tioga County Visitors Bureaus		Staff Time
Low	10.6.2, 10.6.3	Marketing and Tourism	Continue efforts to collaborate with local and county agencies, such as Chambers of Commerce, to promote economic development, such as retail to the area for visitors such as grocery stores, bike shops, outdoor sporting goods, and many others.	Region-wide along with The Endless Mountains and Tioga County Visitors Bureaus		Staff Time
Low	12.1.6	Regional Partnerships and Collaborations	Investigate opportunities to partner with local colleges to promote environmental education and stewardship programs.	Region-wide		Staff Time
Low	12.1.8	Regional Partnerships and Collaborations	Create partnerships between health, economic development, and outdoor recreation stakeholders and providing state-wide studies and resources for local jurisdictions to use will also help to improve agency alignment.	Region-wide		Staff Time
Low	12.2.2.a	Regional Partnerships and Collaborations	Engage representatives of the local townships, boroughs and municipalities in order to expand outdoor recreation opportunities.	Region-wide		Staff Time

Mid-Term - 2014 to 2017						
Priority	**Strategy Number(s)**	**Category**	**Strategy Description**	**Champion**	**Strategy Team**	**Cost Estimate**
High	2.3.1	Connections	Develop trail connections, wayfinding and access points and promote canoeing, kayaking and rafting. Balance recreational use and environmental preservation to prevent overburdening the watersheds. See individual Watershed Plans for specific strategies.	DCNR, DEP, EMHR, Watershed Associations		$10,000/new access; $10,000/kiosk with maps; Staff Time
High	4.1.1	Preservation and Conservation	Preserve unsevered lands that include both environmental and recreation resources.	DCNR, DEP, PEC, EMHR, Region-wide		Staff Time; Easement/Purchase Costs
High	4.1.2a	Preservation and Conservation	Designate greenways and open spaces to preserve resources, provide outdoor recreation and create connections between existing destinations and recreation amenities.	DCNR, EMHR, Region-wide		Staff Time
High	4.1.2c	Preservation and Conservation	Work to preserve areas with significant ecological and historical considerations including acid mine drainage, stream water quality, wildlife habitat and native plant species.	DCNR, DEP, PEC, EMHR, Region-wide		Staff Time
High	4.1.3	Preservation and Conservation	Utilize the Rivers Conservation Plans to inform priorities for action regarding open space, greenways and recreation opportunities.	DCNR, DEP, PEC, EMHR, Region-wide		Staff Time
High	4.1.7, 12.1.5	Preservation and Conservation	Work with private and nonprofit conservancies in the Northern Tier region in order to preserve environmental and recreation resources and provide public access to additional private lands. (See Strategy 12.1.4 for specific groups.)	DCNR, DEP, PEC, EMHR, Region-wide		Volunteer/Staff Time
High	8.1.1a	Recreation Facility and Programming Improvement and Development	Prioritize restrooms, trails and water access points in future planning.	Region-wide		Staff Time
High	8.2.3.a	Recreation Facility and Programming Improvement and Development	Utilize conservation easements to increase access and reduce liability for private landowners.	DCNR, Region-wide		Staff Time; Easement Costs
High	9.1.4.a	Recreation Facility and Programming Improvement and Development, Marketing and Tourism	Collaborate with the DCNR and Audubon Pennsylvania to promote the north branch of the Susquehanna River within the Northern Tier region as a birdwatching and wildlife viewing “hot spots” to increase draw in these activities.	DCNR, Sullivan County, Susquehanna County		Staff Time
High	9.1.6	Recreation Facility and Programming Improvement and Development	Consider recreation trends that will accommodate those over 55 and to reach out to the residents of the area in order to educate them about the benefits of recreation, and to make recreation opportunities easily accessible to all.	Region-wide		Staff Time
High	9.1.6.a	Recreation Facility and Programming Improvement and Development	Include a range of activities beneficial to all abilities when promoting physical activity and outdoor recreation for older adults.	Region-wide		Staff Time
High	10.4.1	Marketing and Tourism	All signage and wayfinding plans should begin at interstate highways or arterials.	Region-wide along with The Endless Mountains and Tioga County Visitors Bureaus		NA
High	10.5.1	Marketing and Tourism	Continue to work within the mandated marketing regions (Upstate PA & PA Wilds) , as well as the Route 66 Corridor to develop a region-wide comprehensive marketing plan.	Region-wide along with The Endless Mountains and Tioga County Visitors Bureaus		Staff Time
High	10.5.5.c	Marketing and Tourism	Pursue smaller niche magazines to market overnight stays that are more geared toward B&B and long-term vacation rental packages, to provide lodging options due to high occupancy rates in motels resulting from gas companies.	EMVB, TCVB, Region-wide		Staff Time; Marketing Campaign
High	10.5.5.d	Marketing and Tourism	For cost-efficiency purposes, participate regionally with Upstate PA, PA Wilds and Route 6 to pursue International Tourist Markets.	EMVB, TCVB, Region-wide		Staff Time; Marketing Campaign
High	11.1.3, 11.1.3a	Funding and Regulatory Resources	Consider implementing concessions and user fees for recreation facilities at state recreation sites, where revenue goes back into the facility rather than to the state’s general fund. Provide fee and/or concession stations to support fee collection.	Region-wide		Staff Time
High	11.1.4	Funding and Regulatory Resources	Utilize a strong educational campaign to employ township or county bond referendums, to secure funds for the development and/or rehabilitation of local park and recreational facilities within the Northern Tier region.	Region-wide		Staff Time
High	11.1.6.a	Funding and Regulatory Resources	Explore Gaming Revenue as a potential traditional funding method.	Region-wide		Staff Time
High	11.2.5, a & b	Funding and Regulatory Resources	Explore the possibility of creating a Regional Recreation Authority. Research KOZ properties within the region as a way of acquiring, developing and operating parks and recreation facilities locally. Investigate use of the Circuit Rider Program to hire staff person(s) to manage the Authority’s programs and services.	Region-wide		Staff Time
High	11.2.5.a	Funding and Regulatory Resources	Research KOZ properties within the region as a way of acquiring, developing and operating parks and recreation facilities locally rather than depending on the state.	Region-wide		Staff Time
High	11.3.1.b	Funding and Regulatory Resources	Develop detailed zoning subdivision / land development ordinances carry out the guiding principles of the comprehensive plan by establishing review criteria for future developments to ensure adequate LOS as the population increases.	Region-wide		Staff Time
High	12.2.2.b	Regional Partnerships and Collaborations	Increase collaboration between the municipalities and other organizations in order to help increase the quality and quantity of recreation facilities available to all residents. (2008 Pennsylvania Resident Survey: A Summary of Key Findings)	Region-wide		Staff Time
Medium	4.1.5b	Preservation and Conservation	Complete stream assessments in order to identify additional conservation and enhancement opportunities.	Region-wide		Volunteer/Staff Time

Medium	8.1.1c & e	Recreation Facility and Programming Improvement and Development	Improvements and modifications to State lands and facilities should include restroom facilities, camp sites and trails, providing accessibility for disabled users, water access points, bringing older facilities up to current standards, and improving overnight accomodations.	Region-wide		TBD by project
Medium	8.2.4	Recreation Facility and Programming Improvement and Development	Expand recreation areas in order to attract more tourism and revenue generation to the region.	EMVB, TCVB, Region-wide		TBD by project
Medium	9.1.1	Recreation Facility and Programming Improvement and Development	Diversify recreation offerings through the development of recreation programs and opportunities that target a wide variety of demographic groups and that meet current and future recreation needs and trends.	Region-wide		Volunteer/Staff Time
Medium	9.1.10	Recreation Facility and Programming Improvement and Development	Develop additional nature tourism opportunities to grow and diversify recreation offerings. Provide necessary training in hospitality and backcountry safety and concentrate marketing efforts towards a predominantly urban user base.	Region-wide		Volunteer/Staff Time
Medium	9.1.2	Recreation Facility and Programming Improvement and Development	Increase programs that celebrate and explain the region's history, culture and environment enhance a user's experience.	Region-wide		Volunteer/Staff Time
Medium	9.1.5	Recreation Facility and Programming Improvement and Development	Consider any special needs or desires of the various races/ethnicities or other special groups within the area. Focusing on increased marketing to minorities rather than developing specific programs may be more effective.	Region-wide		Staff Time
Medium	9.1.7	Recreation Facility and Programming Improvement and Development	Look for opportunities to add art and cultural programs through public-private partnerships and collaboration with local townships, boroughs and municipalities to aid in financing these programs.	Region-wide		Staff Time
High	9.1.8	Recreation Facility and Programming Improvement and Development	Provide programming to attract youth and young adults to the area as visitors as well as to encourage permanent residency in the region.	Region-wide		Staff Time
Medium	9.1.9	Recreation Facility and Programming Improvement and Development	Provide additional programming and special events that focus on the activities listed as the most popular in the NTRPDC Survey. (See recommendation for specific details)	Region-wide		Staff Time
Medium	10.2.3	Marketing and Tourism	Continue to target-market and promote activities aimed at low-impact outdoor recreation activities for engaging older adults and aging populations.	EMVB, TCVB, Region-wide		Staff Time; Marketing Campaign
Low	11.1.1.b	Funding and Regulatory Resources	Investigate the need to expand service hours or level of services provided.	DCNR, Region-wide		Staff Time
Medium	11.1.2	Funding and Regulatory Resources	Work with member agencies to create a tiered fee system, which is structured by classification as residents, visitors, non-profit organizations and seniors.	NTRPDC, DCNR, Region-wide		Staff Time
Medium	11.1.3.b	Marketing and Tourism	Consider dedicating a portion of these concession and user fees to supporting Visitors Centers and marketing outreach.	EMVB, TCVB, Region-wide		Staff Time; Fee Collection Infrastructure
Medium	11.1.5.b	Funding and Regulatory Resources	Explore a dedicated sales or property tax to generate stable annual funding to support the ongoing capital needs of the communities within the area.	Region-wide		Staff Time
Medium	11.2.1 & 11.2.1.a	Funding and Regulatory Resources	Explore offering tiered and/or bundled sponsorship and/or naming rights opportunities for the development of new facilities and programs.	Region-wide		Staff Time
Medium	11.3.1.a	Funding and Regulatory Resources	Develop comprehensive plans to preserve land use characteristics and connections in order to serve as a guide for future development, as well as set aside land for future recreation and predict transportation corridors.	Region-wide		Staff Time
Low	5.4.2, 5.4.3	Preservation and Conservation	Work with oil and gas companies to develop facilities, interpretive signage and programs that educate and inform recreation users and visitors to the area about the drilling of the Marcellus Shale as well as historic mining activities.	DCNR, EMHR, Region-wide		Staff Time
Low	10.2.2	Marketing and Tourism, Programming	Begin a Trade Marketing strategy targeted to entities such as group tour companies, as well as attending trade shows and consumer shows such as AAA.	EMVB, TCVB, Region-wide		Staff Time
Low	10.2.2.a	Marketing and Tourism, Programming	Offer a guided tour service as a potential option for income.	EMVB, TCVB, Region-wide		Staff Time; Program Operations - TBD
Low	10.5.6	Marketing and Tourism, Programming	Continue to promote efforts to increase four-season amenities and activities and continue to implement the marketing plan to attract visitors and to promote activities and events within all of the counties.	Region-wide along with The Endless Mountains and Tioga County Visitors Bureaus		Staff Time
Low	11.1.6.b	Funding and Regulatory Resources	Explore Benefit Assessment Districts as a potential traditional funding method.	Region-wide		Staff Time

Long Term 2018 to 2020						
Priority	**Strategy Number(s)**	**Category**	**Strategy Description**	**Champion**	**Strategy Team**	**Cost Estimate**
High	8.1.1d	Recreation Facility and Programming Improvement and Development	Consider expanding primary facilities, including dedicated ATV and bike facilities, based on survey responses.	Region-wide		TBD by project
High	12.1.3	Regional Partnerships and Collaborations	Investigate the development of a Regional Recreation Authority.	Region-wide		Staff Time
Medium	2.2.4.a	Connections	Endless Mountain Rail-Trail: Provide a more suitable surface for multi-modal use along the mown sections of the trail.	Susquehanna County		$70,000/mile
Medium	3.1.1	Connections	Utilize areas damaged by coal mining for recreation and environmental education during and post clean up.	DCNR, DEP, Region-wide		Volunteer/Staff Time
Medium	6.1.3	Recreation Facility and Programming Improvement and Development	Replace existing facilities as they age.	DCNR, Region-wide		TBD by project
Medium	9.1.4	Recreation Facility and Programming Improvement and Development	Diversify recreation opportunities if expansion into state forest lands is pursued. (See recommendation for specific details)	Region-wide		TBD by project

Notes:

1. *Unit prices adjusted for 2013 estimated costs. Freight and installation not included in amenity price.*
2. *Estimate of costs are based on pre-design estimations and are subject to change.*
3. *Maintained 2' wide pedestrian dirt trail, blazed estimated $2,000/mile*
4. *Maintained 6' wide multi-purpose dirt trail, blazed estimated $20,000/mile*
5. *Maintained 10' wide crushed aggregate multi-purpose trail (rail-trail) estimated $70,000/mile*
6. *Asphalt shoulder addition estimated $110,000-145,000/mile, final cost dependent on total improvements that need to be made.*

Sullivan County Action Strategies and Recommendations

Short Term - 2011 to 2013						
Priority	**Strategy Number(s)**	**Category**	**Strategy Description**	**Champion**	**Strategy Team**	**Cost Estimate**
High	7.1.1.a	Recreation Facility and Programming Improvement and Development	Provide additional signage and wayfinding throughout the county.	Sullivan County		$50/SF, total will be based on type/ size of sign fabricated
High	7.1.1.c	Recreation Facility and Programming Improvement and Development	Improve trails and add facilities such as parking, seating, restrooms in State Game Lands to increase their contribution to the LOS.	Sullivan County		TBD by project
High	7.2.2.a, 7.2.4a	Recreation Facility and Programming Improvement and Development	Improve existing bike routes (see Table 5.1).	Sullivan County, Tioga County		$110,000-145,000/mile shoulder addition, final cost TBD by project
High	7.2.2.b	Recreation Facility and Programming Improvement and Development	Add additional bike routes along County and State roads.	Sullivan County		TBD by project
High	7.2.2.c	Recreation Facility and Programming Improvement and Development	Improve and promote usage of existing trails within State Game Lands.	Sullivan County		$2,000/mile; Staff Time
High	7.2.2.d	Recreation Facility and Programming Improvement and Development	Maintain existing trails.	Sullivan County		Volunteer/Staff Time & Materials
High	11.1.7	Funding and Regulatory Resources	Explore Regional Funding Opportunities, specifically including the Endless Mountains Visitors Bureau Room Tax Grant Program	Sullivan County, Susquehanna County and Wyoming County		Staff Time
Medium	2.2.3.a	Connections	Close the gap between the Loyalsock forestry trails in the Cabbage Hollow area and the State Game Lands 12 trails in the Sunfish Pond area with a spur to Shunk for gas (snowmobile).	Sullivan County		$2,000/mile
Medium	2.2.3.b	Connections	Close the gaps among State Game Lands 13 trails, Ricketts Glen State Park trails, and State Game Lands 57 trails (snowmobile).	Sullivan County		$2,000/mile
Medium	7.3.1.b	Recreation Facility and Programming Improvement and Development	Improve fishing access to water bodies (additional access points, ADA access, signage) along Loyalsock Creek.	Sullivan County		$10,000/new access
Medium	8.1.2.a	Recreation Facility and Programming Improvement and Development	Ricketts Glen State Park: Add signage for trailhead parking and add road signs directing visitors from US 220 to the park, as well as at the Hayfields trailhead.	Sullivan County		$50/SF, total will be based on type/ size of sign fabricated
Medium	8.1.2.b	Recreation Facility and Programming Improvement and Development	Worlds End State Park/Loyalsock State Forest: Improve signage and wayfinding to direct visitors as they drive through the park to reach as their primary destination and improve delineation between the state park and Loyalsock State Forest.	Sullivan County		$50/SF, total will be based on type/ size of sign fabricated
Medium	8.1.2.c	Recreation Facility and Programming Improvement and Development	Hunters Lake: Improve signage and wayfinding to the lake and smooth the driveway transition from Brunnerdale Road to the parking at the fishing pier.	Sullivan County		$50/SF, total will be based on type/ size of sign fabricated; Staff Time & Materials

Mid-Term - 2014 to 2017						
Priority	**Strategy Number(s)**	**Category**	**Strategy Description**	**Champion**	**Strategy Team**	**Cost Estimate**
High	2.2.3.c	Connections	Close the trail gap west of Lake Jean along SR487 (cross country skiing).	Sullivan County		$2,000/mile
High	2.2.3.d	Connections	Extend the Loyalsock Trail to connect Worlds End State Park with Ricketts Glen State Park.	Sullivan County		$2,000/mile
High	9.1.4.a	Recreation Facility and Programming Improvement and Development, Marketing and Tourism	Collaborate with the DCNR and Audubon Pennsylvania to promote the north branch of the Susquehanna River within the Northern Tier region as a birdwatching and wildlife viewing "hot spots" to increase draw in these activities.	DCNR, Sullivan County, Susquehanna County		Staff Time
Medium	7.2.2.e	Recreation Facility and Programming Improvement and Development	Add additional trails (see facility specific recommendations).	Sullivan County		TBD by project
Low	2.3.2.a	Connections	Develop water trails on the Loyalsock Creek.	Sullivan County		$10,000/new access

Long Term 2018 to 2020						
Priority	**Strategy Number(s)**	**Category**	**Strategy Description**	**Champion**	**Strategy Team**	**Cost Estimate**
High	7.3.1.a	Recreation Facility and Programming Improvement and Development	Add additional water trails along Loyalsock Creek.	Sullivan County		$10,000/new access
Low	7.1.1.b	Recreation Facility and Programming Improvement and Development	"Provide additional public access to land in the Dushore area through purchase of additional public land, access easements and public access to private lands such as those owned by conservancies.	Sullivan County		Easement/Purchase Costs

Notes:
1. *Unit prices adjusted for 2013 estimated costs. Freight and installation not included in amenity price.*
2. *Estimate of costs are based on pre-design estimations and are subject to change.*
3. *Maintained 2' wide pedestrian dirt trail, blazed estimated $2,000/mile*
4. *Maintained 6' wide multi-purpose dirt trail, blazed estimated $20,000/mile*
5. *Maintained 10' wide crushed aggregate multi-purpose trail (rail-trail) estimated $70,000/mile*
6. *Asphalt shoulder addition estimated $110,000-145,000/mile, final cost dependent on total improvements that need to be made.*

Susquehanna County Action Strategies and Recommendations

Short Term - 2011 to 2013						
Priority	**Strategy Number(s)**	**Category**	**Strategy Description**	**Champion**	**Strategy Team**	**Cost Estimate**
High	2.2.4.d	Connections	Endless Mountain Rail-Trail: Maintain public control of the trail corridor, so as not to incur any additional ownership and management conflicts with private landowners.	Susquehanna County		Legal/Staff Time
High	2.3.3.c	Connections	Allow human-powered small crafts on the Susquehanna River and remove launch permit requirement.	Susquehanna County		Staff Time
High	2.3.3.d	Connections	Promote increased use of the Susquehanna River by kayaks and canoes.	Susquehanna County		Staff Time, Marketing Campaign
High	8.1.3.a	Recreation Facility and Programming Improvement and Development	Salt Springs State Park: Update aging restroom facilities, improve parking area, improve trail maintenance, improve signage and wayfinding to and within the park and preserve and remodel barn to allow use for public events.	Susquehanna County		$400,000 restroom & parking lot improvements, Volunteer/Staff Time & Materials; $50/SF, total will be based on type/size of sign fabricated, $750,000 (+/-25%) barn remodel
High	11.1.7	Funding and Regulatory Resources	Explore Regional Funding Opportunities, specifically including the Endless Mountains Visitors Bureau Room Tax Grant Program.	Sullivan County, Susquehanna County and Wyoming County		Staff Time
Medium	2.2.4.b	Connections	Endless Mountain Rail-Trail: Provide additional signage and wayfinding for visitors using the trail.	Susquehanna County		$50/SF, total will be based on type/size of sign fabricated
Medium	2.3.3.b	Connections	Provide directional signage to and informational signage at boat launch 348.	Susquehanna County		$50/SF, total will be based on type/size of sign fabricated
Medium	2.3.3.f	Connections	Inventory other streams that could be used for kayaking and canoeing.	Susquehanna County		Volunteer/Staff Time
Medium	7.2.3.b	Recreation Facility and Programming Improvement and Development	Improve and promote usage of existing trails within State Game Lands.	Susquehanna County		Staff Time & Materials
Low	7.1.2.a2	Recreation Facility and Programming Improvement and Development	Provide additional public access to land throughout the county through access easements.	Susquehanna County		Staff Time; Easement Costs
Low	7.2.3	Recreation Facility and Programming Improvement and Development	Improve existing bike routes (see Table 5.1).	Susquehanna County		$110,000-145,000/mile shoulder addition, final cost TBD by project
Low	7.3.2.b	Recreation Facility and Programming Improvement and Development	Improve fishing access to water bodies (additional access points, ADA access, signage) along the Susquehanna River, Wyalusing Creek and Meshoppen Creek.	Susquehanna County		$10,000/new access point
Low	8.1.1b	Recreation Facility and Programming Improvement and Development	Improve informational and directional signs for Hills Creek and Salt Springs State Parks.	Tioga County , Susquehanna County		$50/SF, total will be based on type/size of sign fabricated
Mid-Term - 2014 to 2017						
Priority	**Strategy Number(s)**	**Category**	**Strategy Description**	**Champion**	**Strategy Team**	**Cost Estimate**
High	7.1.2.a3	Recreation Facility and Programming Improvement and Development	Provide additional public access to land throughout the county through public access to private lands such as those owned by conservancies.	Susquehanna County		Volunteer/Staff Time
High	7.1.2.c	Recreation Facility and Programming Improvement and Development	Develop programming of existing public lands to increase their contribution to the LOS.	Susquehanna County		Staff Time
High	7.2.3.c2	Recreation Facility and Programming Improvement and Development	Consider a trail connection from Montrose to Salt Springs State Park.	Susquehanna County		$20,000/mile
High	7.3.2.a1	Recreation Facility and Programming Improvement and Development	Meshoppen Creek (Selection within lemon Township - for expert level kayaking)	Susquehanna County		$10,000/new access
High	9.1.4.a	Recreation Facility and Programming Improvement and Development, Marketing and Tourism	Collaborate with the DCNR and Audubon Pennsylvania to promote the north branch of the Susquehanna River within the Northern Tier region as a birdwatching and wildlife viewing “hot spots” to increase draw in these activities.	DCNR, Sullivan County, Susquehanna County		Staff Time
Medium	2.2.4.e	Connections	Endless Mountain Rail-Trail: Create connections to the D & H Rail-Trail.	Susquehanna County		$70,000/mile
Medium	2.3.3.e	Connections	Develop the Wyalusing Creek Water Trail to connect to Bradford County.	Susquehanna County		$10,000/new access point
Medium	7.1.2.b	Recreation Facility and Programming Improvement and Development	Improve trails and add facilities such as parking, seating, restrooms in State Game Lands to increase their contribution to the LOS.	Susquehanna County		$2,000/mile; $10,000/port-a-let shelter; $1,500/bench; $500/trash receptacle
Medium	7.2.3.a	Recreation Facility and Programming Improvement and Development	Make shoulder improvements on PA 29 & 92.	Susquehanna County		$115,000/mile shoulder addition, final cost TBD by project
Medium	7.2.3.c3	Recreation Facility and Programming Improvement and Development	Consider a trail connection from Montrose to New Milford.	Susquehanna County		$20,000/mile
Low	7.1.2.d	Recreation Facility and Programming Improvement and Development	Consider joint use agreement for public access of Camp Choconut.	Susquehanna County		Staff Time
Low	7.3.2.a2	Recreation Facility and Programming Improvement and Development	Add additional water trails along Wyalusing Creek to connect with the Susquehanna River and Bradford County.	Susquehanna County		$10,000/new access
Low	7.3.2.c	Recreation Facility and Programming Improvement and Development	Add programming throughout the county focused on the Bluestone quarries.	Susquehanna County		Volunteer/Staff Time

Long Term 2018 to 2020						
Priority	**Strategy Number(s)**	**Category**	**Strategy Description**	**Champion**	**Strategy Team**	**Cost Estimate**
High	7.2.3.c1	Recreation Facility and Programming Improvement and Development	Add additional trails including considerations for a trail connection from Friendsville to Bradford County trails.	Susquehanna County		$20,000/mile
Medium	2.2.4.a	Connections	Endless Mountain Rail-Trail: Provide a more suitable surface for multi-modal use along the mown sections of the trail.	Susquehanna County		$70,000/mile
Medium	7.1.2.a1	Recreation Facility and Programming Improvement and Development	Provide additional public access to land throughout the county through purchase of additional public land.	Susquehanna County		Purchase Costs

Notes:
1. *Unit prices adjusted for 2013 estimated costs. Freight and installation not included in amenity price.*
2. *Estimate of costs are based on pre-design estimations and are subject to change.*
3. *Maintained 2' wide pedestrian dirt trail, blazed estimated $2,000/mile*
4. *Maintained 6' wide multi-purpose dirt trail, blazed estimated $20,000/mile*
5. *Maintained 10' wide crushed aggregate multi-purpose trail (rail-trail) estimated $70,000/mile*
6. *Asphalt shoulder addition estimated $110,000-145,000/mile, final cost dependent on total improvements that need to be made.*

Tioga County Action Strategies and Recommendations

Short Term - 2011 to 2013						
Priority	**Strategy Number(s)**	**Category**	**Strategy Description**	**Champion**	**Strategy Team**	**Cost Estimate**
High	2.2.5.c	Connections	Close the Charleston Township gap in the Mid State Trail.	Tioga County		$2,000/mile
High	2.2.5.e	Connections	Work to construct the planned Pine Creek Trail extension from the Marsh Creek Access Area to Wellsboro Junction in order to connect to other regional trails and amenities.	Tioga County		$70,000/mile
High	7.2.2.a, 7.2.4a	Recreation Facility and Programming Improvement and Development	Improve existing bike routes (see Table 5.1).	Sullivan County, Tioga County		$110,000-145,000/mile shoulder addition, final cost TBD by project
High	7.2.4.c	Recreation Facility and Programming Improvement and Development	Maintain trails within Tioga State Forest.	Tioga County		Volunteer/Staff Time & Materials
Medium	2.1.6	Connections	Prioritize funding for overall transportation infrastructure needs for Tioga County.	PennDOT, Tioga County		Staff Time
Medium	7.1.3.b	Recreation Facility and Programming Improvement and Development	Pursue plans to enhance the Mill Cove area.	Tioga County		Volunteer/Staff Time
Medium	7.3.3.a	Recreation Facility and Programming Improvement and Development	Consider boating access to Mill Creek.	Tioga County		$10,000/new access
Low	8.1.1b	Recreation Facility and Programming Improvement and Development	Improve informational and directional signs for Hills Creek and Salt Springs State Parks.	Tioga County , Susquehanna County		$50/SF, total will be based on type/size of sign fabricated
Mid-Term - 2014 to 2017						
Priority	**Strategy Number(s)**	**Category**	**Strategy Description**	**Champion**	**Strategy Team**	**Cost Estimate**
Medium	2.2.5.h	Connections	Improve aesthetics, signage and access to the Lamb's Creek Recreation Area in Mansfield.	Tioga County		TBD by project
Medium	7.3.3.d	Recreation Facility and Programming Improvement and Development	Work with Army Corps of Engineers to improve amenities at Cowanesque Lake.	Tioga County		$10,000/new access; $10,000/kiosk with maps
Medium	7.3.3.e	Recreation Facility and Programming Improvement and Development	Create programming for the Reynolds Spring Bog and Algerine Swamp Bog in the Tioga State Forest.	Tioga County		Volunteer/Staff Time
Low	7.3.3.c	Recreation Facility and Programming Improvement and Development	Consider creating a water trail on Marsh Creek.	Tioga County		$10,000/new access
Long Term 2018 to 2020						
Priority	**Strategy Number(s)**	**Category**	**Strategy Description**	**Champion**	**Strategy Team**	**Cost Estimate**
High	2.2.5.b	Connections	Pursue efforts to connect communities with greenways, including developing more trail connections using links such as Rail-Trail beds and existing corridors.	Tioga County		Staff Time; TBD by project
High	2.2.5.f	Connections	Connect the Pine Creek Trail to proposed trails in Galeton (Potter County).	Tioga County		$10,000/new access; $20,000/mile
High	2.2.5.g	Connections	Continue the Ulysses Trail via PA 49 from Potter County to the Mid State Trail at Cowanesque Lake.	Tioga County		$20,000/mile
High	7.2.4.d2	Recreation Facility and Programming Improvement and Development	Add additional trails. Connect Blossburg to the Mid State Trail.	Tioga County		$20,000/mile
Medium	7.2.4.d4	Recreation Facility and Programming Improvement and Development	Add additional trails. Create a trail connection from Tioga State Forest to Loyalsock State Forest.	Tioga County		$20,000/mile
Medium	7.3.3.b	Recreation Facility and Programming Improvement and Development	Investigate creating a water trail on the Tioga River, a potential connection to New York water trails and the Susquehanna River.	Tioga County		Staff Time
Medium	8.1.4.b	Recreation Facility and Programming Improvement and Development	Hills Creek State Park: Further develop camping, wildlife viewing/photography, swimming and warm-water fishing and replace restrooms and aging infrastructure.	Tioga County		TBD by project
Low	2.2.5.a	Connections	Improve access sites for trails through increased signage and promotion, as they are often very difficult to find for visitors and new residents.	Tioga County		$50/SF, total will be based on type/size of sign fabricated
Low	2.2.5.d	Connections	Close the trail gap from the Ansonia area east to Armenia Mountain near Troy.	Tioga County		$2,000/mile
Low	2.3.4.a	Connections	Develop access points to the upper portion of Pine Creek.	Tioga County		$10,000/new access
Low	2.3.4.b	Connections	Develop water trail access on the Tioga River to New York.	Tioga County		$10,000/new access
Low	7.1.3.a	Recreation Facility and Programming Improvement and Development	Provide additional public access to land in the northwest and northeast portions of the county through purchase of additional public land, access easements and public access to private lands such as those owned by conservancies.	Tioga County		Easement/Purchase Costs
Low	7.1.3.c	Recreation Facility and Programming Improvement and Development	Upgrade facilities in existing state lands to increase their contribution to the LOS (see facility specific recommendations).	Tioga County		TBD by project

Low	7.2.4.b	Recreation Facility and Programming Improvement and Development	Improve and promote usage of existing trails within State Game Lands.	Tioga County		$2,000/mile; Staff Time
Low	7.2.4.d1	Recreation Facility and Programming Improvement and Development	Add additional trails. Consider a trail connection along SR 349.	Tioga County		$20,000/mile
Low	7.2.4.d3	Recreation Facility and Programming Improvement and Development	Add additional trails. Consider trail connections from Bradford County to the Mid State Trail.	Tioga County		$20,000/mile
Low	8.1.4.a	Recreation Facility and Programming Improvement and Development	Leonard Harrison State Park/Colton Point State Park/Tioga State Forest: Add signage and wayfinding to promote key trails and destinations throughout the area, further develop natural scenery viewing/photography opportunities, further develop interpretive	Tioga County		$50/SF, total will be based on type/size of sign fabricated

Notes:
1. *Unit prices adjusted for 2013 estimated costs. Freight and installation not included in amenity price.*
2. *Estimate of costs are based on pre-design estimations and are subject to change.*
3. *Maintained 2' wide pedestrian dirt trail, blazed estimated $2,000/mile*
4. *Maintained 6' wide multi-purpose dirt trail, blazed estimated $20,000/mile*
5. *Maintained 10' wide crushed aggregate multi-purpose trail (rail-trail) estimated $70,000/mile*
6. *Asphalt shoulder addition estimated $110,000-145,000/mile, final cost dependent on total improvements that need to be made.*

Wyoming County Action Strategies and Recommendations

	Short Term - 2011 to 2013						
Term	**Priority**	**Strategy Number(s)**	**Category**	**Strategy Description**	**Champion**	**Strategy Team**	**Cost Estimate**
	High	2.2.6.a	Connections	Connect to the Back Mountain Trail in Luzerne County.	Wyoming County		$70,000/mile
	High	2.2.6.b	Connections	Connect Eatonville to Evans Falls by redeveloping the Eatonville Bridge for pedestrian traffic as part of the Seneca Trail.	Wyoming County		TBD
	High	2.2.6.d	Connections	Ensure completion of the Iroquois Trail in the Tunkhannock area.	Wyoming County		TBD
short	High	4.1.6	Preservation and Conservation	Work to implement the management goals for the Chesapeake Bay Program for the Susquehanna River.	Wyoming County		Staff Time
	High	7.2.5.a	Recreation Facility and Programming Improvement and Development	Improve existing bike routes (see Table 5.1) and provide shoulder improvements on PA 29 & 92.	Wyoming County		$110,000-145,000/mile shoulder addition, final cost TBD by project
	High	7.3.4.b	Recreation Facility and Programming Improvement and Development	Further develop and promote the Tunkhannock Creek water trail.	Wyoming County		$10,000/new access; Marketing Campaign
	High	8.1.5.a	Recreation Facility and Programming Improvement and Development	Little Rocky Glen: Add signage to provide better wayfinding to the preserve as well as warn motorists driving on the road of potential cars and pedestrians.	Wyoming County		$50/SF, total will be based on type/size of sign fabricated
	High	8.1.5.b	Recreation Facility and Programming Improvement and Development	Endless Mountains Nature Center (EMNC): Add signage and wayfinding to the EMNC from the highway and to delineate the EMNC versus Camp Lackawanna and clarify which facilities are for public versus private use.	Wyoming County		$50/SF, total will be based on type/size of sign fabricated
short	High	11.1.7	Funding and Regulatory Resources	Explore Regional Funding Opportunities, specifically including the Endless Mountains Visitors Bureau Room Tax Grant Program	Sullivan County, Susquehanna County and Wyoming County		Staff Time
	Medium	7.3.4.a	Recreation Facility and Programming Improvement and Development	Add additional water trails along Bowman's Creek and Mehoopany Creek.	Wyoming County		$10,000/new access
	Mid-Term - 2014 to 2017						
	Priority	**Strategy Number(s)**	**Category**	**Strategy Description**	**Champion**	**Strategy Leader**	**Cost Estimate**
	High	2.3.5.a	Connections	Develop additional access points to the Susquehanna River between Ulster and Tunkhannock.	Wyoming County		$10,000/new access
	High	2.3.5.b	Connections	Develop additional access points to the Susquehanna River in the Bowman's Creek area.	Wyoming County		$10,000/new access
	High	2.3.5.d	Connections	Further develop the Tunkhannock Creek water trail.	Wyoming County		$10,000/new access; $10,000/kiosk with maps; Staff Time
	High	7.2.5.b	Recreation Facility and Programming Improvement and Development	Improve and promote usage of existing trails within State Game Lands.	Wyoming County		$2,000/mile; Staff Time
	High	7.3.4.c	Recreation Facility and Programming Improvement and Development	Add public amenities such as picnic tables, trash receptacles, etc. to river access points.	Wyoming County		$1,500/bench, table; $500/ trash receptacle
	Medium	2.3.5.c	Connections	Develop a water trail with signage on Bowman's Creek.	Wyoming County		$10,000/new access; $10,000/kiosk with maps
	Long Term 2018 to 2020						
	Priority	**Strategy Number(s)**	**Category**	**Strategy Description**	**Champion**	**Strategy Leader**	**Cost Estimate**
	High	7.1.4.a	Recreation Facility and Programming Improvement and Development	Provide additional public access to land, particularly in the eastern portion of the county, through purchase of additional public land, access easements and public access to private lands, such as those owned by conservancies.	Wyoming County		Easement/Purchase Costs
	High	7.1.4.b	Recreation Facility and Programming Improvement and Development	Improve trails and add facilities such as parking, seating, restrooms in State Game Lands to increase their contribution to the LOS.	Wyoming County		$2,000/mile; $10,000/port-a-let shelter; $1,500/bench; $500/trash receptacle
	Medium	7.2.5.c1	Recreation Facility and Programming Improvement and Development	Add additional trails. Consider trail connections from Ricketts Glen State Park to the Susquehanna River.	Wyoming County		$20,000-$70,000/mile
	Medium	7.2.5.c2	Recreation Facility and Programming Improvement and Development	Add additional trails. Consider trail connections between Nicholson and Factoryville.	Wyoming County		$20,000-$70,000/mile
	Medium	7.2.5.c3	Recreation Facility and Programming Improvement and Development	Investigate right-of-way ownership of the Northern Electric Railway to be developed as the "Trolley Trail" from Clarks Summit to Lake Winola.	Wyoming County		Staff Time
	Low	2.2.6.c	Connections	Ensure completion of the Countryside Conservancy Trolley Trail from Factoryville to Lake Winola.	Wyoming County		$70,000/mile

Notes:
1. *Unit prices adjusted for 2013 estimated costs. Freight and installation not included in amenity price.*
2. *Estimate of costs are based on pre-design estimations and are subject to change.*
3. *Maintained 2' wide pedestrian dirt trail, blazed estimated $2,000/mile*
4. *Maintained 6' wide multi-purpose dirt trail, blazed estimated $20,000/mile*
5. *Maintained 10' wide crushed aggregate multi-purpose trail (rail-trail) estimated $70,000/mile*
6. *Asphalt shoulder addition estimated $110,000-145,000/mile, final cost dependent on total improvements that need to be made.*